TRAFFIC IMPACT REPORT
COMBINED
RIVERPARK & SANTA FE PARK SOUTH DEVELOPMENTS
LITTLETON, COLORADO

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EXECUTIVE SUMMARY

Evergreen Devco and Toll Brothers are planning to independently develop approximately 110.95 acres of property located along the west side of S. Santa Fe Dr. (US 85) between W. Mineral Ave. and the Littleton Equine Medical Center (LEMC) in Littleton, Colorado. Since the transportation system serving these two developments will essentially be integrated with one another the City of Littleton has requested that the traffic impact study incorporate both developments.

The Evergreen Devco parcel, to be known as RiverPark, contains approximately 33.34 acres and is situated in the southwest quadrant of the S. Santa Fe Dr./W. Mineral Ave. intersection. Upon buildout, RiverPark will be a mixed use development consisting of commercial/retail, residential housing and senior living land uses. The commercial/retail parcel is planned to consist of 61,980sf of retail space, three fast-food restaurants with drive-through windows totaling 8,800sf (3,500sf, 3,300sf and 2,000sf, respectively), two 6,500sf high-turnover (sit-down) restaurants, and one 4,993sf convenience market with 16-fueling stations. The residential parcel is planned to consist of 270 multifamily housing units. The senior living parcel is planned to consist of a 168 unit congregate care facility.

The Toll Brothers parcel, to be known as Santa Fe Park South, contains approximately 77.61 acres and is situated immediately south of the proposed RiverPark site adjacent to the west side of S. Santa Fe Dr. Upon buildout, Santa Fe Park South will be a mixed use development consisting of commercial/retail and residential housing uses. The commercial/retail parcel is planned to consist of 15,000sf of retail space, two 2,500sf fast-food restaurants with drive-through windows, and two 5,000sf high-turnover (sit-down) restaurants. The residential parcel is planned to consist of 399 single-family attached housing units and 336 multifamily housing units.

When the two developments are completed they are projected to generate 26,608 daily vehicle trips of which 1789 will occur during the morning peak hour and 1949 will occur during the evening peak hour.

The RiverPark and Santa Fe Park South developments will be served via an integrated internal roadway network providing connectivity to the S. Santa Fe Dr. and W. Mineral Ave. corridors. Due to the significant congestion and operational deficiencies being experienced along these corridors, and particularly at the S. Santa Fe Dr. (US 85)/W. Mineral Ave. intersection, the City of Littleton commissioned a study to develop recommendations for the mitigation of these issues. That study recognizes that the optimal solution to mitigate these issues may involve a grade-separated interchange that would carry an extremely high implementation cost. Without an identified funding source in the foreseeable future that study also developed and evaluated a number of potential interim mitigation strategies that could be implemented in a shorter time frame and at a much lower cost. Based on the findings contained in that, as well as Evergreen Devco's interest in developing the proposed RiverPark parcel, a "quadrant road" alternative aligned through the southwest quadrant of the S. Santa Fe Dr./W. Mineral Ave. intersection, referred to herein as the "SW Quad Road" would be pursued as the interim solution to relieve traffic congestion, improve operational efficiency and provide access for the proposed development. The premise of the SW Quad Road is to reroute the left turn movements at the S. Santa Fe Dr./W. Mineral Ave. intersection through the SW Quad Road allowing additional green time to be allocated to the through traffic movements, which would otherwise be needed for the

left turn movements, thereby enhancing the overall capacity and operation of the intersection. Evergreen Devco and the City of Littleton have been working collaboratively to fine tune the SW Quad Road alignment, roadway section and access points to the development to adequately serve the needs of the development, as well as achieve the objectives of addressing the congestion and operational issues plaguing the adjacent transportation system.

In addition to the SW Quad Road, the spine of the internal roadway network proposed to serve the RiverPark and Santa Fe Park South developments will include extending S. Platte River Pkwy. southerly from the SW Quad Road alignment through the Santa Fe Park South development ultimately intersecting with a new proposed east/west roadway providing connectivity with S. Santa Fe Dr. via a new intersection just north of the Dad Clark Gulch bridge. Upon completion the two developments will have multiple access points intersecting the internal spine roadway network to provide direct connectivity to the adjacent transportation system.

The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed RiverPark and Santa Fe Park South developments at projected buildout (2025) and long term (2040) analysis horizons on the existing and proposed study area intersections and roadway network while incorporating interim measures for mitigating traffic congestion and operational issues plaguing the adjacent transportation system until such time that a grade-separated interchange can be implemented at the S. Santa Fe Dr./W. Mineral Ave. intersection.

Given the mixed use nature of the RiverPark and Santa Fe Park South developments, as well as their proximity to the RTD Littleton/Mineral Station and regional trail networks (Mary Carter Greenway Trail and Railroad Spur Trail) there will be a focus on incorporating infrastructure elements and amenities for the two developments that encourage and promote multimodal travel options. A detailed presentation of the planned multimodal infrastructure and amenities is presented in Appendix “F” of this study.

Based on the analyses conducted in this study a summary of recommendations and associated responsibilities for the construction of roadway and intersection improvements to adequately serve both the RiverPark and Santa Fe Park South developments, as well as address the mitigation of traffic congestion and operational issues within the study area are provided in Table ES-1, below. Figures ES-1 and ES-2 graphically illustrate the recommended roadway and intersection improvements for the 2025 buildout and 2040 long-term analysis horizons, respectively.

TABLE ES-1
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES/IMPACT MITIGATION

ROADWAYS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
W. Mineral Ave.	Although there are no additional through lanes planned for W. Mineral Ave. within the study area, due to the spacing of the S. Santa Fe Dr./W. Mineral Ave. and W. Mineral Ave./S. Platte River Pkwy. intersections, the general roadway section will be undergoing significant modifications in order to accommodate the associated intersection improvements. These modifications are described for the W. Mineral Ave./S. Platte River Pkwy. and S. Santa Fe Dr./W. Mineral Ave. intersections, below.	See responsibilities/impact mitigation for the W. Mineral Ave./S. Platte River Pkwy. and S. Santa Fe Dr./W. Mineral Ave. intersections, below.
S. Santa Fe Dr. (W. Mineral Ave. to south RiverPark property line)	Improvements to S. Santa Fe Dr. from W. Mineral Ave. to the RiverPark south property line will include the following: • Construction of a southbound right turn deceleration lane extending a minimum of 500 feet of storage including a 15:1 entrance taper extending from the proposed W. Nichols Ave. intersection. • Construction of a southbound auxiliary right turn acceleration/deceleration lane from W. Nichols Ave. to the RiverPark south property line. • Construction of dual northbound left turn lanes with raised center median at W. Nichols Ave. See recommendations for S. Santa Fe Dr./W. Nichols Ave. intersection for further discussion. • Construction of raised median along left turn lanes to provide full separation of the northbound and southbound traffic It is anticipated that an additional northbound travel lane will be constructed by the 2040 long-term analysis horizon.	Responsibility for improvements to S. Santa Fe Dr. from W. Mineral Ave. to the RiverPark south property line will be as follows: • The RiverPark developer will be responsible for funding the design and construction of the southbound right turn deceleration lane extending a minimum of 500 feet of storage including a 15:1 entrance taper extending from the proposed W. Nichols Ave. intersection. • The RiverPark developer will be responsible for funding the design and construction of the southbound auxiliary right turn acceleration/deceleration lane from W. Nichols Ave. to the RiverPark south property line. • The RiverPark developer will be responsible for funding the design and construction of dual northbound left turn lanes and raised median at W. Nichols Ave. • CDOT will be responsible for the funding, design and construction of an additional northbound travel lane and associated infrastructure.
S. Santa Fe Dr. (Santa Fe Park South north property line to south property line)	Improvements to S. Santa Fe Dr. form Santa Fe Park South north property line to south property line will include the following: • Construction of a southbound right turn auxiliary right turn acceleration/deceleration lane from the Santa Fe Park South north property line to W. Phillips Ave. • Construction of raised median along left turn lanes to provide full separation of the northbound and southbound traffic It is anticipated that an additional northbound travel lane will be constructed by the 2040 long-term analysis horizon.	Responsibility for improvements to S. Santa Fe Dr. from Santa Fe Park South north property line to south property line will be as follows: • The Santa Fe Park South developer will be responsible for funding, design and construction of the southbound auxiliary right turn acceleration/deceleration lane from the Santa Fe Park South north property line to W. Phillips Ave. • The Santa Fe Park South developer will be responsible for funding, design and construction of raised medians along left turn lanes. • CDOT will be responsible for the funding, design and construction of an additional northbound travel lane and associated infrastructure.
S. Platte River Pkwy. (W. Mineral Ave. To W. Nichols Ave.)	The general laneage requirements for S. Platte River Pkwy. from W. Mineral Ave. to W. Nichols Ave. will consist of two travel lanes in each direction with a continuous raised center median with only one break for the RiverPark – North Site Access to accommodate left turn movements. This roadway segment shall be designed to accommodate large design vehicles (WB-67) as part of the regional roadway system, as well as for access to the adjacent commercial parcels.	Responsibility for the construction of S. Platte River Pkwy. from W. Mineral Ave to W. Nichols Ave. will be as follows: • The RiverPark developer will be responsible for funding the design and construction of one travel lane in each direction and raised center median to accommodate left turn movements. • The City of Littleton will be responsible for funding the design and construction of the remaining outside lanes of the roadway section. • The City of Littleton will be responsible for the design and construction of the roadway as part of the quadrant road solution.
S. Platte River Pkwy. (W. Nichols Ave. to south RiverPark property line)	The general laneage requirements for S. Plate River Pkwy. from W. Nichols Ave. to the RiverPark south property line will consist of one travel lane in each direction with a raised center median to define left turn lanes. This roadway section should match the roadway section for S. Platte River Pkwy. from. the Santa Fe Park north property line to W. Phillips Ave.	RiverPark Developer
S. Platte River Pkwy. (Santa Fe Park South north property line to W. Phillips Ave.)	The general laneage requirements for S. Plate River Pkwy. from the Santa Fe Park north property line to W. Phillips Ave. will consist of one travel lane in each direction with a raised center median to define left turn lanes. This roadway section should match the roadway section for S. Platte River Pkwy. from W. Nichols Ave. to the RiverPark south property line.	Santa Fe Park South Developer

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

ROADWAYS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy. (South of W. Phillips Ave.)	The general laneage requirements for S. Plate River Pkwy. south of W. Phillips Ave. will consist of one travel lane in each direction. This roadway segment shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for access to the commercial parcels.	Santa Fe Park South Developer
W. Nichols Ave.	The general laneage requirements for W. Nichols Ave. will consist of two travel lanes in each direction with a continuous raised center median with only one break for the RiverPark – East Site Access to accommodate left turn movements. The eastbound approach to the S. Santa Fe Dr. intersection will consist of a raised center median and dual left turn lanes. See recommendations for the S. Santa Fe Dr./W. Nichols Ave. and W. Nichols Ave./RiverPark – East Site Access intersections for further discussion. This roadway segment shall be designed to accommodate large design vehicles (WB-67) as part of the regional roadway system, as well as for access to the adjacent commercial parcels.	Responsibility for the construction of W. Nichols Ave. will be as follows: • The RiverPark developer will be responsible for funding the design and construction of one travel lane in each direction, single left turn lanes at intersections, and raised center medians that accommodate the left turn movements. • The City of Littleton will be responsible for funding the design and construction of the remaining outside lanes of the roadway section. • The City of Littleton will be responsible for the design and construction of the roadway as part of the quadrant road solution.
W. Phillips Ave.	The general laneage requirements for W. Phillips Ave. will consist of two eastbound travel lanes and one westbound travel lane with a continuous raised center median with only one break for the Santa Fe Park South – East Site Access 1 to accommodate left turn movements. The inside eastbound travel lane essentially provides necessary queue storage for the projected eastbound left turn movement at the S. Santa Fe Dr./W. Phillips Ave. intersection. Also, in order to accommodate the potential for future dual northbound left turn lanes at the S. Santa Fe Dr./W. Phillips Ave. intersection, additional right-of-way should be reserved to construct an additional westbound through lane to accommodate the required receiving lanes between S. Santa Fe Dr. and S. Platte River Pkwy. with the design and platting of the Santa Fe Park South development. This roadway segment shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for access to the commercial parcels.	Santa Fe Park South Developer

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
W. Mineral Ave./ S. Platte River Pkwy.	• Concurrent with the construction of the SW Quad Road and proposed RiverPark and Santa Fe Park South developments the following improvements are recommended for the S. Platte River Pkwy./W. Mineral Ave. intersection. o 2025 Buildout Analysis Horizon - The intersection will have actuated/coordinated traffic signal control with protected only left turn phasing all four approaches. The east leg of the intersection will consist of one left turn lane with a minimum of total of 250 feet of storage (The projected minimum storage requirement is 275 feet. However, until such time that CDOT allows the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection, the eastbound left turn lanes at the S. Santa Fe Dr./W. Mineral Ave. intersection cannot be removed restricting the available westbound left turn storage capacity at the S. Platte River Pkwy./W. Mineral Ave. intersection to its existing 250 feet.), two through lanes, and one right turn lane on the westbound approach, and three eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with a minimum total of 275 feet of required storage (400 feet existing), three through lanes, and a channelized right turn lane under yield control with a minimum of 350 feet of required storage (430 feet existing) on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will consist of dual left turn lanes, one through lane and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will consist of dual left turn lanes providing a combined total of approximately 650 feet of storage, one shared through/right turn lane, and one right turn lane (the shared through/right turn lane and right turn lane will provide a combined total of approximately 800 feet of storage) on the northbound approach and two southbound departure lanes. o 2040 Long Term Analysis Horizon - The only modification anticipated to be implemented at the intersection by the 2040 long term analysis horizon is adding an additional westbound left turn lane, increasing the capacity of the westbound left turn movement. This will be accomplished by eliminating the eastbound and westbound left turn lanes at the S. Santa Fe Dr./W. Mineral Avenue intersection and implementing the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection.	Responsibility for the implementation of improvements at this intersection will be as follows: • The RiverPark developer will be responsible for funding the following: o One left turn lane and one through/right turn lane on the northbound approach, and one southbound departure lane. o One eastbound right turn deceleration lane o 35% of the additional westbound left turn lane o All traffic signal equipment required • The City of Littleton will be responsible for funding the following: o 41% of the of the additional westbound left turn lane o Any improvements to the north leg of the intersection • The Santa Fe Park South developer will be responsible for funding the following: o 24% of the additional westbound left turn lane • The City will be responsible for the design and construction of the improvements. Since the northbound left turn queue is projected to exceed its capacity during the p.m. peak hour in both the 2025 buildout and 2040 long term analysis horizons it is anticipated that it will spill back into the S. Platte River Pkwy./RiverPark North Site Access intersection. Due to the geometric constraints of the intersection spacing this situation cannot be avoided. Also, the combined northbound shared through/right turn and right turn lanes will provide approximately 800 feet of storage capacity. The combined queue storage requirement is projected to be 818 feet in the 2025 buildout analysis horizon total traffic scenario spilling back into the proposed S. Platte River Pkwy./RiverPark North Site Access intersection. With the addition of the eastbound dual left turn lanes at the S. Santa Fe Dr./W. Nichols Ave. intersection it is projected that this queue storage requirement will drop to 537 feet and resolve the spill back issue. Exacerbating these operational issues is the fact that the projected eastbound left turn and through traffic queues at the S. Santa Fe Dr./W. Mineral Ave. intersection are anticipated to block the S. Platte River Pkwy./W. Mineral Ave. intersection northbound right turn traffic from entering the eastbound to northbound left turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. In addition, the southbound left turn traffic at the S. Platte River Pkwy./W. Mineral Ave. intersection will likely be blocked from entering the eastbound to southbound right turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. Due to the geometric constraints of the existing intersection spacing this situation cannot be avoided. Due to the proximity of the S. Platte River Pkwy./W. Mineral Ave. intersection to the S. Santa Fe Dr./W. Mineral Ave. intersection (approximately 550 feet stop bar to stop bar) and high traffic demand the queue from the westbound through lanes at the S. Platte River Pkwy./W. Mineral Ave. intersection is projected to continue to spillback through the S. Santa Fe Dr./W. Mineral Ave. intersection during the p.m. peak hour through the 2040 long-term analysis horizon. In addition, it is projected that the intersection, overall, will experience a failing level of service during p.m. peak hour in the 2025 buildout analysis horizon and during both the a.m. and p.m. peak hours by the 2040 long term analysis horizon. Multiple lane groups are projected to experience poor or failing levels of service in both analysis horizons during both the a.m. and p.m. peak hours. These issues would be resolved with the construction of the S. Santa Fe Dr./W. Mineral Ave. grade separated interchange.

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Santa Fe Dr./ W. Mineral Ave.	The S. Santa Fe Dr./W. Mineral Ave. intersection is anticipated to undergo the following modifications as part of the SW Quad Road interim improvements: • Initially, the intersection is anticipated to undergo the following modifications. The intersection will remain under actuated/coordinated traffic signal control with protected only left turn phasing on the eastbound, westbound approaches. The northbound and southbound left turn movements will be eliminated. The east leg of the intersection will consist of one left turn lane with approximately 425 feet of storage, two through lanes, and one right turn lane with approximately 375 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with approximately a total of 775 feet of storage, two through lanes, and right turn lane on the eastbound approach, and three westbound departure lanes. The north leg of the intersection will consist of three through lanes, and one right turn lane on the southbound approach and three northbound departure lanes. The south leg of the intersection will consist of three through lanes, and one right turn lane with approximately 650 feet of storage on the northbound approach and three southbound departure lanes. Prior to the 2040 long term analysis horizon the intersection is anticipated to undergo the following additional modifications. The eastbound and westbound left turn lanes will be eliminated resulting in the east leg of the intersection consisting of three through lanes and one right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of two through lanes and one right turn lane on the westbound approach, and four westbound departure lanes.	Responsibility for the implementation of improvements at this intersection will be as follows: • The RiverPark developer will be responsible for funding 4% of the intersection improvements based on entering traffic volume • The Santa Fe Park South developer will be responsible for funding 5% of the intersection improvements based on entering traffic volume • The City of Littleton will be responsible for funding 91% of the intersection improvements based on entering traffic volume • The City will be responsible for the design and construction of the improvements. It is projected that the operational characteristics will improve with the recommended improvements. However, the intersection will continue to experience poor operational conditions through the 2040 analysis horizon due to the high existing and projected traffic volumes entering this intersection. Mitigation of this condition will require implementation of the planned ultimate grade separated interchange of the S. Santa Fe Dr./W. Mineral Ave intersection.
W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./W. Aspen Grove Way	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./ W. County Line Rd.	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./ W. Nichols Ave.	The intersection will be constructed concurrently with the SW Quad Road and proposed RiverPark development as a “T” intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 420 feet of storage and one channelized free-flow right turn lane on the eastbound approach, and two westbound departure lanes. Initially, the dual eastbound left turn lanes will not be activated and should be striped out or right-of-way reserved for them. However, sometime prior to the 2040 long term analysis horizon it is anticipated that they will be activated, therefore they need to be accounted for in the initial construction. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control with a minimum of 500 feet of storage including the entrance taper on the southbound approach, and three northbound departure lanes. The south leg of the intersection will have dual left turn lanes with a minimum total of 770 feet of storage and two through lanes on the northbound approach, and three southbound departure lanes plus an eastbound to southbound right turn acceleration with a minimum length of 760 feet. By the 2040 long term analysis horizon it is projected that an additional northbound through lane will be constructed on S. Santa Fe Dr. passing through this intersection.	Responsibility for the construction of this intersection will be as follows: • The RiverPark developer will be responsible for funding the following: o One travel lane in each direction (the eastbound travel lane is the eastbound right turn lane at the intersection approach) and one left turn lane on the eastbound approach o One left turn lane on the northbound approach o The southbound right turn deceleration lane • The City of Littleton will be responsible for funding the following: o One left turn lane on the eastbound approach o One left turn lane on the northbound approach o All traffic signal equipment required • The City of Littleton will be responsible for the design and construction of the improvements. It is projected that the intersection will experience poor operational conditions through the 2040 analysis horizon due to the high existing and projected traffic volumes entering this intersection. Mitigation of this condition will require implementation of the planned ultimate grade separated interchange of the S. Santa Fe Dr./W. Mineral Ave intersection which will require closing the S. Santa Fe Dr./W. Nichols Ave. intersection.

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ W. Nichols Ave.	The intersection will be constructed concurrently with the SW Quad Road and proposed RiverPark development as a modified two-lane roundabout with yield control on the eastbound, westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane and one right turn by-pass lane on the westbound approach, and two eastbound departure lanes. The west leg of the roundabout will have will have one entrance lane on the eastbound approach, and one westbound departure lane. The north leg of the roundabout will have two entrance lanes on the southbound approach, and one northbound departure lane plus the westbound to northbound right turn by-pass departure lane. The south leg of the roundabout will have one entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate large design vehicles (WB-67) utilizing the truck apron, as necessary.	Responsibility for the construction of the roundabout will be as follows: • The RiverPark developer will be responsible for funding the design and construction of an equivalent single-lane roundabout. • The City of Littleton will be responsible for funding the remaining outside lanes of the roundabout. • The City of Littleton will be responsible for the design and construction of the modified two-lane roundabout as part of the quadrant road solution.
S. Platte River Pkwy./ RiverPark - North Site Access	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through lane and one right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through lane and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the northbound approach, and two southbound departure lanes.	Funding for the design and construction of the intersection will be the responsibility of the RiverPark developer. In order to mitigate the projected poor operational conditions (level of service and delay) of the eastbound and westbound left turn movements the following measures could be employed: Do nothing initially in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; provide guide/way finding signage that directs and encourages motorists to a desired route; restricting the eastbound and westbound left turn movements during peak hour periods; permanently restricting the eastbound and westbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection. The monitoring and evaluation of the operational conditions of the eastbound and westbound left turn movements and implementation of any mitigation measures will be the responsibility of the RiverPark Metropolitan District with approval by the City of Littleton.
W. Nichols Ave./ RiverPark - East Site Access	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum of 200 feet of storage, one through lane and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will have one shared left turn/through lane and one right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane and one right turn lane on the northbound approach, and one southbound departure lane.	Funding for the design and construction of the intersection will be the responsibility of the RiverPark developer. In order to mitigate the projected poor operational conditions (level of service and delay) of the northbound and southbound left turn movements the following measures could be employed: Do nothing initially in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; provide guide/way finding signage that directs and encourages motorists to a desired route; restricting the northbound and southbound left turn movements during peak hour periods; permanently restricting the northbound and southbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection. The monitoring and evaluation of the operational conditions of the northbound and southbound left turn movements and implementation of any mitigation measures will be the responsibility of the RiverPark Metropolitan District with approval by the City of Littleton.
S. Platte River Pkwy./ RiverPark - South Site Access 1	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	RiverPark Developer

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

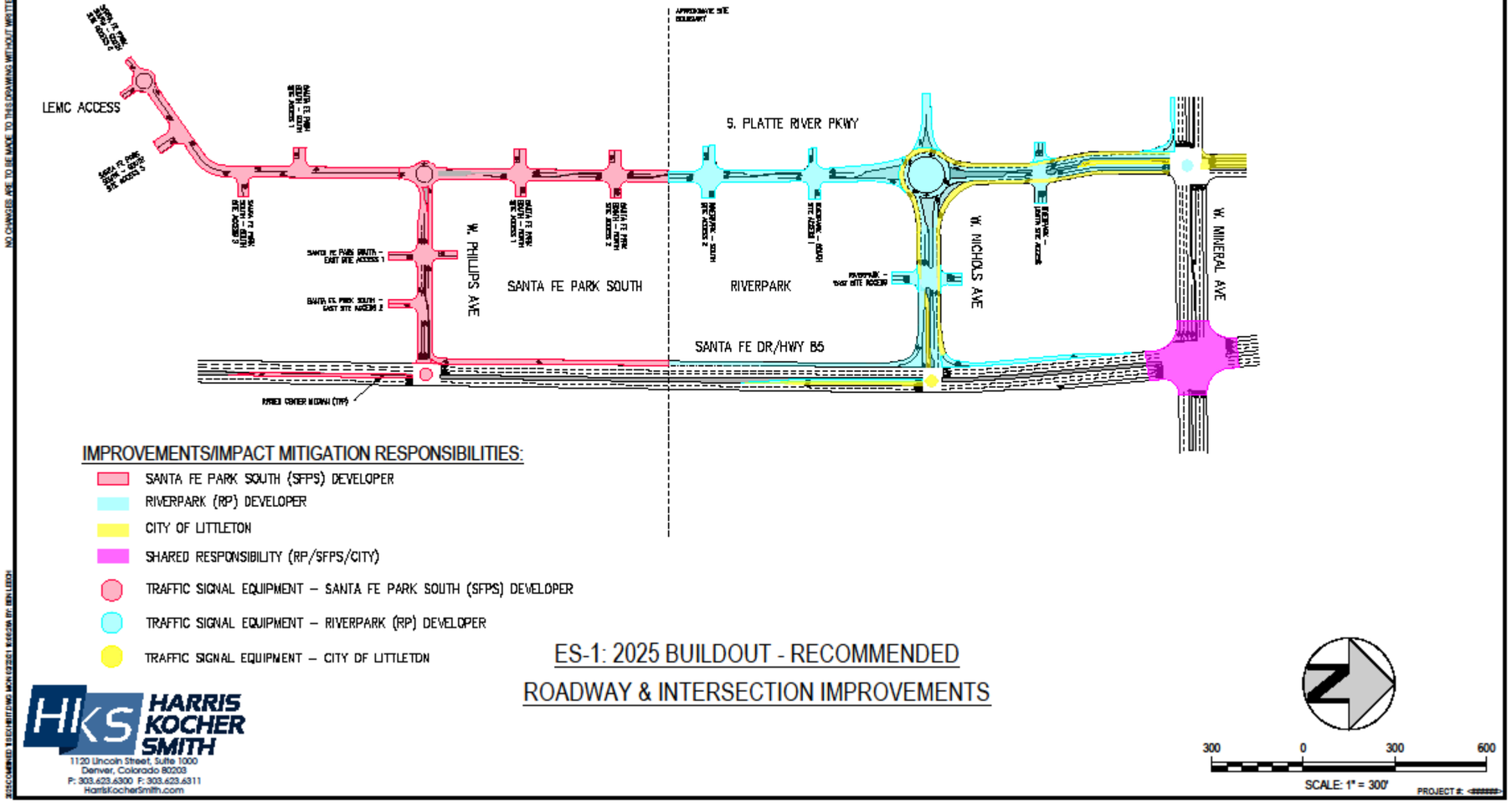
INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ RiverPark - South Site Access 2	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	RiverPark Developer
S. Platte River Pkwy./ W. Phillips Ave.	The intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for service delivery trucks utilizing the truck apron, as necessary.	Santa Fe Park South Developer
S. Santa Fe Dr./ W. Phillips Ave.	The intersection will be constructed concurrently with the Santa Fe Park South development and located north of the Dad Clark Gulch bridge, approximately 1,330 feet south of the proposed S. Santa Fe Dr./W. Nichols Ave. intersection (center to centerline) in order to provide a minimum of 1,260 feet for a continuous acceleration/deceleration lane between the two intersections. The intersection will be a “T” intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 250 feet of storage and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 510 feet of storage and two through lanes (anticipated to be widened to three through lanes by CDOT prior to 2040) on the northbound approach, and three southbound departure lanes.	Funding for the design and construction of the intersection, including all traffic signal equipment required, will be the responsibility of the Santa Fe Park South developer. Although a single northbound left turn lane can be designed to have sufficient capacity to accommodate the projected queues, the level of service of the movement is projected to fail. Providing dual left turn lanes would provide additional capacity for the northbound left turn movement and improve its operational characteristics (level of service and delay). However, the proximity of the Dad Clark Gulch bridge to the south of the intersection currently restricts the possibility of widening the median sufficiently to construct dual left turn lanes. CDOT’s plans for widening S. Santa Fe Dr. (US 85) to provide three through lanes in each direction will require the widening of the Dad Clark Gulch bridge which could potentially include widening the median to accommodate dual northbound left turn lanes. If this were to happen it would be the responsibility of CDOT and the City of Littleton. Additionally, in order to accommodate the dual northbound left turn lanes, additional right-of-way should be reserved to accommodate the potential future construction of an additional westbound lane on W. Phillips Ave. between S. Santa Fe Dr. and S. Platte River Pkwy. with the design and platting of the Santa Fe Park South development.
S. Platte River Pkwy./ Santa Fe Park South - North Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ Santa Fe Park South - North Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - East Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared left turn/through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - East Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the northbound approach and restricted to right turns only (RIRO). The east leg of the intersection will have one through lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one shared through/right turn lane and one through lane on the eastbound approach, and one westbound departure lane. The south leg of the intersection will have one right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the eastbound approach. The west leg of the intersection will have one shared left turn/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 3	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer

TABLE ES-1 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ Santa Fe Park South - South Access 4/LEMC Access	The intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for service delivery trucks utilizing the truck apron, as necessary.	Santa Fe Park South Developer



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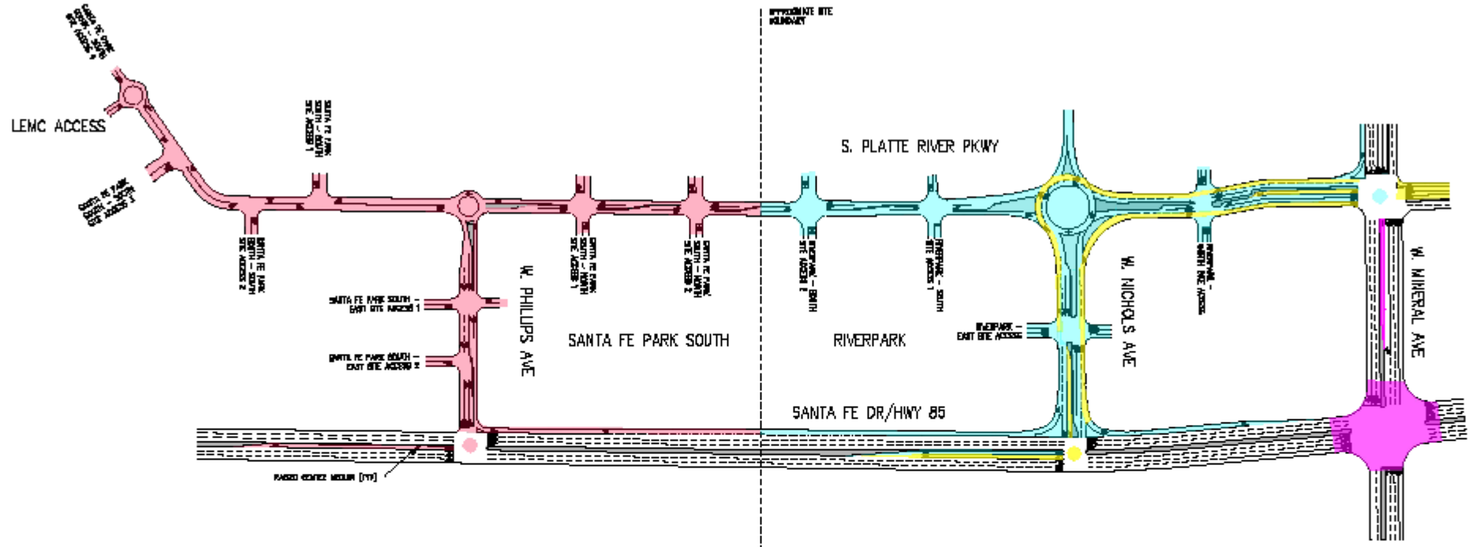

IMPROVEMENTS/IMPACT MITIGATION RESPONSIBILITIES:

- SANTA FE PARK SOUTH (SFPS) DEVELOPER
- RIVERPARK (RP) DEVELOPER
- CITY OF LITTLETON
- SHARED RESPONSIBILITY (RP/SFPS/CITY)
- TRAFFIC SIGNAL EQUIPMENT – SANTA FE PARK SOUTH (SFPS) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – RIVERPARK (RP) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – CITY OF LITTLETON

ES-2: 2040 LONG TERM - RECOMMENDED
ROADWAY & INTERSECTION IMPROVEMENTS

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300 0 300 600
SCALE: 1" = 300'
PROJECT #: 150605

I. INTRODUCTION

A. Project Overview

Evergreen Devco and Toll Brothers are planning to independently develop approximately 110.95 acres of property located along the west side of S. Santa Fe Dr. (US 85) between W. Mineral Ave. and the Littleton Equine Medical Center (LEMC) in Littleton, Colorado. The location of the overall development site is graphically depicted in Figure 1. Since the transportation system serving these two developments will essentially be integrated with one another the City of Littleton has requested that the traffic impact study incorporate both developments.

The Evergreen Devco parcel, to be known as RiverPark, contains approximately 33.34 acres and is situated in the southwest quadrant of the S. Santa Fe Dr./W. Mineral Ave. intersection. More specifically, the RiverPark parcel is currently undeveloped and is bound on the north by W. Mineral Ave., on the east by S. Santa Fe Dr. (U.S. 85), on the south by the proposed Santa Fe Park South parcel, and on the west by undeveloped property and the South Platte River corridor. Upon buildout, RiverPark will be a mixed use development consisting of commercial/retail, residential housing and senior living land uses. The commercial/retail parcel is planned to consist of 61,980sf of retail space, three fast-food restaurants with drive-through windows totaling 8,800sf (3,500sf, 3,300sf and 2,000sf, respectively), two 6,500sf high-turnover (sit-down) restaurants, and one 4,993sf convenience market with 16-fueling stations. The residential parcel is planned to consist of 270 multifamily housing units. The senior living parcel is planned to consist of a 168 unit congregate care facility. Figure 2 provides a conceptual site plan for the proposed RiverPark development.

The Toll Brothers parcel, to be known as Santa Fe Park South, contains approximately 77.61 acres and is situated immediately south of the proposed RiverPark site adjacent to the west side of S. Santa Fe Dr. More specifically, the Santa Fe Park South parcel is currently undeveloped and is bound on the north by the proposed River Park development site, on the east by S. Santa Fe Dr. (U.S. 85), on the south by the Littleton Equine Medical Center (LEMC) and the Wolhurst Mobile Home Community, and on the west by undeveloped property and the South Platte River corridor. Upon buildout, Santa Fe Park South will be a mixed use development consisting of commercial/retail and residential housing uses. The commercial/retail parcel is planned to consist of 15,000sf of retail space, two 2,500sf fast-food restaurants with drive-through windows, and two 5,000sf high-turnover (sit-down) restaurants. The residential parcel is planned to consist of 399 single-family attached housing units and 336 multifamily housing units. Figure 3 provides a conceptual site plan for the proposed Santa Fe Park South development.

The RiverPark and Santa Fe Park South developments will be served via an integrated internal roadway network providing connectivity to the S. Santa Fe Dr. and W. Mineral Ave. corridors. Due to the significant congestion and operational deficiencies being experienced along these corridors, and particularly at the S. Santa Fe Dr. (US 85)/W. Mineral Ave. intersection, the City of Littleton commissioned a study to develop recommendations for the mitigation of these issues. The study is entitled *Santa Fe & Mineral Intersection Study, Littleton, Colorado, November 2019* by HDR. The HDR study recognizes that the optimal solution to mitigate these issues may involve a grade-separated interchange that would carry an extremely high implementation cost. Without an identified funding source in the foreseeable future the HDR study also developed and evaluated a number of potential interim mitigation strategies that could be implemented in a shorter time frame and at a much lower cost. Based on the findings

contained in the HDR study, as well as Evergreen Devco's interest in developing the proposed RiverPark parcel, a "quadrant road" alternative aligned through the southwest quadrant of the S. Santa Fe Dr./W. Mineral Ave. intersection, referred to herein as the "SW Quad Road" would be pursued as the interim solution to relieve traffic congestion, improve operational efficiency and provide access for the proposed development. The premise of the SW Quad Road is to reroute the left turn movements at the S. Santa Fe Dr./W. Mineral Ave. intersection through the SW Quad Road allowing additional green time to be allocated to the through traffic movements, which would otherwise be needed for the left turn movements, thereby enhancing the overall capacity and operation of the intersection.

The general alignment of the basic "SW Quad Road" layout, developed in the HDR study, extends southerly from the W. Mineral Ave./S. Platte River Pkwy. intersection, through the Evergreen parcel, to intersect with S. Santa Fe Dr. As the Evergreen Devco team has been developing the site and land use plan for the proposed RiverPark development they have been working collaboratively with the City of Littleton to fine tune the SW Quad Road alignment, roadway section and access points to adequately serve the needs of the development, as well as achieve the objectives of addressing the congestion and operational issues plaguing the adjacent transportation system.

In addition to the SW Quad Road, the spine of the internal roadway network proposed to serve the RiverPark and Santa Fe Park South developments will include extending S. Platte River Pkwy. southerly from the SW Quad Road through the Santa Fe Park South development. Also, connectivity to S. Santa Fe Dr. will be provided via a new roadway, W. Phillips Ave., extending westerly from S. Santa Fe Dr. just north of Dad Clark Gulch to intersect with S. Platte River Pkwy. Upon completion the two developments will have multiple access points intersecting the internal spine roadways to provide direct connectivity to the adjacent transportation system. The general configuration of the internal spine roadway network and associated access points are graphically illustrated in Figure 1. Figures 2 and 3 provide a more detailed depiction of the internal transportation network and its connectivity to the adjacent transportation system.

B. Purpose of Study

The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed RiverPark and Santa Fe Park South developments on the study area intersections and roadway system. The study includes 2019 (existing), 2025 (year of anticipated buildout), and 2040 (long term) analysis horizons.

C. Study Area

The study area encompasses the existing roadway system in the vicinity of the proposed RiverPark and Santa Fe Park South development sites, as well as the proposed internal roadway system. Specifically, the following roadways and intersections are included in the analysis (Note: RP = RiverPark, SFP = Santa Fe Park South):

- Study Area Roadways
  - S. Santa Fe Dr. (US 85)
  - W. Mineral Ave.
  - "SW Quad Road" (S. Platte River Pkwy. and W. Nichols Ave.) (proposed)

- S. Platte River Pkwy. (south of the SW Quad Road) (proposed)

- Study Area Intersections
  - Key Intersections
    - S. Platte River Pkwy./W. Mineral Ave.
    - S. Santa Fe Dr./W. Mineral Ave.
    - W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.
    - S. Santa Fe Dr./W. Aspen Grove Way
    - S. Santa Fe Dr./W. County Line Rd.
    - S. Santa Fe Dr./W. Nichols Ave. (proposed)
    - S. Platte River Pkwy./W. Nichols Ave. (proposed)
    - S. Santa Fe Dr./W. Phillips Ave. (proposed)
    - S. Platte River Pkwy./W. Phillips Ave. (proposed)

  - Development Site Access Intersections/Driveways
    - S. Platte River Pkwy./RP North Access (proposed)
    - W. Nichols Ave./RP East Access (proposed)
    - S. Platte River Pkwy./RP South Access 1 (proposed)
    - S. Platte River Pkwy./RP South Access 2 (proposed)
    - S. Platte River Pkwy./SFP North Access 1 (proposed)
    - S. Platte River Pkwy./SFP North Access 2 (proposed)
    - S. Platte River Pkwy./SFP East Access 1 (proposed)
    - S. Platte River Pkwy./SFP East Access 2 (proposed)
    - S. Platte River Pkwy./SFP South Access 1 (proposed)
    - S. Platte River Pkwy./SFP South Access 2 (proposed)
    - S. Platte River Pkwy./SFP South Access 3 (proposed)
    - S. Platte River Pkwy./SFP South Access 4/LEMC Access (proposed)

Figures 1, 2 and 3 graphically illustrate the location of the study area roadways and intersections included in this study.

II. 2019 EXISTING CONDITIONS

A. 2019 Existing Traffic Volumes

The 2019 existing conditions analysis scenario peak hour traffic volumes were taken directly from *Figure 9: 2019 Final Balanced Turning Movement Volumes* in the HDR study for the following intersections:

- S. Platte Pkwy./W. Mineral Ave.
- S. Santa Fe Dr./W. Mineral Ave.
- W. Jackass Hill Rd./W. Long Ave./W. Mineral Ave.
- S. Santa Fe Dr./W. Aspen Grove Way

Since the S. Santa Fe Dr./W. County Line Rd. intersection was not included in the HDR study those volumes were forecast in the following manner. HDR provided 2030 peak hour background traffic forecasts they had developed in their preliminary analyses of the S. Santa Fe Dr. and Mineral Ave. corridors, which included the S. Santa Fe Dr./W. County Line Road

intersection. Based on these volumes and applying the forecast traffic volume growth rates developed in the HDR study, 2019 peak hour traffic volumes were forecast for the S. Santa Fe Dr./W. County Line Road intersection. These volumes were balanced with the other 2019 peak hour traffic volumes for consistency through the study area.

A summary of the 2019 existing peak hour intersection turning movement traffic volume counts are graphically illustrated in Figure 4.

B. 2019 Existing Conditions Roadway System

The existing roadway network in the vicinity of the proposed RiverPark and Santa Fe Park South developments is graphically illustrated in Figure 1. The study area includes the following existing roadways and intersections:

Study Area Roadways:

- **S. Santa Fe Dr. (U.S. 85).** – S. Santa Fe Dr. (U.S. 85) is a 4-lane principal arterial roadway under the jurisdiction of the Colorado Department of Transportation (CDOT). The CDOT access category for Santa Fe Dr. (U.S. 85) is E-X (Expressway). Adjacent to the proposed RiverPark and Santa Fe Park South developments the roadway section consists of two travel lanes in each direction with a continuous southbound right turn auxiliary lane. There is a painted center median with paved shoulders and drainage swales on both sides of the roadway. The posted speed limit is 50 mph.

- **W. Mineral Ave.** – W. Mineral Ave. is a 4-lane collector roadway. Within the study area the roadway section consists of two travel lanes in each direction with a raised center median, and curb-and-gutter on both sides of the roadway. West of S. Santa Fe Dr. there is a continuous right turn auxiliary lane in each direction and a 10-foot detached sidewalk on the north side of the roadway. East of S. Santa Fe Dr. there are on street bicycle lanes on both sides, and a 10-foot attached sidewalk on the north and a 6-foot detached sidewalk on the south side of the roadway. The posted speed limit is 45 mph.

- **S. Platte River Pkwy.** – S. Platte River Pkwy. north of W. Mineral Ave. (W. Mineral Ave. to Carson Dr.) is a 4-lane collector roadway. The roadway section consists of two travel lanes in each direction with a painted center median and curb-and-gutter on both sides. Essentially, this segment of S. Platte River Pkwy. provides one through travel lane in each direction with a series of right turn and left turn auxiliary lanes providing access to the multiple RTD Littleton/Mineral Station parking lots. The east side of the roadway has an 8-foot detached sidewalk. The west side of the roadway has a 5-foot attached sidewalk adjacent to the 7-Eleven store on the southwest corner of the W. Mineral Ave./S. Platte River Pkwy. intersection. The remainder of the west side of the roadway to Carson Dr. does not have a sidewalk. The posted speed limit is 30 mph.

Study Area Intersections:

- **S. Platte Pkwy./W. Mineral Ave.** – The S. Platte Pkwy./W. Mineral Ave. intersection is an actuated/coordinated signalized “T” intersection with protected/permitted left turn phasing on the eastbound approach. The east leg of the intersection has one left turn lane with approximately 250 feet of storage, two through lanes, and one continuous right turn auxiliary lane on the westbound approach, and four eastbound departure lanes (the

inside departure lane is the beginning of the outside eastbound to northbound left turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection). The west leg of the intersection has dual left turn lanes with approximately a total of 400 feet of storage and three through lanes on the eastbound approach (the outside through lane begins approximately 450 feet to the west of the intersection), and three westbound departure lanes. The outside westbound departure lane terminates as a right turn lane accessing the 7-Eleven store approximately 170 feet west of S. Platte River Pkwy. The north leg of the intersection has dual left turn lanes with approximately a total of 400 feet of storage and one continuous right turn lane on the southbound approach, and two northbound departure lanes.

- **S. Santa Fe Dr./W. Mineral Ave.** – The S. Santa Fe Dr./W. Mineral Ave. intersection is an actuated/coordinated signalized four-legged intersection with protected only left turn phasing on four approaches. The east leg of the intersection has one left turn lane with approximately 425 feet of storage, two through lanes, and one right turn lane with approximately 375 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection has dual left turn lanes with approximately a total of 775 feet of storage, two through lanes, and one channelized free right turn lane on the eastbound approach, and two westbound departure lanes plus a southbound to westbound channelized free right turn acceleration lane. The north leg of the intersection has dual left turn lanes with approximately a total of 1,100 feet of storage, two through lanes, and one channelized free right turn lane on the southbound approach, and two northbound departure lanes plus a westbound to northbound right turn acceleration lane that terminates in approximately 800 feet. The south leg of the intersection has dual left turn lanes with approximately a total of 1,100 feet of storage, two through lanes, and one right turn lane with approximately 650 feet of storage on the northbound approach, and two southbound departure lanes plus an eastbound to southbound channelized free right turn acceleration lane.

- **W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.** – The W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave. intersection is an actuated/coordinated signalized four-legged intersection with protected/permitted left turn phasing on the eastbound and westbound approaches and permitted left turn phasing on the northbound and southbound approaches. There are on-street bicycle lanes on all for legs of the intersection. The east leg of the intersection has one left turn lane with approximately 100 feet of storage, two through lanes, and one right turn lane with approximately 525 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection has one left turn lane with approximately 225 feet of storage, two through lanes, and one right turn lane with approximately 250 feet of storage on the eastbound approach, and two westbound departure lanes. The north leg of the intersection has one left turn lane with approximately 100 feet of storage, one through lane, and one right turn lane with approximately 50 feet of storage on the southbound approach, and one northbound departure lane. The south leg of the intersection has one left turn lane with approximately 150 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.

- **S. Santa Fe Dr./W. Aspen Grove Way** – The S. Santa Fe Dr./W. Aspen Grove Way intersection is an actuated/coordinated signalized “T” intersection with protected only left

turn phasing on the northbound approach. The west leg of the intersection has dual left turn lanes with approximately a total of 450 feet of storage and one right turn lane with approximately 225 feet of storage on the eastbound approach, and two westbound departure lanes. The north leg of the intersection has two through lanes and one right turn lane with approximately 425 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 600 feet of storage and two through lanes on the northbound approach, and three southbound departure lanes.

- **S. Santa Fe Dr./W. County Line Rd.** – The S. Santa Fe Dr./W. County Line Rd. intersection is an actuated/coordinated signalized four-legged intersection with split phasing on the eastbound and westbound approaches and protected only left turn phasing on the northbound and southbound approaches between 6:00 a.m. and 10:00 p.m. and protected/permitted left turn phasing between 10:00 p.m. and 6:00 a.m. The east leg of the intersection has dual left turn lanes with approximately a total of 500 feet of storage, one through lane, and one channelized free right turn lane on the westbound approach, and one eastbound departure lane plus a northbound to eastbound channelized free right turn acceleration lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage and shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 675 feet of storage, two through lanes, and one right turn lane with approximately 400 feet of storage on the southbound approach, and two northbound departure lanes plus a westbound to northbound channelized free right turn acceleration lane. The south leg of the intersection has one left turn lane with approximately 150 feet of storage, two through lanes, and one channelized free right turn lane on the northbound approach, and three southbound departure lanes.

C. 2019 Existing Conditions Operational Analysis

In order to establish a base condition in which to evaluate and compare the impacts of the traffic generated by the proposed RiverPark and Santa Fe Park South developments on the study area intersections, peak hour capacity analyses were performed for the 2019 existing conditions scenario. These analyses utilized the methodologies contained in the *Highway Capacity Manual 6th Edition* (HCM) employing *Synchro 10* software and resulted in a qualitative measure of the operational characteristics of the intersection described by a letter designation ranging from “A” to “F” known as “Level of Service” (LOS). LOS “A” represents free-flow operating conditions, whereas LOS “F” represents excessive congestion and delay. Unsignalized intersection capacity analysis reports a LOS designation for each impeded intersection movement. Signalized intersection capacity analysis reports the overall LOS designation for the intersection as well as for each lane group and approach. LOS “D” is considered the minimum acceptable standard of operation.

In addition to the geometric and intersection control parameters described above, the City of Littleton provided traffic signal timing plans for each of the existing study area intersections that were incorporated into the analysis.
The study area intersections included in the 2019 existing analysis are as follows:

- S. Platte Pkwy./W. Mineral Ave.
- S. Santa Fe Dr./W. Mineral Ave.
- W. Mineral Ave. /W. Jackass Hill Rd./W. Long Ave.
- S. Santa Fe Dr./W. Aspen Grove Way
- S. Santa Fe Dr./W. County Line Rd.

The results of the 2019 existing conditions operational analysis are summarized in Table 1, below. Figure 5 graphically illustrates the results of the 2019 existing conditions analysis. A detailed summary of the results of this analysis for each lane group is provided in Appendix "A" and detailed *Synchro 10* software intersection capacity analysis reports are provided in Appendix "B".

As shown in Table 1, below, all of the existing study area intersections are shown to be operating at acceptable levels of service, overall, with the exception of the S. Santa Fe Dr./W. Mineral Ave. intersection under 2019 existing conditions. This is due to the intersection not having adequate capacity to serve the high traffic volumes on both S. Santa Fe Dr. and W. Mineral Ave.

D. 2019 Existing Conditions Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the existing study area intersections were computed utilizing the *Synchro 10* 95%tile reported queues. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group. The algorithm used in the Synchro 10 software to calculate traffic queues considers each intersection as being isolated (no upstream or downstream intersections) rather than as part of a network. As a result, potential traffic queue spillback at the study area intersections is not accounted for in the queue or delay calculations.

Queue spillback occurs when the vehicle queue(s) developed at a signalized or stop sign controlled intersection exceeds its lane storage capacity, thus "spilling back" into an adjacent lane or blocking entry into an auxiliary lane and impeding traffic flow. In addition, queue spillback may encroach into the upstream intersection(s) impacting its operation as well. The queuing analysis contained in this study evaluated the study area intersections for the following types of queue spillback impacts:

- Through lane traffic queue spillback blocking entry into left and/or right turn auxiliary lanes
- Left and/or right turn lane traffic queue spillback into adjacent through lanes
- Downstream intersection traffic queue spillback into and/or through upstream intersection(s)

Although the operational impacts of queue spillback is not taken into account in the Synchro 10 analysis models it is necessary to recognize that it can have a significant impact on the operational characteristics of an intersection and mitigation should be provided accordingly.

The queuing analysis contained in this study identifies areas of potential queue spillback that could impact the operational efficiency of the study area intersections and roadway segments and provides recommendations for practical mitigation measures.

Existing storage capacity for through lane groups is reported as the cumulative distance of all through lanes in the group to the next upstream intersection. Existing storage capacity for auxiliary lane groups (left turn and right turn lanes) is reported as the cumulative capacity of all lanes in the group or the distance to the next upstream intersection. Table 2 provides a summary of this analysis and comparison to the actual vehicle storage lengths provided for each of the existing study area intersections.

As shown in Table 2 the following queue related issues are being experienced at the existing study area intersections based on the reported queues in the 2019 existing conditions analysis scenario:

- **S. Platte River Pkwy./W. Mineral Ave.**
  - The southbound right turn lane is anticipated to exceed its capacity in the p.m. peak hour by spilling back through the RTD parking lot access intersection.

- **S. Santa Fe Dr./W. Mineral Ave.**
  - The westbound through lane queue is anticipated to block both the westbound left turn and right turn lanes during the p.m. peak hour.
  - The southbound through lane queue is anticipated to block the southbound left turn lane during the p.m. peak hour.

- **W. Mineral Ave./W. Jackass Hill Rd.**
  - The eastbound left turn lane queue is anticipated exceed its capacity and spill back into the eastbound through lane during both the a.m. and p.m. peak hours.
  - The eastbound through lane queue is anticipated to block both the eastbound left turn and right turn lanes during the a.m. peak hour.
  - The westbound through lane queue is anticipated to block both the westbound left turn and right turn lanes during both the a.m. and p.m. peak hours.
  - The southbound left and right turn lanes are anticipated to exceed their capacities and spill back into the through lanes during both the a.m. and p.m. peak hours.

- **S. Santa Fe Dr./ W. Aspen Grove Way**
  - The southbound through lane queue is anticipated to block southbound right turn lane during the p.m. peak hour.

- **S. Santa Fe Dr./W. County Line Rd.**
  - The northbound through lane queue is anticipated to block both the northbound left and right turn lanes during both the a.m. and p.m. peak hours.

TABLE 1
2019 EXISTING CONDITIONS
SUMMARY OF OPERATIONAL ANALYSIS

INTERSECTION	CONTROL	APPROACH	AM PEAK		PM PEAK	
			LOS	DELAY (SEC)	LOS	DELAY (SEC)
W. Mineral Ave. & S. Platte River Pkwy.	Signalized	Northbound	-	-	-	-
		Southbound	C	28.1	E	79.4
		Eastbound	C	29	B	18.9
		Westbound	C	27.1	D	36.5
		Intersection	**C**	**28.5**	**D**	**38.4**
S. Santa Fe Dr. & W. Mineral Ave.	Signalized	Northbound	F	116.5	F	93.9
		Southbound	E	67.3	F	186.3
		Eastbound	F	209.3	F	86
		Westbound	E	72.1	F	142.7
		Intersection	**F**	**115.5**	**F**	**132.4**
W. Mineral Ave. & W. Jackass Hill Rd.	Signalized	Northbound	C	29.3	C	22.4
		Southbound	C	34.3	C	26.6
		Eastbound	D	42.4	C	20.8
		Westbound	D	36.6	C	25.6
		Intersection	**D**	**39**	**C**	**23.9**
S. Santa Fe Dr. & W. Aspen Grove Way	Signalized	Northbound	A	0.3	A	6.2
		Southbound	A	7.7	C	29
		Eastbound	E	78	F	98.7
		Westbound	-	-	-	-
		Intersection	**A**	**7.1**	**C**	**24.1**
S. Santa Fe Dr. & W. County Line Rd.	Signalized	Northbound	C	33.2	D	44
		Southbound	E	56.3	C	32.5
		Eastbound	F	84.6	F	108
		Westbound	E	74.5	F	95.8
		Intersection	**D**	**44.6**	**D**	**46.4**

TABLE 2
2019 EXISTING CONDITIONS
SUMMARY OF QUEUING ANALYSIS

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (CUMULATIVE) (FT)	
		AM PEAK	PM PEAK
S Platte River Pkwy/W Mineral Ave (Signalized)			
a. EB L (2)	400	41	139
b. EB T (3)	8075	434	188
c. WB L/UT (1)	250	0	0
d. WB T (2)	1100	412	1018
e. WB R (1)	500	174	87
f. SB L (2)	500	67	330
g. SB R (1)	250	0	458
S Santa Fe Dr/W Mineral Ave (Signalized)			
a. EB L (2)	775	144	112
b. EB T (2)	1100	980	516
c. EB R (1)	550	137	99
d. WB L (1)	425	297	178
e. WB T (2)	2450	337	1140
f. WB R (1)	375	167	123
g. NB L (2)	1175	234	548
h. NB T (2)	6250	1208	1292
i. NB R (1)	650	51	53
j. SB L (2)	1100	347	173
k. SB T (2)	4500	1007	1709
l SB R (1)	2250	0	0
Jackass Hill Rd/W Mineral Ave (Signalized)			
a. EB L (1)	225	255	243
b. EB T (2)	2500	641	184
c. EB R (1)	250	0	17
d. WB L (1)	100	7	5
e. WB T (2)	5700	257	358
f. WB R (1)	525	47	40
g. NB L (1)	150	141	86
h. NB TR (1)	425	98	46
i. SB L (1)	100	277	186
j. SB T (1)	530	25	48
k. SB R (1)	50	67	123

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (CUMULATIVE) (FT)	
		AM PEAK	PM PEAK
S Santa Fe Dr/W Aspen Grove Way (Signalized)			
a. EB L (2)	450	82	119
b. EB R (1)	225	59	108
c. NB L (1)	600	7	177
d. NB T (2)	4460	409	201
e. SB T (2)	6300	531	1668
f. SB R (1)	425	11	32
S Santa Fe Dr/W County Line Rd (Signalized)			
a. EB L (1)	100	54	77
b. EB TR (1)	385	54	30
c. WB L (2)	500	108	340
d. WB T (1)	1500	19	54
e. WB R (1)	100	0	0
f. NB L (1)	150	0	61
g. NB T (2)	1400	1256	1032
h. NB R (1)	500	0	0
i. SB L (1)	675	565	571
j. SB T (2)	3000	153	338
k. SB R (1)	400	0	1

Legend

- Turn lane queue spills into thru lane
- Queue spills back into upstream intersection
- Through lane queue blocks LT lane
- Through lane queue blocks RT lane
- Through lane queue blocks LT & RT lanes

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III. BACKGROUND TRAFFIC

Background traffic volume forecasts were developed for two analysis horizons in this study. They include the following:

- **2025 Buildout Analysis Horizon** - The 2025 buildout analysis horizon evaluates the background (no development) and total (background +full development) traffic condition scenarios for the year of anticipated full buildout and occupancy of both the RiverPark and Santa Fe Park South developments. The internal and external roadway improvements associated with the developments are assumed to be in place which includes the SW Quad Road.

- **2040 Long Term Analysis Horizon** – The 2040 long term analysis horizon evaluates the background (no development) and total (background +full development) traffic condition scenarios for the design year of the study. The 2040 long term analysis horizon establishes the design parameters and recommendations for the transportation related improvements associated with the RiverPark and Santa Fe Park South developments. The SW Quad Road and associated improvements are assumed to be in place for the 2040 long term analysis horizon.

The following describes the methodology and parameters used, and results of the analysis of the 2025 buildout and 2040 long term background traffic scenarios for this study.

A. Background Traffic Volumes

Background traffic volume forecasts for the 2025 buildout and 2040 long term analysis horizons were developed for this study utilizing the following methodology:

- Background traffic volumes for the 2025 buildout and 2040 long term analysis horizons are based on the 2019 existing traffic volumes.

- Traffic volume growth rates, taken directly from the HDR study, were applied to the 2019 existing traffic volumes assuming no geometric modifications are made to the existing study area intersections. This establishes a base condition in which traffic can be rerouted based on various future geometric modifications to establish the 2025 buildout and 2040 long term background traffic volumes.

- Traffic volume growth rates applied to the 2019 existing traffic volumes are as follows:
  - 0.9% average annual growth rate was used to forecast the traffic volumes on W. Mineral Ave., the proposed SW Quad Road, and all turning movements on to and off of S. Santa Fe Dr.
  - 2.4% average annual growth rate used to forecast the through traffic volumes on S. Santa Fe Dr.

- The base (existing geometric configuration of the study are roadway network - no SW Quad Rd. and no modifications to the S. Santa Fe Dr./W. Mineral Ave. intersection) 2025 buildout and 2040 long term background traffic volumes were balanced to provide consistency throughout the study area.

- The SW Quad Road layout was developed utilizing the layout described in the HDR study with modifications to serve the needs of the proposed RiverPark development.

- It was assumed that S. Platte River Pkwy. is not extended south of the SW Quad Road in the 2025 buildout and 2040 long term background traffic scenarios.

- The base condition (existing geometric configuration of the study are roadway network – no SW Quad Rd. and no modifications to the S. Santa Fe Dr./W. Mineral Ave. intersection) 2025 buildout and 2040 long term background traffic volumes were rerouted to the SW Quad Road layout study area roadways and intersections.

- For the purposes of this study it was assumed that the LEMC would not be redeveloped until sometime after 2025 but prior to 2040. Therefore, the projected site generated trips from the redevelopment of the LEMC were included in the background traffic scenario volume forecasts in the following manner:
  - The 2025 buildout background traffic volume scenario assumes that the LEMC has not been redeveloped.
  - The 2040 long term background traffic volume scenario assumes that the LEMC has been redeveloped and its sole access is via a new intersection at S. Santa Fe Dr. just north of Dad Clark Gulch (S. Santa Fe Dr./W. Phillips Ave.). The trips projected to be generated by the LEMC redevelopment were added to the 2040 long term background traffic volumes. Site trip generation, distribution and assignment calculations for the assumed redevelopment of the LEMC are provided in Appendix "C".
  - For the 2040 long term total traffic volume scenario it was assumed that S. Platte River Pkwy. will be extended south of the SW Quad Road to provide connectivity between W. Mineral Ave. and the proposed S. Santa Fe Dr./W. Phillips Ave. intersection. Therefore, for the 2040 long term total traffic volume scenario the background traffic component was adjusted to reflect the distribution of the projected LEMC redevelopment trips utilizing the extension of S. Platte River Pkwy.

Figures 6 and 7 graphically illustrate the projected background traffic volumes for the 2025 buildout and 2040 long term analysis horizons, respectively.

B. Background Traffic Roadway System

The existing roadway network in the vicinity of the proposed RiverPark and Santa Fe Park South developments will be modified to include the SW Quad Road system, as well as other regional improvements. These modifications include the following for the 2025 buildout and 2040 long term analysis horizons background traffic scenarios:

Study Area Roadways:

- **S. Santa Fe Dr. (U.S. 85).**
  - 2025 Buildout Analysis Horizon - S. Santa Fe Dr. is not anticipated to undergo any modifications through the 2025 buildout analysis horizon (addition of through laneage).

- 2040 Long Term Analysis Horizon – By the 2040 long term analysis horizon S. Santa Fe Dr. is anticipated to be modified to include three through travel lanes in both directions through the study area.

- **W. Mineral Ave.**
  - 2025 Buildout and 2040 Long Term Analysis Horizons - W. Mineral Ave. is not anticipated to undergo any modifications through the 2040 analysis horizon(addition of through laneage).

- **SW Quad Road**
  - 2025 Buildout and 2040 Long Term Analysis Horizons – The SW Quad Road will consist of two travel lanes in each direction and have a posted speed limit of 35mph. The north/south segment (S. Platte River Pkwy.) will extend southerly approximately 870 feet from the W. Mineral Ave./S. Platte River Pkwy. intersection to intersect with its east/west segment (W. Nichols Ave.). From this intersection the east/west segment will extend easterly approximately 650 feet to intersect with S. Santa Fe Dr.

Study Area Intersections:

- **S. Platte River Pkwy./W. Mineral Ave.**
  - 2025 Buildout and 2040 Long Term Analysis Horizons – The S. Platte River Pkwy./W. Mineral Ave. intersection will be modified to an actuated/coordinated signalized four-legged intersection with protected only left turn phasing on all four approaches. It is anticipated that the east leg of the intersection will maintain its existing single eastbound left turn lane through the 2025 buildout analysis horizon. At such time that the eastbound dual left turn lanes are removed at the S. Santa Fe Dr./W. Mineral Ave. intersection, anticipated to be prior to the 2040 long term analysis horizon, dual westbound left turn lanes will be constructed. The remainder of the east leg of the intersection will have two through lanes, and one right turn lane on the westbound approach, and four eastbound departure lanes. The west leg of the intersection will have dual left turn lanes, three through lanes and one channelized right turn lane on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will have dual left turn lanes, one through lane and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have dual left turn lanes, one shared through/right turn lane and one right turn lane, and two southbound departure lanes.

- **S. Santa Fe Dr./W. Mineral Ave.**
  - 2025 Buildout Analysis Horizon – The S. Santa Fe Dr./W. Mineral Ave. intersection will be modified to an actuated/coordinated signalized four-legged intersection with protected only left turn phasing on the eastbound and westbound approaches. The east leg of the intersection will have one left turn lane, two through lanes, and one right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have dual left turn lanes, two through lanes, and one right turn lane on the eastbound approach, and three westbound departure lanes. The north leg of the intersection will have three through lanes, and one right turn lane on the southbound approach, and three northbound departure lanes. The south leg of the intersection will have three through lanes, and one right turn lane on the northbound approach, and three southbound departure lanes.

- 2040 Buildout Analysis Horizon – The S. Santa Fe Dr./W. Mineral Ave. intersection will be modified to include actuated/coordinated signalization eliminating left turn movements on all four approaches. The east leg of the intersection will have three through lanes, and one right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have two through lanes, and one right turn lane on the eastbound approach, and three westbound departure lanes. The north and south legs of the intersection will not have any additional modifications.

- **W. Jackass Hill Rd./W. Long Ave./W. Mineral Ave.**
  - The W. Jackass Hill Rd./W. Long Ave./W. Mineral Ave. intersection is not anticipated to undergo any geometric or operational modifications through the 2040 long term analysis horizon.
- **S. Santa Fe Dr./W. Aspen Grove Way**
  - The S. Santa Fe Dr./W. Aspen Grove Way intersection is not anticipated to undergo any geometric or operational modifications through the 2040 long term analysis horizon.
- **S. Santa Fe Dr./W. County Line Rd.**
  - 2025 Buildout Analysis Horizon - The S. Santa Fe Dr./W. County Line Rd. intersection is not anticipated to undergo any geometric or operational modifications through the 2025 buildout analysis horizon.

  - 2040 Long Term Analysis Horizon - The S. Santa Fe Dr./W. County Line Rd. intersection will be modified by the 2040 analysis horizon to include three through travel lanes on the northbound and southbound approaches. The westbound through lane will be eliminated by combining it with the westbound left turn lane. Also, the westbound channelized free right turn lane will be converted to yield control due to the addition of the northbound through lane eliminating the westbound to northbound right turn acceleration lane.

- **S. Santa Fe Dr./W. Nichols Ave.**
  - 2025 Buildout Analysis Horizon – The S. Santa Fe Dr./W. Nichols Ave. intersection will be an actuated/coordinated signalized “T” intersection with protected only left turn phasing on the northbound approach. The intersection will be located approximately 870 linear feet south of the S. Santa Fe Dr./W. Mineral Ave. intersection (centerline to centerline). The west leg of the intersection will have one channelized free-flow right turn lane on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have dual left turn lanes and two through lanes on the northbound approach, and three southbound departure lanes plus an eastbound to southbound right turn acceleration lane.

  - 2040 Long Term Analysis Horizon - The S. Santa Fe Dr./W. Nichols Ave. intersection will be modified by the 2040 analysis horizon to include actuated/coordinated signalization with protected only left turn phasing on the eastbound and northbound

approaches. The west leg of the intersection will add dual left turn lanes. The north leg of the intersection will not require any modifications. The south leg of the intersection will add one through travel lane.

- **S. Platte River Pkwy./W. Nichols Ave.**
  - 2025 Buildout and 2040 Long Term Analysis Horizons – The S. Platte River Pkwy./W. Nichols Ave. intersection is proposed to be a modified two-lane roundabout. The east leg of the roundabout will have one entrance lane and one right turn bypass lane on the westbound approach, and two eastbound departure lanes. The west leg of the roundabout will have one entrance lane on the eastbound approach, and one westbound departure lane. The north leg of the roundabout will have two entrance lanes on the southbound approach, and one northbound departure lane plus a westbound to northbound right turn bypass lane. The south leg of the roundabout will have one entrance lane on the northbound approach and southbound departure lane.

S. Santa Fe Dr./W. Phillips Ave.

- 2025 Buildout Analysis Horizon – It is assumed that the S. Santa Fe Dr./W. Phillips Ave. intersection will not be constructed prior to the 2025 buildout analysis horizon if development does not occur on the Santa Fe Park South or LEMC properties.

- 2040 Long Term Analysis Horizon – Assuming that the LEMC property will be redeveloped prior to the 2040 long term analysis horizon the S. Santa Fe Dr./W. Phillips Ave. intersection will be required even if the Santa Fe Park South development does not move forward. The intersection will consist of an actuated/coordinated signalized “T” intersection with protected only left turn phasing on the northbound approach. The west leg of the intersection will have one left turn lane and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control on the southbound approach, and three northbound departure lanes. The south leg of the intersection will have one left turn lane and three through lanes on the northbound approach, and three southbound departure lanes.

C. Background Traffic Operational Analysis

The following study area intersections were analyzed for the 2025 buildout and 2040 long term analysis horizons background traffic scenarios:

- S. Platte River Pkwy./W. Mineral Ave.
- S. Santa Fe Dr./W. Mineral Ave.
- W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.
- S. Santa Fe Dr./W. Aspen Grove Way
- S. Santa Fe Dr./W. County Line Rd.
- S. Santa Fe Dr./W. Nichols Ave.
- S. Platte River Pkwy./W. Nichols Ave.
- S. Santa Fe Dr./W. Phillips Ave. (2040 long term analysis horizon only)

The results of the background traffic operational analyses are summarized in Table 3, below. Figures 8 and 9 graphically illustrate the results of the 2025 buildout and 2040 long term

analysis horizons background traffic analysis scenarios, respectively. A detailed summary of the results of these analyses for each lane group is provided in Appendix “A” and detailed *Synchro 10* software intersection capacity analysis reports are provided in Appendix “B”.
As shown in Table 3, and Appendix “A”, all of the study area intersections are projected to operate at acceptable levels of service, overall, with the exception of the S. Santa Fe Dr./W. Mineral Ave. and S. Santa Fe Dr./W. County Line Rd. intersections in the 2025 buildout analysis horizon background traffic scenario. As in the 2019 existing condition, the poor operational performance of the S. Santa Fe Dr./W. Mineral Ave. intersection is due to the intersection lacking adequate capacity to serve the high traffic demand on both S. Santa Fe Dr. and W. Mineral Ave. even with the addition of the SW Quad Road modifications. Similarly, the poor operational performance of the S. Santa Fe Dr./W. County Line Rd. intersection is due to the intersection lacking adequate capacity to serve the high traffic demand on S. Santa Fe Dr.

Although the other study area intersections are projected to operate at acceptable levels of service, overall, in the 2025 buildout analysis horizon background traffic scenario, the S. Platte River Pkwy./W. Mineral Ave., S. Santa Fe Dr./W. Mineral Ave., W. Mineral Ave./W. Jackass Hill Rd., S. Santa Fe Dr./W. Aspen Grove Way, S. Santa Fe Dr./W. County Line Rd., and Santa Fe Dr./W. Nichols Ave. intersections are projected to experience poor or failing levels of service for one or multiple lane groups. The S. Platte River Pkwy./W. Nichols Ave. roundabout is projected to operate at acceptable levels of service, overall, as well as for all individual lane groups.

By prohibiting the eastbound left turn movement at the proposed S. Santa Fe Dr./W. Nichols Ave. intersection and retaining the eastbound and westbound left turn lanes at the S. Santa Fe Dr./W. Mineral Ave. intersection once the SW Quad Road is constructed the operational benefits of the proposed quadrant road improvement will be diminished. In order to take full advantage of the SW Quad Road improvement the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection should be allowed and all left turn movements should be removed from the S. Santa Fe Dr./W. Mineral Ave. intersection by rerouting them through the quadrant road. This will effectually optimize the performance of the S. Santa Fe Dr./W. Mineral Ave. intersection by maximizing the reduction in overall vehicular delay and queuing experienced.

As background traffic volumes grow, by the 2040 long term analysis horizon it is projected that the S. Platte River Pkwy./W. Mineral Ave., S. Santa Fe Dr./W. Mineral Ave., S. Santa Fe Dr./W. Aspen Grove Way, and S. Santa Fe Dr./W. Nichols Ave., intersections will experience poor to failing levels of service, overall, as well as multiple individual lane groups. The S. Santa Fe Dr./W. Phillips Ave. intersection is projected to operate at acceptable levels of service overall, however, it will experience poor to failing levels of service for multiple lane groups. The S. Platte River Pkwy./W. Nichols Ave. roundabout is projected to operate at acceptable levels of service, overall, as well as for all individual lane groups.

D. Background Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the study area intersections were computed utilizing the *Synchro 10* 95%tile reported queues for the 2025 buildout and 2040 long term analysis horizons background traffic scenarios. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group. Table 4 provides a summary of this

analysis and comparison to the existing/proposed vehicle storage lengths provided for each of the study area intersections.

As shown in Table 4 the following queue related issues are projected to be experienced at the study area intersections based on the reported queues in the 2025 buildout and 2040 long term analysis horizon background traffic analysis scenarios:

- **S. Platte River Pkwy./W. Mineral Ave.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The westbound through lane queue is projected to exceed its capacity and spill back into the S. Santa Fe Dr./W. Mineral Ave. intersection, as well as block both the westbound left turn and right turn lanes during the p.m. peak hour.
  - The southbound right turn lane is projected to exceed its capacity in the p.m. peak hour by spilling back through the RTD parking lot access intersection.

- **S. Santa Fe Dr./W. Mineral Ave.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound through lane queue is projected to exceed its capacity and spill back into the S. Platte River Pkwy./W. Mineral Ave. intersection, as well as block the eastbound left turn lanes during the a.m. peak hour. During the p.m. peak hour the eastbound through lanes are projected to have sufficient capacity but will block the eastbound left turn lanes.
  - The eastbound right turn lane queue is projected to exceed its capacity and spill back into the S. Platte River Pkwy./W. Mineral Ave intersection during the p.m. peak hour and also during the a.m. peak hour by the 2040 long term analysis horizon.
  - The westbound through lane queue is anticipated to block both the westbound left turn and right turn lanes during the p.m. peak hour.

- **W. Mineral Ave./W. Jackass Hill Rd.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound left turn lane queue is projected exceed its capacity and spill back into the eastbound through lane during the p.m. peak hour.
  - The eastbound through lane queue is projected to block both the eastbound left turn and right turn lanes during the a.m. peak hour.
  - The westbound through lane queue is anticipated to block the westbound left turn lane during both the a.m. and p.m. peak hours.
  - The northbound left turn queue is projected to exceed its capacity during the 2040 long term analysis horizon and spill back into the northbound through lane during the a.m. peak hour.
  - The southbound left and right turn lanes are anticipated to exceed their capacities and spill back into the southbound through lanes during both the a.m. and p.m. peak hours.

- **S. Santa Fe Dr./ W. Aspen Grove Way**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound right turn lane queue is projected exceed its capacity and spill back into the upstream intersection by the 2040 long term analysis horizon p.m. peak hour.

- The northbound through lane queue is projected to block the northbound left turn lane during the a.m. peak hour.
- The southbound through lane queue is projected to block southbound right turn lane during the p.m. peak hour by the 2025 buildout analysis horizon and during both the a.m. and p.m. peak hours by the 2040 long term analysis horizon.

- **S. Santa Fe Dr./W. County Line Rd.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The westbound right turn lane is projected to spillback into the W. County Line Rd./Southpark Cir. intersection by the 2040 long term analysis horizon p.m. peak hour.
  - The northbound through lane queue is projected to exceed its capacity and spill back into the S. Santa Fe Dr./Eastbound C-470 Ramps intersection, as well as block both the northbound left turn and right turn lanes during both the a.m. and p.m. peak hours. This will be mitigated by the 2040 long term analysis horizon with the addition of a third northbound through lane except for blocking the left turn lane.
  - The southbound left turn queue is projected to exceed its capacity and spill back into the southbound through lanes during the 2025 buildout analysis horizon p.m. peak hour.

- **S. Santa Fe Dr./W. Nichols Ave.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The southbound through lane queue is projected to block the southbound right turn lane by the 2040 long term analysis horizon p.m. peak hour.

- **S. Platte River Pkwy./W. Nichols Ave. Roundabout**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The southbound through lane queue is projected spill back into the S. Platte River Pkwy./RiverPark North Access intersection by the 2040 long term analysis horizon p.m. peak hour.

- **S. Santa Fe Dr./W. Phillips Ave.**
  2025 Buildout and 2040 Long Term Analysis Horizons
  - There are no queuing issues associated with this intersection.

TABLE 3
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
BACKGROUND TRAFFIC SCENARIO SUMMARY OF OPERATIONAL ANALYSIS

INTERSECTION	CONTROL	APPROACH	BACKGROUND TRAFFIC HORIZON							
			2025 BUILDOUT				2040 LONG TERM			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)
W. Mineral Ave. & S. Platte River Pkwy.	Signalized	Northbound	D	50.2	F	90.5	E	58.5	F	132.4
		Southbound	E	77.7	F	114.5	E	75.5	F	101.1
		Eastbound	D	45.2	D	50.1	D	52.8	E	73.6
		Westbound	B	16.4	C	23.8	C	33.1	F	128.2
		Intersection	**D**	**42.2**	**D**	**53.2**	**D**	**50.1**	**F**	**114.7**
S. Santa Fe Dr. & W. Mineral Ave.	Signalized	Northbound	D	54.4	D	36.5	F	139.7	D	37.1
		Southbound	F	86.7	E	54.9	F	163.4	F	97
		Eastbound	F	89.4	E	70	F	152	F	149.6
		Westbound	E	57.2	E	79.3	C	31.4	F	136.2
		Intersection	**E**	**74.5**	**E**	**57.8**	**F**	**137.9**	**F**	**93.2**
W. Mineral Ave. & W. Jackass Hill Rd.	Signalized	Northbound	C	29.6	C	23.7	C	32.8	C	30.1
		Southbound	D	35	C	28.6	D	40.4	D	42.6
		Eastbound	D	54.6	B	19.4	E	63.6	B	19.7
		Westbound	D	37.1	C	29.3	D	40.7	D	37.4
		Intersection	**D**	**45.9**	**C**	**25.4**	**D**	**52.5**	**C**	**31.6**
S. Santa Fe Dr. & W. Aspen Grove Way	Signalized	Northbound	B	10.7	B	17.3	F	105.9	E	55.2
		Southbound	B	11.7	E	55.6	F	119.2	F	260
		Eastbound	F	84.9	F	317.6	F	133.2	F	380.6
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**B**	**14.2**	**D**	**54.1**	**F**	**113.1**	**F**	**180.5**
S. Santa Fe Dr. & W. County Line Rd.	Signalized	Northbound	E	57.4	E	65.6	D	36.8	D	49.2
		Southbound	E	65.8	D	38.6	D	42.8	D	50.7
		Eastbound	F	84.5	F	103.1	F	83.4	F	102.1
		Westbound	E	74.3	F	97.6	E	73.9	E	78
		Intersection	**E**	**61.7**	**E**	**57.9**	**D**	**40.9**	**D**	**52.5**
S. Santa Fe Dr. & W. Nichols Ave.	Signalized	Northbound	B	10.5	B	11.7	C	20.4	D	41.5
		Southbound	A	0.1	A	0.1	A	1.2	F	81.5
		Eastbound	A	0	A	0	F	80.6	F	91
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**A**	**5.4**	**A**	**5.4**	**B**	**13.4**	**E**	**62**
S. Platte River Pkwy. & W. Nichols Ave.	Round-about	Northbound	-	-			-	-	-	-
		Southbound	A	5.6	A	5.4	B	14.2	B	10.6
		Eastbound	-	-	-	-	-	-	-	-
		Westbound	A	0	A	0	A	0	A	0
		Intersection	**A**	**2.1**	**A**	**1.8**	**A**	**7.6**	**A**	**4.7**
S. Santa Fe Dr. & W. Phillips Ave.	Signalized	Northbound	-	-	-	-	A	6.3	A	8.7
		Southbound	-	-	-	-	B	13	E	65.9
		Eastbound	-	-	-	-	E	76.1	F	90.5
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**-**	**-**	**-**	**-**	**B**	**10.5**	**D**	**41.1**

TABLE 4
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
BACKGROUND TRAFFIC SCENARIO
SUMMARY OF QUEUING ANALYSIS

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (CUMULATIVE) (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
S. Platte River Pkwy/W Mineral Ave (Signalized)					
a. EB L (2)	400	138	223	156	273
b. EB T (3)	8075	581	260	704	305
c. EB R (1)	430	93	63	422	83
d. WB L (1/2)	250/900	16	134	196	200
e. WB T (2)	1100	151	1183	133	1464
f. WB R (1)	500	62	70	36	158
g. NB L (2)	700	210	518	263	705
h. NB TR (1)	350	269	234	310	267
i. NB R (1)	325	129	64	78	66
j. SB L (2)	500	88	418	91	422
k. SB T (1)	250	0	0	27	85
l SB R (1)	250	0	515	17	613
S. Santa Fe Dr/W Mineral Ave (Signalized)					
a. EB L (2)	775	153	159	-	-
b. EB T (2)	1100	1135	717	1405	1015
c. EB R (1)	550	418	581	670	1024
d. WB L (1)	425	353	262	-	-
e. WB T (2/3)	2450/2875	263	1028	273	992
f. WB R (1)	375	267	196	334	288
g. NB T (3)	2610	833	743	1559	1357
h. NB R (1)	650	101	80	224	186
i. SB T (3)	6750	1003	1218	1645	2033
j. SB R (1)	2250	70	399	83	404
Jackass Hill Rd/W Mineral Ave (Signalized)					
a. EB L (1)	225	156	233	69	297
b. EB T (2)	2500	703	192	703	250
c. EB R (1)	250	0	17	0	18
d. WB L (1)	100	7	5	5	4
e. WB T (2)	5700	288	424	334	591
f. WB R (1)	525	51	45	48	46
g. NB L (1)	150	142	91	180	106
h. NB TR (1)	425	100	47	125	56
i. SB L (1)	100	285	200	433	265
j. SB T (1)	530	24	49	27	58
k. SB R (1)	50	65	81	81	125
S. Santa Fe Dr/W Aspen Grove Way (Signalized)					
a. EB L (2)	450	86	138	98	171
b. EB R (1)	225	85	166	203	256
c. NB L (1)	600	36	350	32	307
d. NB T (2)	4460	1244	453	1380	886
e. SB T (2)	6300	814	2073	2309	3772
f. SB R (1)	425	12	24	10	56

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (CUMULATIVE) (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
S. Santa Fe Dr/W County Line Rd (Signalized)					
a. EB L (1)	100	53	65	66	71
b. EB TR (1)	385	53	30	62	30
c. WB L (2)	500	111	369	143	352
d. WB T (1)	1500	19	54	-	-
e. WB LT (1)	1500	-	-	146	346
f. WB R (1)	1500	0	0	610	1696
g. NB L (1)	150	0	61	0	84
h. NB T (2/3)	1400/2100	1597	1413	1479	1871
i. NB R (1)	500	0	0	0	0
j. SB L (1)	675	624	687	431	448
k. SB T (2/3)	3000/4500	236	510	433	1353
l SB R (1)	400	0	3	0	10
S. Santa Fe Dr/Nichols Ave (Signalied)					
a. EB L (2)	500	-	-	172	132
b. EB R (1)	250	0	0	0	0
c. NB L (2)	770	208	222	325	729
d. NB T (2)	3140	1004	1033	294	528
e. SB T (3)	2610	152	103	119	1579
f. SB R (1)	400	0	0	0	0
S. Platte River Pkwy/Nichols Ave (Roundabout)					
a. EB (1)	-	0	0	0	0
b. WB (2)	300	0	0	0	0
c. NB (1)	225	0	0	0	0
d. SB (2)	360	50	50	400	250
S. Santa Fe Dr/Phillips Ave (Signalized)					
a. EB L (2)	250	-	-	61	164
b. EB R (1)	150	-	-	25	70
c. NB L (1)	510	-	-	94	96
d. NB T (2)	3000	-	-	489	886
e. SB T (3)	4650	-	-	330	2379
f. SB R (1)	1550	-	-	0	21

Legend

- Turn lane queue spills into thru lane
- Queue spills back into upstream intersection
- Through lane queue blocks LT lane
- Through lane queue blocks RT lane
- Through lane queue blocks LT & RT lanes

HARRIS KOCHER SMITH

IV. PROJECT DEVELOPMENT

A. Trip Generation

Project trip generation projections for the proposed combined RiverPark and Santa Fe Park South developments were forecast utilizing the publication *Trip Generation, 10th Edition*, by the Institute of Transportation Engineers. Estimates of total daily traffic volume and AM and PM peak hour traffic volumes were calculated. Site generated trip reductions due to internal trip capture and transit use was considered and has been incorporated into the projections. Pass-by trips have also been incorporated into the projections.

Internal trip capture is the portion of trips generated by a mixed-use development that both begin and end within the development. The importance of internal trip capture is that those trips satisfy a portion of the total development's trip generation and they do so without using the external roadway system. The methodology presented in *Trip Generation Handbook, 3rd Edition,* by the ITE was utilized to estimate internal trip capture rates for the proposed combined RiverPark and Santa Fe Park South developments. Based on evaluating the configuration of the RiverPark and Santa Fe Park South conceptual site plans, the proximity of the proposed land uses within the combined development, and the proposed internal multimodal amenities (sidewalks, trail network, interconnectivity, etc.), the projected site generated trips captured internally are considered to be non-vehicular trips and therefore deducted from the overall site generated trip totals. Additionally, in collaboration with the City, the ITE internal trip capture rates were adjusted to be more appropriate for the proposed combined RiverPark and Santa Fe Park South developments. The internal trip capture rates and resulting site generated trip reductions are summarized in Table 5A for each specific land use within the combined RiverPark and Santa Fe Park South developments. Appendix “D” provides detailed internal trip capture and site generated trip projection worksheets.

Pass-by trips can be defined as an intermediate stop on the way from an origin to a primary trip destination (I.e. home to work) without route diversion. For example, a commuter whose primary trip is home to work makes an intermediate stop for vehicle fueling, fast-food, etc. and continues on their way without any route diversion. These site generated trips already exist in the background traffic volume and are only added to the sites access intersections with the external roadway network and internal roadway system. The methodology presented in *Trip Generation Handbook, 3rd Edition,* by the ITE was utilized to estimate pass-by trip rates and volumes for the proposed combined RiverPark and Santa Fe Park South developments. For the purposes of this study, site generated pass-by trips were distributed to the study area roadways and intersections utilizing the same trip distribution methodology as for the distribution of the site generated trips for each specific land use. Site generated pass-by trips for the proposed combined RiverPark and Santa Fe Park South developments have been computed for each specific land use and summarized in Table 5A and graphically illustrated Appendix “E”. Figures E-1, E-2, E-3 and E-4, in Appendix “E”, provide the break out of pass-by trips for the RiverPark commercial/retail, RiverPark C-store, Santa Fe Park South commercial/retail, and combined RiverPark and Santa Fe Park South developments 2025 buildout analysis horizon, respectively. Figures E-5, E-6, E-7 and E-8, in Appendix “E”, provide the break out of pass-by trips for the RiverPark commercial/retail, RiverPark C-store, Santa Fe Park South commercial/retail, and combined RiverPark and Santa Fe Park South developments 2040 long term analysis horizon, respectively.

Site generated trip reductions as a result of transit trips were based on data obtained from the Regional Transportation District (RTD). RTD studies indicate that an average of 4% of all commuter trips in the Denver Metropolitan Area are made utilizing RTD facilities. Based on the proximity of the proposed combined RiverPark and Santa Fe Park South developments to RTD's Littleton/Mineral Station a 5% transit trip reduction rate was applied to the residential land uses after the internal trip capture reductions were taken.

For the purposes of this study, it was assumed that the RiverPark and Santa Fe Park South developments will be fully built out by 2025 as an integrated mixed use development containing a variety of commercial/retail uses, multifamily and single-family attached residential uses, and senior living residential uses. A summary of the proposed RiverPark and Santa Fe Park South developments unadjusted site generated trip projections are provided in Table 5 and a summary of the site generated trips adjusted for internal trip capture, transit usage and pass-by trips is provided in Table 5A. A detailed breakdown of the proposed RiverPark trip generation projections is provided in Appendix "D".

Santa Fe Park South Commercial/Retail Parcels Site Generated Trips Development -
The Santa Fe Park South conceptual site plan (Figure 3) depicts a total of 30,000 square feet of unidentified retail/mixed use land uses. In discussions with Toll Brothers, the developer of Santa Fe Park South, the commercial/retail parcels do not have any specific users at this time. Based on site planning it was determined that a total of 30,000 square feet of commercial/retail development would be appropriate for these parcels. In order to develop a reasonable trip generation model of probable typical land uses that might be developed on these parcels a mix of fast-food restaurants with drive through windows, high-turnover (sit-down) restaurants, and general retail space were selected. These land uses were then assigned to the various commercial/retail pad sites identified on the Santa Fe Park South conceptual site plan. Table 5 identifies each of the selected land uses and the parcel they were assigned to. This methodology establishes a reasonable baseline for the development of the Santa Fe Park South commercial/retail parcels and the execution of the traffic study. As actual development occurs within the Santa Fe Park South commercial/retail parcels, the traffic study can be used to verify and confirm compliance with specific commercial/retail development applications.

TABLE 5
COMBINED RIVERPARK & SANTA FE PARK SOUTH DEVELOPMENTS
SUMMARY OF SITE GENERATED TRIPS (UNADJUSTED)

Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
				Total	In	Out	Total	In	Out
RiverPark - Commercial/Retail									
Pad "A" - Fast-Food Restaurant w/ Drive-Thru	3.3 TSF	934	1554	133	68	65	108	56	52
Pad "B" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	36	29	64	39	25
Pads "C", "D", "E", "F", "H" - Shopping Center	61.98 TSF	820	4343	183	113	70	381	183	198
Pad "G" - Fast-Food Restaurant w/ Drive-Thru	3.5 TSF	934	1648	141	72	69	114	59	55
Pad "J" - Fast-Food Restaurant w/ Drive-Thru	2 TSF	934	942	80	41	39	65	34	31
Pad "L" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	36	29	64	39	25
RiverPark - Commercial/Retail Total			**9945**	**667**	**366**	**301**	**796**	**410**	**386**
RiverPark - Residential									
Multifamily Housing (Mid-Rise)	270 DU	221	1470	91	24	67	115	70	45
RiverPark - Residential Total			**1470**	**91**	**24**	**67**	**115**	**70**	**45**
Riverpark CCRC									
Congregate Care Facility	168 DU	253	339	11	6	5	29	15	14
RiverPark - CCRC Total			**339**	**11**	**6**	**5**	**29**	**15**	**14**
Riverpark Super Convenience Market/Gas Station									
Pad "I" - Super Convenience Market/Gas Station	4.99 TSF	960	4180	421	210	211	346	173	173
RiverPark - C-Store/Gas Station Total			**4180**	**421**	**210**	**211**	**346**	**173**	**173**
Total - RiverPark Development (Unadjusted)			**15934**	**1190**	**606**	**584**	**1286**	**668**	**618**
Santa Fe Park - Residential									
Single-Family Detached Housing	399 DU	210	3714	288	72	216	384	242	142
Multi-Family Housing (Mid-Rise) 3-10 floors	336 DU	221	1829	112	29	83	142	87	55
Santa Fe Park - Residential Total			5543	400	101	299	526	329	197
Santa Fe Park - Commercial/Retail									
Shopping Center	15 TSF	820	1655	159	98	61	133	64	69
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	27	23	49	30	19
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	27	23	49	30	19
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51	49	82	42	40
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51	49	82	42	40
Santa Fe Park - Commercial/Retail Total			5131	459	254	205	395	208	187
Total - Santa Fe Park Development (Unadjusted)			**10,674**	**859**	**355**	**504**	**921**	**537**	**384**
Total - Combined Developments (Unadjusted)			**26,608**	**2,049**	**961**	**1088**	**2,207**	**1,205**	**1,002**

TABLE 5A
COMBINED RIVERPARK & SANTA FE PARK SOUTH DEVELOPMENTS
SUMMARY OF SITE GENERATED TRIPS
(ADJUSTED FOR INTERNAL TRIP CAPTURE & TRANSIT USE)

Land Use	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
	Total	In	Out	Total	In	Out
RiverPark (RP) - Summary of Adjusted Site Generated Trips						
RP - Commercial/Retail						
RP Commercial/Retail - Internal Trip Capture	92	66	25	123	58	65
RP Commercial/Retail - Adjusted External Trips	575	299	275	672	352	320
RP Commercial/Retail - Pass-By Trips	149	69	80	235	127	108
RP - Residential						
RP Residential - Internal Trip Capture	20	3	17	14	9	5
RP Residential - Adjusted External Trips	71	21	50	101	61	40
RP Residential - Pass-By Trips	0	0	0	0	0	0
RP - CCRC						
RP CRCC - Internal Trip Capture	0	0	0	0	0	0
RP CRCC - Adjusted External Trips	11	6	5	29	15	14
RP CRCC - Pass-By Trips	0	0	0	0	0	0
RP - Super C-Store/Gas Station						
RP Super C-Store/Gas Station - Internal Trip Capture	0	0	0	0	0	0
RP Super C-Store/Gas Station - Adjusted External Trips	421	210	211	346	173	173
RP Super C-Store/Gas Station - Pass-By Trips	261	130	131	194	97	97
RiverPark - Total Adjusted Trip Summary						
RP Total - Internal Trip Capture	112	69	42	137	67	70
RP Total - Adjusted External & Transit Trips	1078	536	541	1148	601	547
RP Total - Pass-By Trips	410	199	211	429	224	205
Santa Fe Park (SFP) - Summary of Adjusted Site Generated Trips						
SFP - Commercial/Retail						
SFP Commercial/Retail - Internal Trip Capture	62	44	18	58	26	32
SFP Commercial/Retail - Adjusted External Trips	397	210	188	337	182	155
SFP Commercial/Retail - Pass-By Trips	84	39	45	129	71	58
SFP - Residential						
SFP Residential - Internal Trip Capture	86	13	74	63	41	22
SFP Residential - Adjusted External Trips	314	89	225	464	288	176
SFP Residential - Pass-By Trips	0	0	0	0	0	0
Santa Fe Park - Total Adjusted Trip Summary						
SFP Total - Internal Trip Capture	148	57	92	121	67	54
SFP Total - Adjusted External & Transit Trips	711	299	413	801	470	331
SFP Total - Pass-By Trips	84	39	45	129	71	58
Combined (RiverPark & Santa Fe Park) Total Adjusted Trips Summary						
Combined Total - Internal Trip Capture	260	126	134	258	134	124
Combined Total - Adjusted External Trips	1789	835	954	1949	1071	878
Combined Total - Pass-By Trips	494	238	256	558	295	263

B. Trip Distribution

The distribution of the projected vehicle trips generated by the proposed RiverPark and Santa Fe Park South developments were established based on the current and projected future traffic patterns on the surrounding transportation system, efficiency of access to the principal transportation corridors serving the area, and potential trip origins/destinations for the proposed land uses. The projected adjusted site generated trips for the RiverPark and Santa Fe Park South developments were distributed to the study area roadways and intersections for each of the principal land use categories (commercial/retail, residential, senior living, and C-store/gas station) comprising the two developments for the 2025 buildout and 2040 long term analysis horizons.

Figures 10, 11, 12 and 13 graphically illustrate the project generated trip distribution patterns for the RiverPark development 2025 buildout analysis horizon commercial/retail, multifamily, senior living, and C-store/gas station land uses, respectively. Figures 10A and 10B graphically illustrate the breakdown of the RiverPark commercial/retail parcels north of W. Nichols Ave. and south of west Nichols Ave. based on site generated trips, respectively.

Figures 14 and 15 graphically illustrate the project generated trip distribution patterns for the Santa Fe Park South development 2025 buildout analysis horizon commercial/retail and land uses, respectively. Figures 14A, 14B, 14C and 14D graphically illustrate the breakdown of the Santa Fe Park South commercial/retail parcels “A”, “B”, “C” and “D” based on parcel areas, respectively. Figures 15A, 15B, 15C and 15D graphically illustrate the breakdown of the Santa Fe Park South residential parcels “C”, “F”, “H & I” and “J” based on site generated trips, respectively.

Figures 16, 17, 18 and 19 graphically illustrate the project generated trip distribution patterns for the RiverPark development 2040 long term analysis horizon commercial/retail, multifamily, senior living, and C-store/gas station land uses, respectively. Figures 16A and 16B graphically illustrate the breakdown of the RiverPark commercial/retail parcels north of W. Nichols Ave. and south of west Nichols Ave. based on site generated trips, respectively.

Figures 20 and 21 graphically illustrate the project generated trip distribution patterns for the Santa Fe Park South development 2040 long term analysis horizon commercial/retail and land uses, respectively. Figures 20A, 20B, 20C and 20D graphically illustrate the breakdown of the Santa Fe Park South commercial/retail parcels “A”, “B”, “C” and “D” based on parcel areas, respectively. Figures 21A, 21B, 21C and 21D graphically illustrate the breakdown of the Santa Fe Park South residential parcels “C”, “F”, “H & I” and “J” based on site generated trips, respectively.

C. Trip Assignment

The vehicular trips projected to be generated by the proposed RiverPark and Santa Fe Park South developments were assigned to the study area roadways and intersections utilizing the trip distribution analysis described above. Figures 22, 23 and 24 graphically illustrate the site generated trip assignments for the RiverPark, Santa Fe Park South and combined developments 2025 buildout analysis horizon, respectively. Figures 25, 26 and 27 graphically

illustrate the site generated trip assignments for the RiverPark, Santa Fe Park South and combined developments 2040 long term analysis horizon, respectively.

V. TOTAL TRAFFIC

Total traffic projections for the 2025 buildout and 2040 long term analysis horizons were computed by combining the background traffic volumes with the associated projected site generated vehicular traffic volumes fort each of the study area intersections. Figures 28 and 29 graphically illustrate the 2025 buildout and 2040 long term analysis horizon total traffic projections, respectively.

VI. PROJECT ANALYSIS

A. Operational Analysis

In order to evaluate the traffic impacts of the proposed RiverPark and Santa Fe Park South developments on the study area roadway system peak hour intersection capacity analyses for the 2025 buildout and 2040 long term analysis horizons total traffic scenarios were performed at each of the study area intersections listed below.

- S. Platte River Pkwy./W. Mineral Ave.
- S. Santa Fe Dr./W. Mineral Ave.
- W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.
- S. Santa Fe Dr./W. Aspen Grove Way
- S. Santa Fe Dr./W. County Line Rd.
- S. Santa Fe Dr./W. Nichols Ave. (proposed)
- S. Platte River Pkwy./W. Nichols Ave. (proposed)
- S. Platte River Pkwy./RiverPark North Site Access (proposed)
- W. Nichols Ave./RiverPark East Site Access (proposed)
- S. Platte River Pkwy./RiverPark South Site Access 1 (proposed)
- S. Platte River Pkwy./RiverPark South Site Access 2 (proposed)
- S. Platte River Pkwy./W. Phillips Ave. (proposed)
- S. Santa Fe Dr./W. Phillips Ave. (proposed)
- S. Platte River Pkwy./Santa Fe Park South North Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South North Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South East Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South East Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 3 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 4/LEMC Access (proposed)

The results of the background traffic operational analyses are summarized in Table 6, below. Figures 30 and 31 graphically illustrate the 2025 buildout and 2040 long term analysis horizon total traffic scenarios operational analyses, respectively. A detailed summary of the results of these analyses for each lane group is provided in Appendix “A” and detailed *Synchro 10* software intersection capacity analysis reports are provided in Appendix “B”.

TABLE 6
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
TOTAL TRAFFIC SCENARIO SUMMARY OF OPERATIONAL ANALYSIS

INTERSECTION	CONTROL	APPROACH	2025 BUILDOUT HORIZON				2040 LONG TERM HORIZON			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)
W. Mineral Ave. & S. Platte River Pkwy.	Signalized	Northbound	E	58.9	F	98.2	E	61.6	F	152.3
		Southbound	E	72.3	F	87.4	E	66.4	F	91
		Eastbound	E	55.9	E	68	F	87.5	F	87.9
		Westbound	C	26	F	116.5	E	60.8	F	163.5
		Intersection	**D**	**52.3**	**F**	**98.5**	**E**	**73**	**F**	**139.7**
S. Santa Fe Dr. & W. Mineral Ave.	Signalized	Northbound	E	79.2	D	38.4	F	169.8	E	55.7
		Southbound	F	131	E	77.3	F	180.1	F	126.7
		Eastbound	F	141.6	F	142.3	F	180.2	F	158.2
		Westbound	E	67.5	F	114.7	C	32.5	F	170.8
		Intersection	**F**	**111.2**	**F**	**88.4**	**F**	**158.5**	**F**	**117.4**
W. Mineral Ave. & W. Jackass Hill Rd.	Signalized	Northbound	C	30	C	26.4	C	33.2	C	31.3
		Southbound	D	35.6	C	33	D	40.9	D	46.8
		Eastbound	E	64.8	C	20.2	F	85.8	B	19.8
		Westbound	D	39.1	D	35.7	D	46.6	E	63
		Intersection	**D**	**52.1**	**C**	**29.3**	**E**	**66.2**	**D**	**43.5**
S. Santa Fe Dr. & W. Aspen Grove Way	Signalized	Northbound	B	14.7	B	11.9	F	136.3	E	76.1
		Southbound	B	14.3	F	100.8	F	142.4	F	296.6
		Eastbound	F	84.9	F	546.3	F	133.2	F	380.6
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**B**	**17.2**	**F**	**117.1**	**F**	**139.1**	**F**	**208.7**
S. Santa Fe Dr. & W. County Line Rd.	Signalized	Northbound	F	89.1	F	102.6	D	54.3	E	62.2
		Southbound	E	70	D	45.3	D	40.9	E	67.1
		Eastbound	F	84.5	F	103.1	F	83.3	F	102.1
		Westbound	E	74.3	F	97.6	E	73.8	E	78
		Intersection	**F**	**80.7**	**E**	**77.7**	**D**	**49.3**	**E**	**65.8**
S. Santa Fe Dr. & Nichols Ave.	Signalized	Northbound	B	12.8	C	23.2	C	26.1	D	43.5
		Southbound	A	0.1	A	0.2	A	4.2	F	125.5
		Eastbound	A	0	A	0	F	237.5	F	180
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**A**	**6.8**	**B**	**11.7**	**C**	**28.7**	**F**	**87.7**
S. Platte River Pkwy. & Nichols Ave.	2-Lane Roundabout	Northbound	A	7.2	A	6.9	B	13.5	B	11.9
		Southbound	A	6.3	A	6.6	C	18.8	B	14.3
		Eastbound	A	4.5	A	4.8	A	8.9	A	7.9
		Westbound	A	0.1	A	0.2	A	0.1	A	0.2
		Intersection	**A**	**3.1**	**A**	**3**	**B**	**11.5**	**A**	**8.1**

TABLE 6 (CONTINUED)
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
TOTAL TRAFFIC SCENARIO SUMMARY OF OPERATIONAL ANALYSIS

INTERSECTION	CONTROL	APPROACH	2025 BUILDOUT HORIZON				2040 LONG TERM HORIZON			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)
S. Platte River Pkwy./RiverPark Access North	TWSC	Northbound	A	0.1	A	0.1	A	0.1	A	0.1
		Southbound	A	1.4	A	1.5	A	1	A	1.4
		Eastbound	F	79.7	F	118.8	F	246.7	F	262.2
		Westbound	D	31.8	F	57.8	F	275.5	F	488.8
		Intersection	**A**	**3.6**	**A**	**5.3**	**C**	**16.7**	**D**	**28.4**
Nichols Ave./RiverPark Access East	TWSC	Northbound	F	674.7	F	790.1	F	336.1	F	311.5
		Southbound	E	37.9	F	63.4	F	787.9	F	964.5
		Eastbound	A	0.7	A	0.8	A	0.4	A	0.6
		Westbound	A	2	A	1.5	A	2.3	A	1.5
		Intersection	**F**	**91.5**	**F**	**93.2**	**F**	**57.6**	**F**	**62.2**
S. Platte River Pkwy./RiverPark Access South 1	TWSC	Northbound	A	0.2	A	0.2	A	0.2	A	0.2
		Southbound	A	1.5	A	1.3	A	0.7	A	0.8
		Eastbound	B	10.9	B	11.1	B	12.9	B	13.4
		Westbound	B	10.7	B	10.6	B	11.8	B	12.1
		Intersection	**A**	**2.4**	**A**	**2.5**	**A**	**1.9**	**A**	**1.9**
S. Platte River Pkwy./RiverPark Access South 2	TWSC	Northbound	A	0.2	A	0.2	A	0.2	A	0.2
		Southbound	A	0.3	A	0.2	A	0.1	A	0.1
		Eastbound	B	10.3	B	10.5	B	12.1	B	12.4
		Westbound	B	10.5	B	10.4	B	11.8	B	12.1
		Intersection	**A**	**0.8**	**A**	**0.7**	**A**	**0.6**	**A**	**0.6**
S. Platte River Pkwy. & Phillips Ave	1-Lane Roundabout	Northbound	A	4.8	A	4.3	A	5.6	A	6.4
		Southbound	A	3.9	A	4.9	A	5.6	A	6.4
		Eastbound	-	-	-		-	-	-	
		Westbound	A	4.3	A	5.3	A	4.8	A	5.7
		Intersection	**A**	**4.4**	**A**	**5**	**A**	**5.4**	**A**	**6.2**
S. Santa Fe Dr. & Phillips Ave.	Signalized	Northbound	B	14.1	B	18.7	C	20.5	C	26
		Southbound	B	13	C	21.7	E	68.3	F	128.1
		Eastbound	E	73.9	F	99	F	91.7	F	153.2
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**B**	**16.6**	**C**	**23.3**	**D**	**47.2**	**F**	**83.5**
S. Platte River Pkwy./Santa Fe Park Access North 2	TWSC	Northbound	A	0.6	A	0.7	A	0.6	A	0.4
		Southbound	A	0.8	A	0.6	A	0.5	A	0.5
		Eastbound	B	10.6	B	10.7	B	12.6	B	12.6
		Westbound	A	9.9	A	9.9	B	10.3	B	10.6
		Intersection	**A**	**2**	**A**	**1.6**	**A**	**1.7**	**A**	**1.3**

TABLE 6 (CONTINUED)
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
TOTAL TRAFFIC SCENARIO SUMMARY OF OPERATIONAL ANALYSIS

INTERSECTION	CONTROL	APPROACH	2025 BUILDOUT HORIZON				2040 LONG TERM HORIZON			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)
S. Platte River Pkwy./Santa Fe Park Access North 1	TWSC	Northbound	A	0.6	A	0.7	A	0.6	A	0.4
		Southbound	A	1.8	A	1.3	A	1.1	A	1
		Eastbound	B	10.7	B	10.7	B	12.5	B	12.6
		Westbound	B	10.4	B	10.6	B	11.7	B	12.2
		Intersection	**A**	**3.2**	**A**	**2.6**	**A**	**2.5**	**A**	**2**
Phillips Ave. & Santa Fe Park Access East 1	TWSC	Northbound	B	11.4	B	13.2	B	13.4	C	15.3
		Southbound	B	11.7	B	13.2	B	12.7	B	14.3
		Eastbound	A	0.3	A	0.4	A	0.2	A	0.2
		Westbound	A	0.5	A	0.3	A	0.3	A	0.2
		Intersection	**A**	**1.7**	**A**	**1.4**	**A**	**1.5**	**A**	**1.1**
Phillips Ave. & Santa Fe Park Access East 2	TWSC	Northbound	A	9.2	A	9	A	9.5	A	9.6
		Southbound	-	-	-	-	-	-	-	-
		Eastbound	A	0	A	0	A	0	A	0
		Westbound	A	0	A	0	A	0	A	0
		Intersection	**A**	**0.1**	**A**	**0.1**	**A**	**0.2**	**A**	**0.1**
S. Platte River Pkwy./Santa Fe Park Access South 1	TWSC	Northbound	A	0	A	0	A	0	A	0
		Southbound	A	0	A	0	A	0	A	0
		Eastbound	B	10.7	B	11.7	B	14.5	C	17.3
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**A**	**2.6**	**A**	**1.7**	**A**	**1.9**	**A**	**1.5**
S. Platte River Pkwy./Santa Fe Park Access South 2	TWSC	Northbound	A	0	A	0	A	0	A	0
		Southbound	A	3.5	A	2.2	A	1	A	1.4
		Eastbound	-	-			-	-		
		Westbound	A	9.1	A	8.9	A	9.6	B	10.4
		Intersection	**A**	**3.1**	**A**	**2.5**	**A**	**1.5**	**A**	**1.3**
S. Platte River Pkwy./Santa Fe Park Access South 3	TWSC	Northbound	A	0	A	0	A	0	A	0
		Southbound	A	1.6	A	1.6	A	0.3	A	0.9
		Eastbound	-	-			-	-		
		Westbound	A	8.8	A	8.7	A	9.3	B	10.1
		Intersection	**A**	**1.9**	**A**	**1.8**	**A**	**0.7**	**A**	**0.8**
S. Platte River Pkwy./Santa Fe Park Access South 4/LEMC	1-Lane Roundabout	Northbound	A	0	A	0	A	0	A	0
		Southbound	A	2.9	A	3.3	A	4.3	A	4.2
		Eastbound	A	3.2	A	3.1	A	3.7	A	4.6
		Westbound	-	-	-	-	-	-	-	-
		Intersection	**A**	**3.1**	**A**	**3.2**	**A**	**4.1**	**A**	**4.4**

B. Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the study area intersections were computed utilizing the *Synchro 10* 95%tile reported queues for the 2025 buildout and 2040 long term analysis horizons total traffic scenarios. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group. Table 7 provides a summary of this analysis and comparison to the existing/proposed vehicle storage lengths provided for each of the study area intersections.

As shown in Table 7 the following queue related issues are projected to be experienced at the study area intersections based on the reported queues in the 2025 buildout and 2040 long term analysis horizon total traffic analysis scenarios:

- S. Platte River Pkwy./W. Mineral Ave.
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound right turn lane queue is projected to exceed its capacity and spill back into the eastbound through lanes during both the a.m. and p.m. peak hours by the 2040 long term analysis horizon.
  - The westbound left turn lane is projected to slightly exceed its capacity and spill back into the westbound through lanes. During the 2025 buildout analysis horizon a.m. and p.m. peak hours. The projected minimum storage requirement is 275 feet. However, until such time that CDOT allows the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection, the eastbound left turn lanes at the S. Santa Fe Dr./W. Mineral Ave. intersection cannot be removed restricting the available westbound left turn storage capacity at the S. Platte River Pkwy./W. Mineral Ave. intersection to its existing 250 feet.
  - The westbound through lane queue is projected to exceed its capacity and spill back into the S. Santa Fe Dr./W. Mineral Ave. intersection, as well as block both the westbound left turn and right turn lanes during the p.m. peak hour.
  - The northbound left turn lane queue is projected to exceed its capacity and spill back into the northbound shared through/right turn lane and the S. Platte River Pkwy./RiverPark North Access intersection by the 2040 long term analysis horizon p.m. peak hour.
  - The northbound shared through/right turn lane is projected to slightly exceed its capacity and spill back into the S. Platte River Pkwy./RiverPark North Access intersection by the 2025 buildout analysis horizon. With the addition of the eastbound dual left turn lanes at the S. Santa Fe Dr./W. Nichols Ave. intersection it is projected that this queue storage requirement will drop to 537 feet and resolve the spill back issue.
  - The southbound right turn queue is projected to exceed its capacity in both the a.m. and p.m. peak hours by spilling back into the RTD parking lot access intersection.

- S. Santa Fe Dr./W. Mineral Ave.
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound through lane queue is projected to exceed its capacity and spill back into the S. Platte River Pkwy./W. Mineral Ave. intersection, as well as block the eastbound left turn lanes during the a.m. peak hour. During the p.m. peak hour the

eastbound through lanes are projected to have sufficient capacity but will block the eastbound left turn lanes. By the 2040 long term analysis horizon the p.m. peak hour the eastbound through lane queue is projected to exceed its capacity and spill back into the S. Platte River Pkwy./W. Mineral Ave. intersection. The eastbound left turn lanes are assumed to be removed by the 2040 long term analysis horizon.

- The eastbound right turn lane queue is projected to exceed its capacity and spill back into the S. Platte River Pkwy./W. Mineral Ave intersection during the p.m. peak hour by the 2025 buildout analysis horizon and also during both the a.m. peak and p.m. peak hours by the 2040 long term analysis horizon.
- The westbound left turn lane is projected to exceed its capacity and spill back into the westbound through lanes during both the a.m. and p.m. peak hours in the 2025 buildout analysis horizon total traffic scenario.
- The westbound through lane queue is anticipated to block both the westbound left turn and right turn lanes during the p.m. peak hour in both the 2025 buildout and 2040 long term analysis horizons. The westbound left turn lane is assumed to be removed by the 2040 long term analysis horizon.

- W. Mineral Ave./W. Jackass Hill Rd.
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound left turn lane queue is projected exceed its capacity and spill back into the eastbound through lane during the p.m. peak hour.
  - The eastbound through lane queue is projected to block both the eastbound left turn and right turn lanes during the a.m. peak hour.
  - The westbound through lane queue is anticipated to block the westbound left turn lane during both the a.m. and p.m. peak hours.
  - The northbound left turn queue is projected to exceed its capacity during the 2040 long term analysis horizon and spill back into the northbound through lane during the a.m. peak hour.
  - The southbound left and right turn lanes are anticipated to exceed their capacities and spill back into the southbound through lanes in the a.m. and p.m. peak hours.

- S. Santa Fe Dr./ W. Aspen Grove Way
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The eastbound right turn lane queue is projected exceed its capacity and spill back into the upstream intersection by the 2040 long term horizon p.m. peak hour.
  - The northbound through lane queue is projected to block the northbound left turn lane during the a.m. peak hour.
  - The southbound through lane queue is projected to block southbound right turn lane both the a.m. and p.m. peak hours.

- S. Santa Fe Dr./W. County Line Rd.
  2025 Buildout and 2040 Long Term Analysis Horizons
  - The westbound right turn lane is projected to spillback into the W. County Line Rd./Southpark Cir. intersection by the 2040 long term analysis horizon p.m. peak hour.
  - The northbound through lane queue is projected to exceed its capacity and spill back into the S. Santa Fe Dr./Eastbound C-470 Ramps intersection, as well as block both the northbound left turn and right turn lanes during both the a.m. and p.m. peak

hours in the 2025 buildout analysis horizon. This will be mitigated by the 2040 long term analysis horizon with the addition of a third northbound through lane except for blocking the left turn lane.
    - The southbound left turn queue is projected to exceed its capacity and spill back into the southbound through lanes during the 2025 buildout analysis horizon p.m. peak hour.

- S. Santa Fe Dr./W. Nichols Ave.
  2025 Buildout and 2040 Long Term Analysis Horizons
    - The southbound through lane queue is projected to block the southbound right turn lane by the 2040 long term analysis horizon p.m. peak hour.

- S. Platte River Pkwy./W. Nichols Ave. Roundabout
  2025 Buildout and 2040 Long Term Analysis Horizons
    - The southbound through lane queue is projected spill back into the S. Platte River Pkwy./RiverPark North Access intersection by the 2040 long term analysis horizon p.m. peak hour.

- S. Santa Fe Dr./W. Phillips Ave.
  2025 Buildout and 2040 Long Term Analysis Horizons
    - The eastbound right turn queue is projected to spill back into the RIRO Santa Fe Park South Access - East - 2 by the 2040 long term analysis horizon.

TABLE 7
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
TOTAL TRAFFIC SCENARIO
SUMMARY OF QUEUING ANALYSIS

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
S. Platte River Pkwy/W Mineral Ave (Signalized)					
a. EB L (2)	400	140	235	156	273
b. EB T (3)	8075	687	319	816	330
c. EB R (1)	430	330	106	896	593
d. WB L (1/2)	250/900	258	266	426	396
e. WB T (2)	1100	187	1191	169	1415
f. WB R (1)	500	118	138	77	170
g. NB L (2)	650	371	704	478	910
h. NB TR (1) i. NB R (1)	800	818	813	537	498
j. SB L (2)	500	88	342	91	386
k. SB T (1)	250	44	52	57	116
l SB R (1)	250	13	475	0	585
S. Santa Fe Dr/W Mineral Ave (Signalized)					
a. EB L (2)	775	222	276	-	-
b. EB T (2)	1100	1329	985	1526	1122
c. EB R (1)	550	512	782	618	1002
d. WB L (1)	425	513	536	-	-
e. WB T (2/3)	2450/2875	310	1163	335	1148
f. WB R (1)	375	274	202	334	283
g. NB T (3)	2610	934	795	1710	1660
h. NB R (1)	650	141	101	293	244
i. SB T (3)	6750	1124	1390	1726	2216
j. SB R (1)	2250	106	425	126	485
Jackass Hill Rd/W Mineral Ave (Signalized)					
a. EB L (1)	225	126	272	52	308
b. EB T (2)	2500	717	266	722	314
c. EB R (1)	250	0	19	0	21
d. WB L (1)	100	7	5	5	4
e. WB T (2)	5700	388	577	427	711
f. WB R (1)	525	52	44	48	45
g. NB L (1)	150	142	88	180	106
h. NB TR (1)	425	100	45	125	56
i. SB L (1)	100	286	194	440	265
j. SB T (1)	530	24	47	27	58
k. SB R (1)	50	65	96	81	141
S. Santa Fe Dr/W Aspen Grove Way (Signalized)					
a. EB L (2)	450	86	138	98	171
b. EB R (1)	225	108	193	203	256
c. NB L (1)	600	36	259	31	293
d. NB T (2)	4460	1302	440	1430	1012
e. SB T (2)	6300	927	2564	2465	4056
f. SB R (1)	425	11	78	10	60

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
S. Santa Fe Dr/W County Line Rd (Signalized)					
a. EB L (1)	100	53	65	62	70
b. EB TR (1)	385	53	30	61	30
c. WB L (2)	500	111	369	142	352
d. WB LT (1)	1500	-	-	145	346
e. WB T (1)	1500	19	54	-	-
f. WB R (1)	1500	0	0	618	1839
g. NB L (1)	150	0	61	0	84
h. NB T (2/3)	1400/2100	1753	1649	1619	2013
i. NB R (1)	500	0	0	0	0
j. SB L (1)	675	696	777	455	517
k. SB T (2/3)	3000/4500	267	565	490	1433
l SB R (1)	400	0	3	0	10
S. Santa Fe Dr/Nichols Ave (Signalized)					
a. EB L (2)	500	-	-	418	364
b. EB R (1)	250	0	0	0	0
c. NB L (2)	770	272	500	381	770
d. NB T (2)	3140	1277	853	310	561
e. SB T (3)	2610	124	211	104	1556
f. SB R (1)	400	0	5	0	0
S. Platte River Pkwy/Nichols Ave (Roundabout)					
a. EB (1)	-	0	0	0	0
b. WB (2)	300	0	0	0	0
c. NB (1)	225	25	25	75	50
d. SB (2)	360	100	100	650	500
S. Platte River Pkwy/RiverPark Access North (TWSC)					
a. EB L (1)	-	43	48	63	48
b. EB TR (1)	-	3	3	5	3
c. WB L (1)	-	33	58	140	173
d. WB TR (1)	-	23	28	20	28
e. NB L (1)	50	0	3	0	3
f. NB TR (2)	600	0	0	0	0
g. SB L (1)	100	13	18	18	28
h. SB TR (2)	1400	0	0	0	0
S. Platte River Pkwy/RiverPark Access East (TWSC)					
a. EB L (1)	100	5	5	5	8
b. EB TR (2)	500	0	0	0	0
c. WB L (1)	200	23	20	33	25
d. WB TR (2)	500	0	0	0	0
e. NB L (1)	-	468	460	220	215
f. NB TR (1)	-	10	8	50	38
g. SB L (1)	-	40	65	165	200
h. SB TR (1)	-	13	15	5	5

HARRIS KOCHER SMITH

TABLE 7 (CONTINUED)
2025 BUILDOUT & 2040 LONG TERM ANALYSIS HORIZONS
TOTAL TRAFFIC SCENARIO
SUMMARY OF QUEUING ANALYSIS

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
S. Platte River Pkwy/RiverPark Access South 1 (TWSC)					
a. EB LTR (1)	-	3	3	3	3
b. WB LTR (1)	-	8	10	10	10
c. NB L (1)	50	0	0	0	0
d. NB TR (1)	250	0	0	0	0
e. SB L (1)	50	3	3	3	3
f. SB TR (1)	225	0	0	0	0
S. Platte River Pkwy/RiverPark Access South 2 (TWSC)					
a. EB LTR (1)	-	0	3	3	3
b. WB LTR (1)	-	3	0	3	3
c. NB L (1)	50	0	0	0	0
d. NB TR (1)	250	0	0	0	0
e. SB L (1)	50	0	0	0	0
f. SB TR (1)	250	0	0	0	0
S. Platte River Pkwy/Phillips Ave (Roundabout)					
a. WB (1)	175	25	25	25	25
b. NB (1)	250	25	25	25	50
c. SB (1)	250	0	25	25	25
S. Santa Fe Dr/Phillips Ave (Signalized)					
a. EB L (2)	250	114	111	148	229
b. EB R (1)	150	104	70	263	197
c. NB L (1)	510	197	354	353	504
d. NB T (2)	3000	835	1008	721	942
e. SB T (3)	4650	676	1103	1693	2556
f. SB R (1)	1550	28	57	3	37
S. Platte River Pkwy/Santa Fe Park Access North 2 (TWSC)					
a. EB LTR (1)	-	5	3	5	3
b. WB LTR (1)	-	3	3	3	3
c. NB L (1)	50	0	0	0	0
d. NB TR (1)	250	0	0	0	0
e. SB L (1)	50	0	0	0	0
f. SB TR (1)	250	0	0	0	0
S. Platte River Pkwy/Santa Fe Park Access North 1 (TWSC)					
a. EB LTR (1)	-	5	3	5	3
b. WB LTR (1)	-	8	8	8	8
c. NB L (1)	50	0	0	0	0
d. NB TR (1)	250	0	0	0	0
e. SB L (1)	50	3	3	3	3
f. SB TR (1)	250	0	0	0	0

INTERSECTION (# OF LANES IN LANE GROUP)	EXISTING/PROPOSED STORAGE (CUMULATIVE) (FT)	SYNCHRO 10 95% QUEUE LENGTH (FT)			
		ANALYSIS HORIZON			
		2025		2040	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
Phillips Ave/Santa Fe Park Access East 1 (TWSC)					
a. EB L (1)	100	0	0	0	0
b. EB TR (1)	172	0	0	0	0
c. WB L (1)	75	0	0	0	0
d. WB TR (1)	250	0	0	0	0
e. NB LTR (1)	-	3	3	3	3
f. SB LTR (1)	-	8	8	8	8
Phillips Ave/Santa Fe Park Access East 2 (TWSC)					
a. EB TR (1)	100	0	0	0	0
b. WB T (1)	125	0	0	0	0
c. NB LR (1)	-	0	0	0	0
S Platte River Pkwy/Santa Fe Park Access South 1 (TWSC)					
a. EB LR (1)	-	10	10	18	20
b. NB LT (1)	100	0	0	0	0
c. SB TR (1)	200	0	0	0	0
S Platte River Pkwy/Santa Fe Park Access South 2 (TWSC)					
a. WB LR (1)	-	5	3	5	5
b. NB TR (1)	100	0	0	0	0
c. SB LT (1)	100	3	3	3	5
S Platte River Pkwy/Santa Fe Park Access South 3 (TWSC)					
a. WB LR (1)	-	3	3	3	3
b. NB TR (1)	100	0	0	0	0
c. SB LT (1)	200	0	3	0	3
S Platte River Pkwy/Santa Fe Park Access South 4/LEMC Acces					
a. EB (1)	-	0	0	0	25
b. NB (1)	-	0	0	0	0
c. SB (1)	100	0	0	25	25

Legend

- Turn lane queue spills into thru lane
- Queue spills back into upstream intersection
- Through lane queue blocks LT lane
- Through lane queue blocks RT lane
- Through lane queue blocks LT & RT lanes

HARRIS KOCHER SMITH

C. Summary of Operational Analysis & Recommended Improvements

The following summary of analysis and recommendations for improvements to the existing and proposed study area intersections and roadways were developed based on implementing the SW Quad Road as an interim strategy for relieving congestion at the S. Santa Fe Dr./W. Mineral Ave. intersection, as well as serving the needs of the RiverPark and Santa Fe Park South developments.

Study Area Intersections:

- **S. Platte River Pkwy./W. Mineral Ave.** – Concurrent with the construction of the SW Quad Road and proposed RiverPark and Santa Fe Park South developments the following improvements are recommended for the S. Platte River Pkwy./W. Mineral Ave. intersection.

    - 2025 Buildout Analysis Horizon - The intersection will have actuated/coordinated traffic signal control with protected only left turn phasing all four approaches. The east leg of the intersection will consist of one left turn lane with a minimum of total of 250 feet of storage (The projected minimum storage requirement is 275 feet. However, until such time that CDOT allows the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection, the eastbound left turn lanes at the S. Santa Fe Dr./W. Mineral Ave. intersection cannot be removed restricting the available westbound left turn storage capacity at the S. Platte River Pkwy./W. Mineral Ave. intersection to its existing 250 feet.), two through lanes, and one right turn lane on the westbound approach, and three eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with a minimum total of 275 feet of required storage (400 feet existing), three through lanes, and a channelized right turn lane under yield control with a minimum of 350 feet of required storage (430 feet existing) on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will consist of dual left turn lanes, one through lane and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will consist of dual left turn lanes providing a combined total of approximately 650 feet of storage, one shared through/right turn lane, and one right turn lane (the shared through/right turn lane and right turn lane will provide a combined total of approximately 800 feet of storage) on the northbound approach, and two southbound departure lanes.

      Since the northbound left turn queue is projected to exceed its capacity during the p.m. peak hour in both the 2025 buildout and 2040 long term analysis horizons it is anticipated that it will spill back into the S. Platte River Pkwy./RiverPark North Site Access intersection. Due to the geometric constraints of the intersection spacing this situation cannot be avoided. The combined northbound shared through/right turn and right turn lanes will provide approximately 800 feet of storage capacity. The combined queue storage requirement is projected to be 818 feet in the 2025 buildout analysis horizon total traffic scenario spilling back into the proposed S. Platte River Pkwy./RiverPark North Site Access intersection. With the addition of the eastbound dual left turn lanes at the S. Santa Fe Dr./W. Nichols Ave. intersection it is projected that this queue storage requirement will drop to 537 feet and resolve the spill back

issue. Based on these parameters and the existing and forecast background and total traffic volumes, it is projected that the intersection, overall, will experience a failing level of service during p.m. peak hour in the 2025 buildout analysis horizon and during both the a.m. and p.m. peak hours by the 2040 long term analysis horizon. Multiple lane groups are projected to experience poor or failing levels of service in both analysis horizons during both the a.m. and p.m. peak hours.

Exacerbating these operational issues is the fact that the projected eastbound left turn and through traffic queues at the S. Santa Fe Dr./W. Mineral Ave. intersection are anticipated to block the S. Platte River Pkwy./W. Mineral Ave. intersection northbound right turn traffic from entering the eastbound to northbound left turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. In addition, the southbound left turn traffic at the S. Platte River Pkwy./W. Mineral Ave. intersection will likely be blocked from entering the eastbound to southbound right turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. Due to the geometric constraints of the existing intersection spacing this situation cannot be avoided.

These issues could be eliminated or significantly improved by modifying the proposed S. Santa Fe Dr./W. Nichols Ave. intersection to incorporate an eastbound left turn movement. This simple modification would have the following positive effects on the S. Platte River Pkwy./W. Mineral Ave. and S. Santa Fe Dr./W. Mineral Ave. intersections:

- There would no longer be a need for the eastbound and westbound left turn movements at the S. Santa Fe Dr./W. Mineral Ave. intersection. Eliminating the eastbound and westbound left turn movements would enhance the operational efficiency of the intersection by allowing all of the green time to be allocated to the northbound/southbound and eastbound/westbound through movements.
- Eliminating the eastbound left turn movement at the S. Santa Fe Dr./W. Mineral Ave. intersection would allow needed additional westbound left turn lane storage to be provided for the westbound left turn lane at the S. Platte River Pkwy./W. Mineral Ave. intersection.
- Eliminating the eastbound left turn movement at the S. Santa Fe Dr./W. Mineral Ave. intersection would reduce the required northbound shared through/right turn and right turn queue storage requirement such that it would not spill back into the proposed S. Platte River Pkwy./RiverPark North Site Access intersection.
- Eliminating the eastbound left turn movement at the S. Santa Fe Dr./W. Mineral Ave. intersection would eliminate the issue of the eastbound approach queue spilling back preventing the S. Platte River Pkwy./W. Mineral Ave. intersection northbound right turn traffic from entering the eastbound left turn lane.
- Traffic patterns would be redistributed by providing an eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection and eliminating the eastbound and westbound left turn movements at the S. Santa Fe Dr./W. Mineral Ave. intersection. This would significantly reduce the traffic demand on the S. Platte river Pkwy./W. Mineral Ave. intersection.
- Due to the proximity of the S. Platte River Pkwy./W. Mineral Ave. intersection to the S. Santa Fe Dr./W. Mineral Ave. intersection (approximately 550 feet stop bar to stop bar) and high traffic demand the queue from the westbound through lanes at the S. Platte River Pkwy./W. Mineral Ave. intersection is projected to continue

to spillback through the S. Santa Fe Dr./W. Mineral Ave. intersection during the p.m. peak hour through the 2040 long-term analysis horizon. This issue would be resolved if the S. Santa Fe Dr./W. Mineral Ave. grade separated interchange were constructed.

- 2040 Long Term Analysis Horizon - The only modification anticipated to be implemented at the intersection by the 2040 long term analysis horizon is increasing the capacity of the westbound left turn lane due to eliminating the eastbound and westbound left turn lanes at the S. Santa Fe Dr./W. Mineral Avenue intersection and adding an eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection.

- **S. Santa Fe Dr./W. Mineral Ave.** – The S. Santa Fe Dr./W. Mineral Ave. intersection is anticipated to undergo the following modifications as part of the SW Quad Road interim improvements:
  - 2025 Buildout Analysis Horizon - The intersection is anticipated to undergo the following modifications. The intersection will remain under actuated/coordinated traffic signal control with protected only left turn phasing on the eastbound, westbound approaches. The northbound and southbound left turn movements will be eliminated. The east leg of the intersection will consist of one left turn lane with approximately 425 feet of storage, two through lanes, and one right turn lane with approximately 375 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with approximately a total of 775 feet of storage, two through lanes, and right turn lane on the eastbound approach, and three westbound departure lanes. The north leg of the intersection will consist of three through lanes, and one right turn lane on the southbound approach and three northbound departure lanes. The south leg of the intersection will consist of three through lanes, and one right turn lane with approximately 650 feet of storage on the northbound approach and three southbound departure lanes. Based on these parameters and the existing and forecast background and total traffic volumes, it is projected that the intersection, overall, as well as multiple lane groups will experience poor/failing levels of service by the 2025 buildout analysis horizon total traffic scenario.

    Eliminating the eastbound and westbound left turn movements at this intersection would eliminate the westbound left turn queue spillback issue improving the overall operational efficiency of the westbound intersection approach. Due to the proximity of the S. Platte River Pkwy./W. Mineral Ave. intersection to the S. Santa Fe Dr./W. Mineral Ave. intersection (approximately 550 feet stop bar to stop bar) and high traffic demand the queue from the westbound through lanes at the S. Platte River Pkwy./W. Mineral Ave. intersection is projected to continue to spillback through the S. Santa Fe Dr./W. Mineral Ave. intersection during the p.m. peak hour through the 2040 long-term analysis horizon. This issue would be resolved if the S. Santa Fe Dr./W. Mineral Ave. grade separated interchange were constructed.

  - 2040 Long Term Analysis Horizon – The intersection is anticipated to undergo the following additional modifications by the 2040 long term analysis horizon. The eastbound and westbound left turn lanes will be eliminated resulting in the east leg of

the intersection consisting of three through lanes and one right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of two through lanes and one right turn lane on the westbound approach, and four westbound departure lanes. Based on these parameters and the existing and forecast background and total traffic volumes, it is projected that the intersection, overall, as well as multiple lane groups will experience failing levels of service by the 2040 long term analysis horizon total traffic scenario.

- **W. Jackass Hill Rd./W. Long Ave./W. Mineral Ave.** – The W. Jackass Hill Rd./W. Long Ave./W. Mineral Ave. intersection is not anticipated to undergo any geometric or operational modifications through the 2040 long term analysis horizon. Therefore, the analyses assumed that the intersection will remain under actuated/coordinated traffic signal control with protected/permitted left turn phasing on the eastbound and westbound approaches and permitted left turn phasing on the northbound and southbound approaches. The east leg of the intersection has one left turn lane with approximately 100 feet of storage, two through lanes, and one right turn lane with approximately 525 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection has one left turn lane with approximately 225 feet of storage, two through lanes, and one right turn lane with approximately 250 feet of storage on the eastbound approach, and two westbound departure lanes. The north leg of the intersection has one left turn lane with approximately 100 feet of storage, one through lane, and one right turn lane with approximately 50 feet of storage on the southbound approach, and one northbound departure lane. The south leg of the intersection has one left turn lane with approximately 150 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and the existing and forecast background and total traffic volumes, it is projected that the intersection, overall, as well as all lane groups, will operate at acceptable levels of service through the 2025 buildout analysis horizon total traffic scenario with the exception of the eastbound through movement which experiences a poor level of service during the a.m. peak hour. By the 2040 long term analysis horizon the intersection, overall, is projected to deteriorate to a poor level of service during the a.m. peak hour and the eastbound through and westbound through movements are projected to continue to experience failing levels of service during the a.m. peak hour.

  In order to mitigate the projected northbound and southbound turn lane queues from spilling back into the through lanes the intersection approaches would require widening to provide additional turn lane storage capacity. Similarly, in order to mitigate the projected eastbound and westbound through lane queues from spilling back and blocking their associated auxiliary turn lanes the existing turn lanes could be expanded into the existing raised landscaped medians and tree lawns to provide sufficient length to avoid blocking the entrance tapers to the auxiliary turn lanes.

- **S. Santa Fe Dr./W. Aspen Grove Way** – The S. Santa Fe Dr./W. Aspen Grove Way intersection is not anticipated to undergo any geometric or operational modifications through the 2040 long term analysis horizon. Therefore, the analysis assumes that the intersection will remain under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection has

dual left turn lanes with approximately a total of 450 feet of storage and one right turn lane with approximately 225 feet of storage on the eastbound approach, and two westbound departure lanes. The north leg of the intersection has two through lanes and one right turn lane with approximately 425 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 600 feet of storage and two through lanes on the northbound approach, and three southbound departure lanes. Based on these parameters and the existing and forecast traffic volumes, it is projected that the intersection, overall, will operate at acceptable levels of service through the 2040 long term analysis horizon a.m. peak hour. The intersection, overall, is projected to fail in the p.m. peak hour by the 2040 long term analysis horizon. The eastbound left turn and right turn and northbound left turn movements are projected to have poor to failing levels of service during both the a.m. and p.m. peak hours, as well as the southbound through movement during the p.m. peak hour by the 2025 buildout analysis horizon.

In order to mitigate the projected northbound through lane queue from spilling back and blocking the entrance to the northbound left turn lane the northbound left turn lane could be expanded sufficiently by restriping the existing painted median. In order to mitigate the projected southbound through lane queue from spilling back and blocking the entrance to the southbound right turn lane S. Santa Fe Dr. could be widened to provide additional southbound right turn lane capacity.

- **S. Santa Fe Dr./W. County Line Rd.** – The S. Santa Fe Dr./W. County Line Rd. intersection is not anticipated to undergo any geometric or operational modifications through the 2025 buildout analysis horizon. Therefore, the analyses assumes that the intersection will remain under actuated/coordinated traffic signal control with split phasing on the eastbound and westbound approaches and protected only left turn phasing on the northbound and southbound approaches. The east leg of the intersection has dual left turn lanes with a storage capacity in excess of 500 feet, one through lane and one channelized free-flow right turn lane on the westbound approach, and one eastbound departure lane plus a northbound to eastbound continuous right acceleration lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage and shared through/right turn lane on the eastbound approach and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 675 feet of storage, two through lanes, and one right turn lane with approximately 400 feet of storage on the southbound approach and two northbound departure lanes plus a westbound to northbound channelized free right turn acceleration lane. The south leg of the intersection has one left turn lane with approximately 150 feet of storage, two through lanes, and one channelized free right turn lane on the northbound approach and three southbound departure lanes. It is anticipated that by the 2040 long term analysis horizon the intersection will be modified to include three through travel lanes on the northbound and southbound approaches. Also, the westbound through lane will be eliminated by combining it with the outside westbound left turn lane and the westbound free-flow right turn lane will modified to have yield control as the acceleration lane will be eliminated. Based on these parameters and the existing and forecast traffic volumes, it is projected that the intersection, overall, as well as multiple lane groups, will experience poor to failing levels of service during the a.m. and p.m. peak hours by the 2025 buildout analysis horizon total traffic scenario. By the 2040 long

term analysis horizon total traffic scenario the overall performance of the intersection is projected to improve due to the anticipated S. Santa Fe Dr. widening improvements. However, there will still be multiple lane groups with poor to failing levels of service.

The anticipated planned improvements to S. Santa Fe Dr., outlined in the South US 85 PEL Study is projected to mitigate the queue spillback issues associated with this intersection.

- **S. Santa Fe Dr./W. Nichols Ave.** – The S. Santa Fe Dr./W. Nichols Ave. intersection will be constructed concurrently with the RiverPark development as a "T" intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 420 feet of storage and one channelized free-flow right turn lane on the eastbound approach, and two westbound departure lanes. Initially, the dual eastbound left turn lanes will not be activated and should be striped out or right-of-way reserved for them. However, sometime prior to the 2040 long term analysis horizon it is anticipated that they will be activated, therefore they need to be accounted for in the initial construction. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control with a minimum of 500 feet of storage including the entrance taper on the southbound approach, and three northbound departure lanes. The south leg of the intersection will have dual left turn lanes with a minimum total of 770 feet of storage and two through lanes on the northbound approach, and three southbound departure lanes plus an eastbound to southbound right turn acceleration with a minimum length of 760 feet. By the 2040 long term analysis horizon it is projected that an additional northbound through lane will be constructed on S. Santa Fe Dr. passing through this intersection. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, will operate at acceptable levels of service through the 2025 buildout analysis horizon. However, the northbound left turn movement is projected to experience poor to failing levels of service during both the a.m. and p.m. peak hours. By the 2040 buildout analysis horizon the intersection, overall, is projected to operate at an acceptable level of service during the a.m. peak hour and decline to poor/failing levels of service during the p.m. peak hour. The eastbound and northbound left turn movements are projected to experience failing levels of service during both the a.m. and p.m. peak hours and the southbound through movement during the p.m. peak hour.

  It is projected that by the 2040 long-term analysis horizon that the southbound through traffic queue will spill back and block the entrance to the southbound right turn lane during the p.m. peak hour. Due to the proximity of the S. Santa Fe Dr./W. Mineral Ave. intersection to the S. Santa Fe Dr./W. Nichols Ave. intersection (approximately 870 feet) there is not sufficient space to add the additional capacity necessary to mitigate this issue. This issue would be resolved if the S. Santa Fe Dr./W. Mineral Ave. grade separated interchange were constructed.

- **S. Platte River Pkwy./W. Nichols Ave.** – The S. Platte River Pkwy./W. Nichols Ave. intersection will be constructed concurrently with the RiverPark development as a modified two-lane roundabout with yield control on the eastbound, westbound, northbound and southbound approaches. The east leg of the roundabout will have one

entrance lane and one right turn by-pass lane on the westbound approach, and two eastbound departure lanes. The west leg of the roundabout will have will have one entrance lane on the eastbound approach, and one westbound departure lane. The north leg of the roundabout will have two entrance lanes on the southbound approach, and one northbound departure lane plus the westbound to northbound right turn by-pass departure lane. The south leg of the roundabout will have one entrance lane on the northbound approach, and southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the roundabout will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

It is projected that by the 2040 long-term analysis horizon that the southbound approach traffic queue will spill back through the proposed S. Platte River Pkwy./ RiverPark North Site Access intersection. Due to the proximity of the S. Platte River Pkwy./ RiverPark North Site Access intersection to the S. Platte River Pkwy./W. Nichols Ave. intersection there is not sufficient space to add the additional capacity necessary to mitigate this issue.

- **S. Platte River Pkwy./RiverPark North Site Access** – The S. Platte River Pkwy./RiverPark North Site Access intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through lane and one right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through lane and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the northbound approach, and two southbound departure lanes. Based on these parameters and forecast traffic volumes, it is projected that the eastbound and westbound left turn movements are projected to experience failing levels of service during both the a.m. and p.m. peak hours due to the high northbound and southbound through traffic volumes on S. Platte River Pkwy.

  There are several alternatives that could be employed to mitigate the projected poor eastbound and westbound left turn levels of service. They include; initially, doing nothing in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; providing guide signing that directs and encourages motorists to a desired route; restricting the eastbound and westbound left turn movements during peak hour periods; permanently restricting the eastbound and westbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection.

- **W. Nichols Ave./RiverPark East Site Access** – The W. Nichols Ave./RiverPark East Site Access intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum

of 200 feet of storage, one through lane and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will have one shared left turn/through lane and one right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane and one right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the northbound and southbound left turn movements are projected to experience failing levels of service during both the a.m. and p.m. peak hours due to the high eastbound and westbound through traffic volumes on W. Nichols Ave.

There are several alternatives that could be employed to mitigate the projected poor northbound and southbound left turn levels of service. They include; doing nothing initially in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; providing guide signing that directs and encourages motorists to a desired route; restricting the northbound and southbound left turn movements during peak hour periods; permanently restricting the northbound and southbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection.

- **S. Platte River Pkwy./RiverPark Access South 1** – The S. Platte River Pkwy./RiverPark Access South 1 intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./RiverPark Access South 2** – The S. Platte River Pkwy./RiverPark Access South 2 intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and

one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./W. Phillips Ave.** – The S. Platte River Pkwy./W. Phillips Ave. intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the roundabout, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Santa Fe Dr./W. Phillips Ave.** – The S. Santa Fe Dr./W. Phillips Ave. intersection will be constructed concurrently with the Santa Fe Park South development and located north of the Dad Clark Gulch bridge, approximately 1,330 feet south of the proposed S. Santa Fe Dr./W. Nichols Ave. intersection (center to centerline) in order to provide a minimum of 1,260 feet for a continuous acceleration/deceleration lane between the two intersections. The intersection will be a “T” intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 250 feet of storage and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 510 feet of storage and two through lanes (widened to three through lanes by 2040) on the northbound approach, and three southbound departure lanes. Although the single northbound left turn lane can be designed to have sufficient capacity to accommodate the projected queues, the level of service of the movement is projected to fail. Providing dual left turn lanes would provide additional capacity for the northbound left turn movement and improve its operational characteristics (level of service and delay). However, the proximity of the Dad Clark Gulch bridge to the south of the intersection currently restricts the possibility of widening the median to construct dual left turn lanes. CDOT’s plans for widening S. Santa Fe Dr. to provide three through lanes in each direction will require the widening of the Dad Clark Gulch bridge which could potentially include widening the median to accommodate dual left turn lanes. With this in mind, consideration should be given to reserving the additional right-of-way required for providing two westbound receiving lanes on W. Phillips Ave. to accommodate the northbound dual left turn lanes. This right-of way reservation should extend to the S. Platte River Pkwy roundabout. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, is projected to operate at acceptable levels of services through the 2025 buildout analysis horizon. However, it is projected that the

eastbound left and right turn movements will experience poor to failing levels of service during the p.m. peak hour and the northbound left turn movement will experience poor to failing levels of service during both the a.m. and p.m. peak hours. By the 2040 long term analysis horizon it is projected that all lane groups, with the exception of the northbound through and southbound right turn movements, will experience failing levels of service during both the a.m. and p.m. peak hours. The intersection, overall, is projected to experience a failing level of service during the p.m. peak hour.

It is projected that by the 2040 long-term analysis horizon that the eastbound right turn queue will spill back through the proposed W. Phillips Ave./Santa Fe Park South East Access 2 intersection. This does not create a significant concern due to the parcel this access intersections serves is also served by another access intersecting W. Phillips Ave. to the west.

- **S. Platte River Pkwy./Santa Fe Park South Access North 2** – The S. Platte River Pkwy./Santa Fe Park South Access North 2 intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./Santa Fe Park South Access North 1** – The S. Platte River Pkwy./Santa Fe Park South Access North 1 intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **W. Phillips Ave./Santa Fe Park South Access East 1** – The W. Phillips Ave./Santa Fe Park South Access East 1 intersection will be constructed concurrently with the Santa Fe

Park South development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared left turn/through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **W. Phillips Ave./Santa Fe Park South Access East 2** – The W. Phillips Ave./Santa Fe Park South Access East 2 intersection will be constructed concurrently with the Santa Fe Park South development as a "T" intersection with stop sign control on the northbound approach and restricted to right turns only (RIRO). The east leg of the intersection will have one through lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one shared through/right turn lane and one through lane on the eastbound approach, and one westbound departure lane. The south leg of the intersection will have one right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./Santa Fe Park South Access South 1** – The S. Platte River Pkwy./Santa Fe Park South Access South 1 intersection will be constructed concurrently with the Santa Fe Park South development as a "T" intersection with stop sign control on the eastbound approach. The west leg of the intersection will have one shared left turn/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./Santa Fe Park South Access South 2** – The S. Platte River Pkwy./Santa Fe Park South Access South 2 intersection will be constructed concurrently with the Santa Fe Park South development as a "T" intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach,

and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./Santa Fe Park South Access South 3** – The S. Platte River Pkwy./Santa Fe Park South Access South 3 intersection will be constructed concurrently with the Santa Fe Park South development as a "T" intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the intersection, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

- **S. Platte River Pkwy./Santa Fe Park South Access South 4/LEMC Access** – The S. Platte River Pkwy./Santa Fe Park South Access South 4/LEMC Access intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. Based on these parameters and forecast traffic volumes, it is projected that the roundabout, overall, as well as all impeded traffic movements will operate at acceptable levels of service through the 2040 long term analysis horizon total traffic scenario.

Study Area Roadways :

- **S. Platte River Pkwy.** – The following describes the general laneage requirements for S. Platte River Pkwy. They do not include auxiliary laneage at intersections.
  - W. Mineral Ave. to W. Nichols Ave. – Two travel lanes in each direction with a raised center median to define left turn lanes.
  - W. Nichols Ave. to W. Phillips Ave. – One travel lane in each direction with a raised center median to define left turn lanes.
  - W. Phillips Ave. to LEMC Access Roundabout – One travel lane in each direction.

- **W. Nichols Ave.** – The following describes the general laneage requirements for W. Nichols Ave. They do not include auxiliary laneage at intersections.
  - S. Platte River Pkwy. to S. Santa Fe Dr. – Two travel lanes in each direction with a center median to accommodate left turn movements.

- **W. Phillips Ave.** – The following describes the general laneage requirements for W. Phillips Ave. They do not include auxiliary laneage at intersections.

- S. Platte River Pkwy. to S. Santa Fe Dr. – Two eastbound travel lanes and one westbound travel lane with a center median to accommodate left turn movements. The second eastbound travel lane essentially provides necessary queue storage for the projected eastbound left turn movement at the S. Santa Fe Dr./W. Phillips Ave. intersection.

- **S. Santa Fe Dr.** – CDOT is planning to widen S. Santa Fe Dr. to include three through lanes in both directions and a raised center median prior to the 2040 long term analysis horizon.

- **W. Mineral Ave.** – Although there are no additional through lanes planned for W. Mineral Ave. within the study area, due to the proximity of the S. Santa Fe Dr./W. Mineral Ave. and W. Mineral Ave./S. Platte River Pkwy. intersections the general roadway section will be undergoing significant modifications in order to accommodate the associated intersection improvements.

Figures 32 and 33 graphically illustrate the roadway and intersection improvements recommended for the combined RiverPark and Santa Fe Park South developments described, herein for the 2025 buildout and 2040 long term analysis horizons, respectively.

D. Multimodal Considerations

Given the mixed use nature of the RiverPark and Santa Fe Park South developments, as well as their proximity to the RTD Littleton/Mineral Station and regional trail networks (Mary Carter Greenway Trail and Railroad Spur Trail) there will be a focus on incorporating infrastructure elements and amenities for the two developments that encourage and promote multimodal travel options. A detailed presentation of the planned multimodal infrastructure and amenities is presented in Appendix “F”.

E. S. Santa Fe Dr./W. Mineral Ave. Grade Separation Considerations

Although a scenario with the S. Santa Fe Dr./W. Mineral Ave. intersection configured as a grade separated interchange was not included in the scope of this traffic study the following considerations should be given consideration in the design of the proposed RiverPark and Santa Fe Park South developments:

- Traffic patterns on the study area roadways and intersections would be significantly altered, eliminating the need/purpose for the SW Quad Road.
- The non-development (background) related traffic that utilized the SW Quad Road would be eliminated significantly reducing the travel demand on the segment of S. Platte River Pkwy. between W. Mineral Ave. and W. Nichols Ave.
- The S. Santa Fe Dr./ W. Nichols Ave. intersection would be removed.
- Travel demand on the segment of S. Platte River Pkwy. between W. Nichols Ave. and W. Phillips Ave. and on W. Phillips Ave. between S. Santa Fe Dr. and S. Platte River Pkwy. would increase due to the elimination of the S. Santa Fe Dr./W. Nichols Ave. intersection. However, based on the projected travel demand for this segment of S. Platte River Pkwy. together with the likely increase in traffic as a result of the redistribution of traffic due to the construction of a grade separated interchange, there

will still be excess capacity on the currently proposed roadway sections for this segment of S. Platte River Pkwy. and W. Phillips Ave.

- The travel demand for the northbound left turn movement at S. Santa Fe Dr./W. Phillips Ave. intersection will increase as a result of the construction a grade separated interchange at the S. Santa Fe Dr./W. Mineral Ave. intersection. Due to the projected operational characteristics and associated queues for the northbound left turn movement, consideration should be given to the possibility that dual left turn lanes may be required in the future. This would require the widening of the existing Dad Clark Gulch bridge to the south on S. Santa Fe Dr. and reserving the appropriate right-of way on W. Phillips Ave. to construct two westbound receiving lanes for the dual left turns. This right-of-way reservation should extend to S. Platte River Pkwy.

VII. CONCLUSION

Evergreen Devco and Toll Brothers are planning to independently develop approximately 110.95 acres of property located along the west side of S. Santa Fe Dr. (US 85) between W. Mineral Ave. and the Littleton Equine Medical Center (LEMC) in Littleton, Colorado. Since the transportation system serving these two developments will essentially be integrated with one another the City of Littleton has requested that the traffic impact study should incorporate both developments.

The Evergreen Devco parcel, to be known as RiverPark, contains approximately 33.34 acres situated in the southwest quadrant of the S. Santa Fe Dr./W. Mineral Ave. intersection. Upon buildout, RiverPark will be a mixed use development consisting of commercial/retail, residential housing and senior living land uses. The commercial/retail parcel is planned to consist of 61,980sf of retail space, three fast-food restaurants with drive-through windows totaling 8,800sf (3,500sf, 3,300sf and 2,000sf, respectively), two 6,500sf high-turnover (sit-down) restaurants, and one 4,993sf convenience market with 16-fueling stations. The residential parcel is planned to consist of 270 multifamily housing units. The senior living parcel is planned to consist of a 168 unit congregate care facility.

The Toll Brothers parcel, to be known as Santa Fe Park South, contains approximately 77.61 acres situated immediately south of the proposed RiverPark site adjacent to the west side of S. Santa Fe Dr. Upon buildout, Santa Fe Park South will be a mixed use development consisting of commercial/retail and residential housing uses. The commercial/retail parcel is planned to consist of 15,000sf of retail space, two 2,500sf fast-food restaurants with drive-through windows, and two 5,000sf high-turnover (sit-down) restaurants. The residential parcel is planned to consist of 399 single-family attached housing units and 336 multifamily housing units.

When the two developments are completed they are projected to generate 26,608 daily vehicle trips of which 1789 will occur during the morning peak hour and 1949 will occur during the evening peak hour.

The purpose of this study was to evaluate the impact of the vehicular trips projected to be generated by the proposed RiverPark and Santa Fe Park South developments at projected buildout (2025) and long term (2040) analysis horizons on the study area intersections and roadway system while incorporating measures for mitigating traffic congestion and operational issues plaguing the adjacent transportation system. Based on the analyses contained herein, recommendations for improvements to accommodate the transportation needs of the RiverPark

and Santa Fe Park South developments, as well as provide mitigation measures for relieving traffic congestion on the adjacent roadway system, were developed for the following existing and proposed study area intersections and roadways:

Study Area Intersections:

- S. Platte River Pkwy./W. Mineral Ave.
- S. Santa Fe Dr./W. Mineral Ave.
- W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.
- S. Santa Fe Dr./W. Aspen Grove Way
- S. Santa Fe Dr./W. County Line Rd.
- S. Santa Fe Dr./W. Nichols Ave. (proposed)
- S. Platte River Pkwy./W. Nichols Ave. (proposed)
- S. Platte River Pkwy./RiverPark North Site Access (proposed)
- W. Nichols Ave./RiverPark East Site Access (proposed)
- S. Platte River Pkwy./RiverPark South Site Access 1 (proposed)
- S. Platte River Pkwy./RiverPark South Site Access 2 (proposed)
- S. Platte River Pkwy./W. Phillips Ave. (proposed)
- S. Santa Fe Dr./W. Phillips Ave. (proposed)
- S. Platte River Pkwy./Santa Fe Park South North Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South North Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South East Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South East Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 1 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 2 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 3 (proposed)
- S. Platte River Pkwy./Santa Fe Park South South Access 4/LEMC Access (proposed)

Study Area Roadways:

- S. Platte River Pkwy.(proposed)
- W. Nichols Ave. (proposed)
- W. Phillips Ave. (proposed)
- S. Santa Fe Dr.
- W. Mineral Ave.

Based on the analysis contained herein, the proportional contribution of peak hour traffic volumes entering each of the study area intersections by the proposed RiverPark and Santa Fe Park South developments and non-site generated (background) traffic for the 2025 buildout and 2040 long term analysis horizon total traffic scenarios were identified. The purpose of these computations is to assist the developers and the City of Littleton in evaluating and assigning financial responsibility for the mitigation of the traffic impacts associated with the construction of the recommended improvements. Table 8 provides the results of these computations.

A summary of recommendations and associated responsibilities for the construction of roadway and intersection improvements to adequately serve both the RiverPark and Santa Fe Park South developments, as well as address the mitigation of traffic congestion and operational issues within the study area are provided in Table 9, below. Figures 32 and 33 graphically

illustrate the recommended roadway and intersection improvements for the 2025 buildout and 2040 long-term analysis horizons, respectively.

TABLE 8
COMBINED (RIVERPARK & SANTA FE PARK SOUTH DEVELOPMENTS
PROPORTIONAL CONTRIBUTION OF VOLUME ON STUDY AREA INTERSECTIONS

INTERSECTION	2025 AM Peak Hour				2025 PM Peak Hour			
	RiverPark Site Trips (Volume %)	Santa Fe Park Site Trips (Volume %)	Background Traffic (Volume %)	Total Traffic (Volume %)	RiverPark Site Trips (Volume %)	Santa Fe Park Site Trips (Volume %)	Background Traffic (Volume %)	Total Traffic (Volume %)
S. Platte River Pkwy/	565	300	3650	4510	575	280	4755	5610
W. Mineral Ave.	12%	7%	81%	100%	10%	5%	85%	100%
S. Santa Fe Dr./	350	370	7420	8140	365	410	7870	8645
W. Mineral Ave.	4%	5%	91%	100%	4%	5%	91%	100%
Jackass Hill Rd./	175	170	3245	3590	180	160	3265	3605
W. Mineral Ave.	5%	5%	90%	100%	5%	4%	91%	100%
S. Santa Fe Dr./	165	165	4745	5075	180	200	5345	5725
W. Aspen Grove Way	3%	3%	94%	100%	3%	3%	94%	100%
S. Santa Fe Dr./	150	130	4410	4690	165	165	4850	5180
W. County Line Rd.	3%	3%	94%	100%	3%	3%	94%	100%
S. Santa Fe Dr./	300	260	5435	5995	315	300	5895	6510
W. Nichols Ave.	5%	4%	91%	100%	5%	5%	90%	100%
S. Platte River Pkwy/	510	280	1075	1865	565	285	1220	2070
W. Nichols Ave.	27%	15%	58%	100%	27%	14%	59%	100%
S. Santa Fe Dr./	185	425	5055	5665	200	485	5650	6335
W. Phillips Ave.	3%	8%	89%	100%	3%	8%	89%	100%
S. Platte River Pkwy./	60	490	0	550	65	605	0	670
W. Phillips Ave.	11%	89%	0%	100%	10%	90%	0%	100%

INTERSECTION	2040 AM Peak Hour				2040 PM Peak Hour			
	RiverPark Site Trips (Volume %)	Santa Fe Park Site Trips (Volume %)	Background Traffic (Volume %)	Total Traffic (Volume %)	RiverPark Site Trips (Volume %)	Santa Fe Park Site Trips (Volume %)	Background Traffic (Volume %)	Total Traffic (Volume %)
S. Platte River Pkwy/	445	310	4495	5250	475	315	5710	6500
W. Mineral Ave.	8%	6%	86%	100%	7%	5%	88%	100%
S. Santa Fe Dr./	350	370	10070	10790	370	400	10785	11555
W. Mineral Ave.	3%	3%	94%	100%	3%	4%	93%	100%
Jackass Hill Rd./	175	165	3810	4150	180	160	3840	4180
W. Mineral Ave.	4%	4%	92%	100%	4%	4%	92%	100%
S. Santa Fe Dr./	165	170	6920	7255	180	200	7785	8165
W. Aspen Grove Way	2%	2%	96%	100%	2%	2%	96%	100%
S. Santa Fe Dr./	145	130	6530	6805	165	170	7220	7555
W. County Line Rd.	2%	2%	96%	100%	2%	2%	96%	100%
S. Santa Fe Dr./	415	250	7965	8630	425	270	8630	9325
W. Nichols Ave.	5%	3%	92%	100%	5%	3%	92%	100%
S. Platte River Pkwy/	440	320	1790	2550	480	350	1810	2640
W. Nichols Ave.	17%	13%	70%	100%	18%	13%	69%	100%
S. Santa Fe Dr./	185	390	7365	7940	200	440	8275	8915
W. Phillips Ave.	2%	5%	93%	100%	2%	5%	93%	100%
S. Platte River Pkwy./	60	475	295	830	65	595	350	1010
W. Phillips Ave.	7%	57%	36%	100%	6%	59%	35%	100%

TABLE 9
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES/IMPACT MITIGATION

ROADWAYS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
W. Mineral Ave.	Although there are no additional through lanes planned for W. Mineral Ave. within the study area, due to the spacing of the S. Santa Fe Dr./W. Mineral Ave. and W. Mineral Ave./S. Platte River Pkwy. intersections, the general roadway section will be undergoing significant modifications in order to accommodate the associated intersection improvements. These modifications are described for the W. Mineral Ave./S. Platte River Pkwy. and S. Santa Fe Dr./W. Mineral Ave. intersections, below.	See responsibilities/impact mitigation for the W. Mineral Ave./S. Platte River Pkwy. and S. Santa Fe Dr./W. Mineral Ave. intersections, below.
S. Santa Fe Dr. (W. Mineral Ave. to south RiverPark property line)	Improvements to S. Santa Fe Dr. from W. Mineral Ave. to the RiverPark south property line will include the following: • Construction of a southbound right turn deceleration lane extending a minimum of 500 feet of storage including a 15:1 entrance taper extending from the proposed W. Nichols Ave. intersection. • Construction of a southbound auxiliary right turn acceleration/deceleration lane from W. Nichols Ave. to the RiverPark south property line. • Construction of dual northbound left turn lanes with raised center median at W. Nichols Ave. See recommendations for S. Santa Fe Dr./W. Nichols Ave. intersection for further discussion. • Construction of raised median along left turn lanes to provide full separation of the northbound and southbound traffic It is anticipated that an additional northbound travel lane will be constructed by the 2040 long-term analysis horizon.	Responsibility for improvements to S. Santa Fe Dr. from W. Mineral Ave. to the RiverPark south property line will be as follows: • The RiverPark developer will be responsible for funding the design and construction of the southbound right turn deceleration lane extending a minimum of 500 feet of storage including a 15:1 entrance taper extending from the proposed W. Nichols Ave. intersection. • The RiverPark developer will be responsible for funding the design and construction of the southbound auxiliary right turn acceleration/deceleration lane from W. Nichols Ave. to the RiverPark south property line. • The RiverPark developer will be responsible for funding the design and construction of dual northbound left turn lanes and raised median at W. Nichols Ave. • CDOT will be responsible for the funding, design and construction of an additional northbound travel lane and associated infrastructure.
S. Santa Fe Dr. (Santa Fe Park South north property line to south property line)	Improvements to S. Santa Fe Dr. form Santa Fe Park South north property line to south property line will include the following: • Construction of a southbound right turn auxiliary right turn acceleration/deceleration lane from the Santa Fe Park South north property line to W. Phillips Ave. • Construction of raised median along left turn lanes to provide full separation of the northbound and southbound traffic It is anticipated that an additional northbound travel lane will be constructed by the 2040 long-term analysis horizon.	Responsibility for improvements to S. Santa Fe Dr. from Santa Fe Park South north property line to south property line will be as follows: • The Santa Fe Park South developer will be responsible for funding, design and construction of the southbound auxiliary right turn acceleration/deceleration lane from the Santa Fe Park South north property line to W. Phillips Ave. • The Santa Fe Park South developer will be responsible for funding, design and construction of raised medians along left turn lanes. • CDOT will be responsible for the funding, design and construction of an additional northbound travel lane and associated infrastructure.
S. Platte River Pkwy. (W. Mineral Ave. To W. Nichols Ave.)	The general laneage requirements for S. Platte River Pkwy. from W. Mineral Ave. to W. Nichols Ave. will consist of two travel lanes in each direction with a continuous raised center median with only one break for the RiverPark – North Site Access to accommodate left turn movements. This roadway segment shall be designed to accommodate large design vehicles (WB-67) as part of the regional roadway system, as well as for access to the adjacent commercial parcels.	Responsibility for the construction of S. Platte River Pkwy. from W. Mineral Ave to W. Nichols Ave. will be as follows: • The RiverPark developer will be responsible for funding the design and construction of one travel lane in each direction and raised center median to accommodate left turn movements. • The City of Littleton will be responsible for funding the design and construction of the remaining outside lanes of the roadway section. • The City of Littleton will be responsible for the design and construction of the roadway as part of the quadrant road solution.
S. Platte River Pkwy. (W. Nichols Ave. to south RiverPark property line)	The general laneage requirements for S. Plate River Pkwy. from W. Nichols Ave. to the RiverPark south property line will consist of one travel lane in each direction with a raised center median to define left turn lanes. This roadway section should match the roadway section for S. Platte River Pkwy. from. the Santa Fe Park north property line to W. Phillips Ave.	RiverPark Developer
S. Platte River Pkwy. (Santa Fe Park South north property line to W. Phillips Ave.)	The general laneage requirements for S. Plate River Pkwy. from the Santa Fe Park north property line to W. Phillips Ave. will consist of one travel lane in each direction with a raised center median to define left turn lanes. This roadway section should match the roadway section for S. Platte River Pkwy. from W. Nichols Ave. to the RiverPark south property line.	Santa Fe Park South Developer

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

ROADWAYS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy. (South of W. Phillips Ave.)	The general laneage requirements for S. Plate River Pkwy. south of W. Phillips Ave. will consist of one travel lane in each direction. This roadway segment shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for access to the commercial parcels.	Santa Fe Park South Developer
W. Nichols Ave.	The general laneage requirements for W. Nichols Ave. will consist of two travel lanes in each direction with a continuous raised center median with only one break for the RiverPark – East Site Access to accommodate left turn movements. The eastbound approach to the S. Santa Fe Dr. intersection will consist of a raised center median and dual left turn lanes. See recommendations for the S. Santa Fe Dr./W. Nichols Ave. and W. Nichols Ave./RiverPark – East Site Access intersections for further discussion. This roadway segment shall be designed to accommodate large design vehicles (WB-67) as part of the regional roadway system, as well as for access to the adjacent commercial parcels.	Responsibility for the construction of W. Nichols Ave. will be as follows: • The RiverPark developer will be responsible for funding the design and construction of one travel lane in each direction, single left turn lanes at intersections, and raised center medians that accommodate the left turn movements. • The City of Littleton will be responsible for funding the design and construction of the remaining outside lanes of the roadway section. • The City of Littleton will be responsible for the design and construction of the roadway as part of the quadrant road solution.
W. Phillips Ave.	The general laneage requirements for W. Phillips Ave. will consist of two eastbound travel lanes and one westbound travel lane with a continuous raised center median with only one break for the Santa Fe Park South – East Site Access 1 to accommodate left turn movements. The inside eastbound travel lane essentially provides necessary queue storage for the projected eastbound left turn movement at the S. Santa Fe Dr./W. Phillips Ave. intersection. Also, in order to accommodate the potential for future dual northbound left turn lanes at the S. Santa Fe Dr./W. Phillips Ave. intersection, additional right-of-way should be reserved to construct an additional westbound through lane to accommodate the required receiving lanes between S. Santa Fe Dr. and S. Platte River Pkwy. with the design and platting of the Santa Fe Park South development. This roadway segment shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for access to the commercial parcels.	Santa Fe Park South Developer

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
W. Mineral Ave./ S. Platte River Pkwy.	• Concurrent with the construction of the SW Quad Road and proposed RiverPark and Santa Fe Park South developments the following improvements are recommended for the S. Platte River Pkwy./W. Mineral Ave. intersection. o 2025 Buildout Analysis Horizon - The intersection will have actuated/coordinated traffic signal control with protected only left turn phasing all four approaches. The east leg of the intersection will consist of one left turn lane with a minimum of total of 250 feet of storage (The projected minimum storage requirement is 275 feet. However, until such time that CDOT allows the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection, the eastbound left turn lanes at the S. Santa Fe Dr./W. Mineral Ave. intersection cannot be removed restricting the available westbound left turn storage capacity at the S. Platte River Pkwy./W. Mineral Ave. intersection to its existing 250 feet.), two through lanes, and one right turn lane on the westbound approach, and three eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with a minimum total of 275 feet of required storage (400 feet existing), three through lanes, and a channelized right turn lane under yield control with a minimum of 350 feet of required storage (430 feet existing) on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will consist of dual left turn lanes, one through lane and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will consist of dual left turn lanes providing a combined total of approximately 650 feet of storage, one shared through/right turn lane, and one right turn lane (the shared through/right turn lane and right turn lane will provide a combined total of approximately 800 feet of storage) on the northbound approach and two southbound departure lanes. o 2040 Long Term Analysis Horizon - The only modification anticipated to be implemented at the intersection by the 2040 long term analysis horizon is adding an additional westbound left turn lane, increasing the capacity of the westbound left turn movement. This will be accomplished by eliminating the eastbound and westbound left turn lanes at the S. Santa Fe Dr./W. Mineral Avenue intersection and implementing the eastbound left turn movement at the S. Santa Fe Dr./W. Nichols Ave. intersection.	Responsibility for the implementation of improvements at this intersection will be as follows: • The RiverPark developer will be responsible for funding the following: o One left turn lane and one through/right turn lane on the northbound approach, and one southbound departure lane. o One eastbound right turn deceleration lane o 35% of the additional westbound left turn lane o All traffic signal equipment required • The City of Littleton will be responsible for funding the following: o 41% of the of the additional westbound left turn lane o Any improvements to the north leg of the intersection • The Santa Fe Park South developer will be responsible for funding the following: o 24% of the additional westbound left turn lane • The City will be responsible for the design and construction of the improvements. Since the northbound left turn queue is projected to exceed its capacity during the p.m. peak hour in both the 2025 buildout and 2040 long term analysis horizons it is anticipated that it will spill back into the S. Platte River Pkwy./RiverPark North Site Access intersection. Due to the geometric constraints of the intersection spacing this situation cannot be avoided. Also, the combined northbound shared through/right turn and right turn lanes will provide approximately 800 feet of storage capacity. The combined queue storage requirement is projected to be 818 feet in the 2025 buildout analysis horizon total traffic scenario spilling back into the proposed S. Platte River Pkwy./RiverPark North Site Access intersection. With the addition of the eastbound dual left turn lanes at the S. Santa Fe Dr./W. Nichols Ave. intersection it is projected that this queue storage requirement will drop to 537 feet and resolve the spill back issue. Exacerbating these operational issues is the fact that the projected eastbound left turn and through traffic queues at the S. Santa Fe Dr./W. Mineral Ave. intersection are anticipated to block the S. Platte River Pkwy./W. Mineral Ave. intersection northbound right turn traffic from entering the eastbound to northbound left turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. In addition, the southbound left turn traffic at the S. Platte River Pkwy./W. Mineral Ave. intersection will likely be blocked from entering the eastbound to southbound right turn lane at the S. Santa Fe Dr./W. Mineral Ave. intersection. Due to the geometric constraints of the existing intersection spacing this situation cannot be avoided. Due to the proximity of the S. Platte River Pkwy./W. Mineral Ave. intersection to the S. Santa Fe Dr./W. Mineral Ave. intersection (approximately 550 feet stop bar to stop bar) and high traffic demand the queue from the westbound through lanes at the S. Platte River Pkwy./W. Mineral Ave. intersection is projected to continue to spillback through the S. Santa Fe Dr./W. Mineral Ave. intersection during the p.m. peak hour through the 2040 long-term analysis horizon. In addition, it is projected that the intersection, overall, will experience a failing level of service during p.m. peak hour in the 2025 buildout analysis horizon and during both the a.m. and p.m. peak hours by the 2040 long term analysis horizon. Multiple lane groups are projected to experience poor or failing levels of service in both analysis horizons during both the a.m. and p.m. peak hours. These issues would be resolved with the construction of the S. Santa Fe Dr./W. Mineral Ave. grade separated interchange.

TABLE 9 (CONTINUED)

SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Santa Fe Dr./ W. Mineral Ave.	The S. Santa Fe Dr./W. Mineral Ave. intersection is anticipated to undergo the following modifications as part of the SW Quad Road interim improvements: • Initially, the intersection is anticipated to undergo the following modifications. The intersection will remain under actuated/coordinated traffic signal control with protected only left turn phasing on the eastbound, westbound approaches. The northbound and southbound left turn movements will be eliminated. The east leg of the intersection will consist of one left turn lane with approximately 425 feet of storage, two through lanes, and one right turn lane with approximately 375 feet of storage on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of dual left turn lanes with approximately a total of 775 feet of storage, two through lanes, and right turn lane on the eastbound approach, and three westbound departure lanes. The north leg of the intersection will consist of three through lanes, and one right turn lane on the southbound approach and three northbound departure lanes. The south leg of the intersection will consist of three through lanes, and one right turn lane with approximately 650 feet of storage on the northbound approach and three southbound departure lanes. Prior to the 2040 long term analysis horizon the intersection is anticipated to undergo the following additional modifications. The eastbound and westbound left turn lanes will be eliminated resulting in the east leg of the intersection consisting of three through lanes and one right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will consist of two through lanes and one right turn lane on the westbound approach, and four westbound departure lanes.	Responsibility for the implementation of improvements at this intersection will be as follows: • The RiverPark developer will be responsible for funding 4% of the intersection improvements based on entering traffic volume • The Santa Fe Park South developer will be responsible for funding 5% of the intersection improvements based on entering traffic volume • The City of Littleton will be responsible for funding 91% of the intersection improvements based on entering traffic volume • The City will be responsible for the design and construction of the improvements. It is projected that the operational characteristics will improve with the recommended improvements. However, the intersection will continue to experience poor operational conditions through the 2040 analysis horizon due to the high existing and projected traffic volumes entering this intersection. Mitigation of this condition will require implementation of the planned ultimate grade separated interchange of the S. Santa Fe Dr./W. Mineral Ave intersection.
W. Mineral Ave./W. Jackass Hill Rd./W. Long Ave.	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./W. Aspen Grove Way	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./ W. County Line Rd.	No geometric or operational modifications are recommended as a result of the development of the proposed project.	N/A
S. Santa Fe Dr./ W. Nichols Ave.	The intersection will be constructed concurrently with the SW Quad Road and proposed RiverPark development as a “T” intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 420 feet of storage and one channelized free-flow right turn lane on the eastbound approach, and two westbound departure lanes. Initially, the dual eastbound left turn lanes will not be activated and should be striped out or right-of-way reserved for them. However, sometime prior to the 2040 long term analysis horizon it is anticipated that they will be activated, therefore they need to be accounted for in the initial construction. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control with a minimum of 500 feet of storage including the entrance taper on the southbound approach, and three northbound departure lanes. The south leg of the intersection will have dual left turn lanes with a minimum total of 770 feet of storage and two through lanes on the northbound approach, and three southbound departure lanes plus an eastbound to southbound right turn acceleration with a minimum length of 760 feet. By the 2040 long term analysis horizon it is projected that an additional northbound through lane will be constructed on S. Santa Fe Dr. passing through this intersection.	Responsibility for the construction of this intersection will be as follows: • The RiverPark developer will be responsible for funding the following: o One travel lane in each direction (the eastbound travel lane is the eastbound right turn lane at the intersection approach) and one left turn lane on the eastbound approach o One left turn lane on the northbound approach o The southbound right turn deceleration lane • The City of Littleton will be responsible for funding the following: o One left turn lane on the eastbound approach o One left turn lane on the northbound approach o All traffic signal equipment required • The City of Littleton will be responsible for the design and construction of the improvements. It is projected that the intersection will experience poor operational conditions through the 2040 analysis horizon due to the high existing and projected traffic volumes entering this intersection. Mitigation of this condition will require implementation of the planned ultimate grade separated interchange of the S. Santa Fe Dr./W. Mineral Ave intersection which will require closing the S. Santa Fe Dr./W. Nichols Ave. intersection.

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ W. Nichols Ave.	The intersection will be constructed concurrently with the SW Quad Road and proposed RiverPark development as a modified two-lane roundabout with yield control on the eastbound, westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane and one right turn by-pass lane on the westbound approach, and two eastbound departure lanes. The west leg of the roundabout will have will have one entrance lane on the eastbound approach, and one westbound departure lane. The north leg of the roundabout will have two entrance lanes on the southbound approach, and one northbound departure lane plus the westbound to northbound right turn by-pass departure lane. The south leg of the roundabout will have one entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate large design vehicles (WB-67) utilizing the truck apron, as necessary.	Responsibility for the construction of the roundabout will be as follows: • The RiverPark developer will be responsible for funding the design and construction of an equivalent single-lane roundabout. • The City of Littleton will be responsible for funding the remaining outside lanes of the roundabout. • The City of Littleton will be responsible for the design and construction of the modified two-lane roundabout as part of the quadrant road solution.
S. Platte River Pkwy./ RiverPark - North Site Access	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through lane and one right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through lane and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the northbound approach, and two southbound departure lanes.	Funding for the design and construction of the intersection will be the responsibility of the RiverPark developer. In order to mitigate the projected poor operational conditions (level of service and delay) of the eastbound and westbound left turn movements the following measures could be employed: Do nothing initially in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; provide guide/way finding signage that directs and encourages motorists to a desired route; restricting the eastbound and westbound left turn movements during peak hour periods; permanently restricting the eastbound and westbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection. The monitoring and evaluation of the operational conditions of the eastbound and westbound left turn movements and implementation of any mitigation measures will be the responsibility of the RiverPark Metropolitan District with approval by the City of Littleton.
W. Nichols Ave./ RiverPark - East Site Access	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum of 200 feet of storage, one through lane and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 100 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and two westbound departure lanes. The north leg of the intersection will have one shared left turn/through lane and one right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane and one right turn lane on the northbound approach, and one southbound departure lane.	Funding for the design and construction of the intersection will be the responsibility of the RiverPark developer. In order to mitigate the projected poor operational conditions (level of service and delay) of the northbound and southbound left turn movements the following measures could be employed: Do nothing initially in order to evaluate if traffic naturally redistributes to other access points eliminating the issue; provide guide/way finding signage that directs and encourages motorists to a desired route; restricting the northbound and southbound left turn movements during peak hour periods; permanently restricting the northbound and southbound left turn movements. It is recommended that initially no physical mitigation measures be implemented in order to evaluate the actual operational characteristics of the intersection. The monitoring and evaluation of the operational conditions of the northbound and southbound left turn movements and implementation of any mitigation measures will be the responsibility of the RiverPark Metropolitan District with approval by the City of Littleton.
S. Platte River Pkwy./ RiverPark - South Site Access 1	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	RiverPark Developer

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

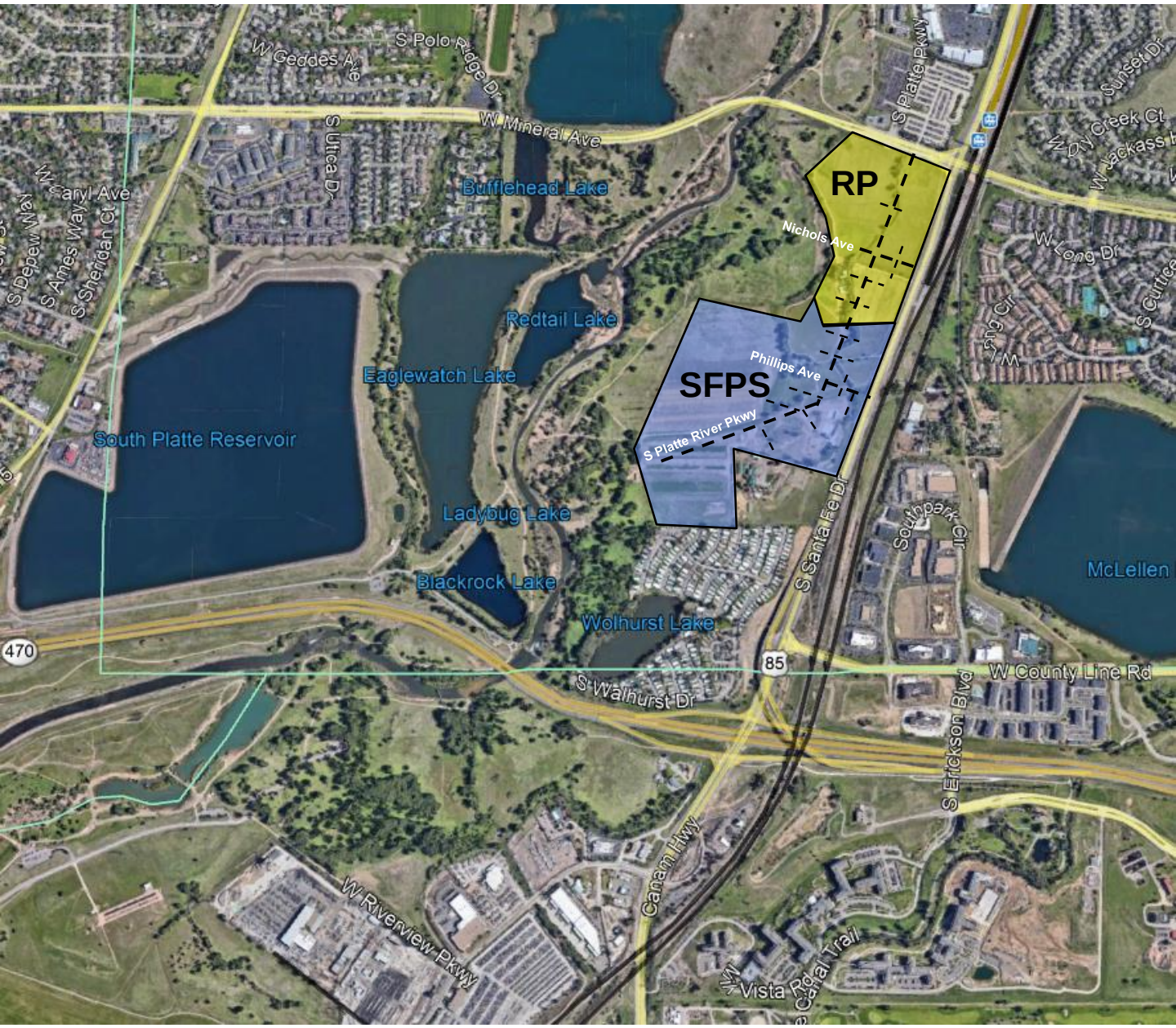
INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ RiverPark - South Site Access 2	The intersection will be constructed concurrently with the RiverPark development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	RiverPark Developer
S. Platte River Pkwy./ W. Phillips Ave.	The intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for service delivery trucks utilizing the truck apron, as necessary.	Santa Fe Park South Developer
S. Santa Fe Dr./ W. Phillips Ave.	The intersection will be constructed concurrently with the Santa Fe Park South development and located north of the Dad Clark Gulch bridge, approximately 1,330 feet south of the proposed S. Santa Fe Dr./W. Nichols Ave. intersection (center to centerline) in order to provide a minimum of 1,260 feet for a continuous acceleration/deceleration lane between the two intersections. The intersection will be a “T” intersection under actuated/coordinated traffic signal control with protected only left turn phasing on the northbound approach. The west leg of the intersection will have dual left turn lanes with a minimum total of 250 feet of storage and one right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have three through lanes and one channelized right turn lane under yield control on the southbound approach, and two northbound departure lanes. The south leg of the intersection will have one left turn lane with a minimum of 510 feet of storage and two through lanes (anticipated to be widened to three through lanes by CDOT prior to 2040) on the northbound approach, and three southbound departure lanes.	Funding for the design and construction of the intersection, including all traffic signal equipment required, will be the responsibility of the Santa Fe Park South developer. Although a single northbound left turn lane can be designed to have sufficient capacity to accommodate the projected queues, the level of service of the movement is projected to fail. Providing dual left turn lanes would provide additional capacity for the northbound left turn movement and improve its operational characteristics (level of service and delay). However, the proximity of the Dad Clark Gulch bridge to the south of the intersection currently restricts the possibility of widening the median sufficiently to construct dual left turn lanes. CDOT’s plans for widening S. Santa Fe Dr. (US 85) to provide three through lanes in each direction will require the widening of the Dad Clark Gulch bridge which could potentially include widening the median to accommodate dual northbound left turn lanes. If this were to happen it would be the responsibility of CDOT and the City of Littleton. Additionally, in order to accommodate the dual northbound left turn lanes, additional right-of-way should be reserved to accommodate the potential future construction of an additional westbound lane on W. Phillips Ave. between S. Santa Fe Dr. and S. Platte River Pkwy. with the design and platting of the Santa Fe Park South development.
S. Platte River Pkwy./ Santa Fe Park South - North Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ Santa Fe Park South - North Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the eastbound and westbound approaches. The east leg of the intersection will have one shared left turn/through/right turn lane on the westbound approach and one eastbound departure lane. The west leg of the intersection will have one shared left turn/through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - East Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a four-legged intersection with stop sign control on the northbound and southbound approaches. The east leg of the intersection will have one left turn lane with a minimum of 50 feet of storage and one shared through/right turn lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one left turn lane with a minimum of 50 feet of storage, one through lane and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared left turn/through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - East Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the northbound approach and restricted to right turns only (RIRO). The east leg of the intersection will have one through lane on the westbound approach, and two eastbound departure lanes. The west leg of the intersection will have one shared through/right turn lane and one through lane on the eastbound approach, and one westbound departure lane. The south leg of the intersection will have one right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 1	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the eastbound approach. The west leg of the intersection will have one shared left turn/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will have one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared left turn/through lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 2	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer
S. Platte River Pkwy./ Santa Fe Park South - South Access 3	The intersection will be constructed concurrently with the Santa Fe Park South development as a “T” intersection with stop sign control on the westbound approach. The east leg of the intersection will have one shared left turn/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection will have one shared left turn/through lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have one shared through/right turn lane on the northbound approach, and one southbound departure lane.	Santa Fe Park South Developer

TABLE 9 (CONTINUED)
SUMMARY OF RECOMMENDATIONS & RESPONSIBILITIES

INTERSECTIONS	RECOMMENDATIONS	RESPONSIBILITY/IMPACT MITIGATION
S. Platte River Pkwy./ Santa Fe Park South - South Access 4/LEMC Access	The intersection will be constructed concurrently with the Santa Fe Park South development as a single lane roundabout with yield control on the westbound, northbound and southbound approaches. The east leg of the roundabout will have one entrance lane on the westbound approach, and one eastbound departure lane. The north leg of the roundabout will have one entrance lane on the southbound approach, and one northbound departure lane. The south leg of the intersection will have entrance lane on the northbound approach, and one southbound departure lane. This roundabout shall be designed to accommodate larger design vehicles with trailers accessing LEMC, as well as for service delivery trucks utilizing the truck apron, as necessary.	Santa Fe Park South Developer



RP = RiverPark

SFP = Santa Fe Park

Proposed Roadway

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DENVER • DALLAS/FORT WORTH

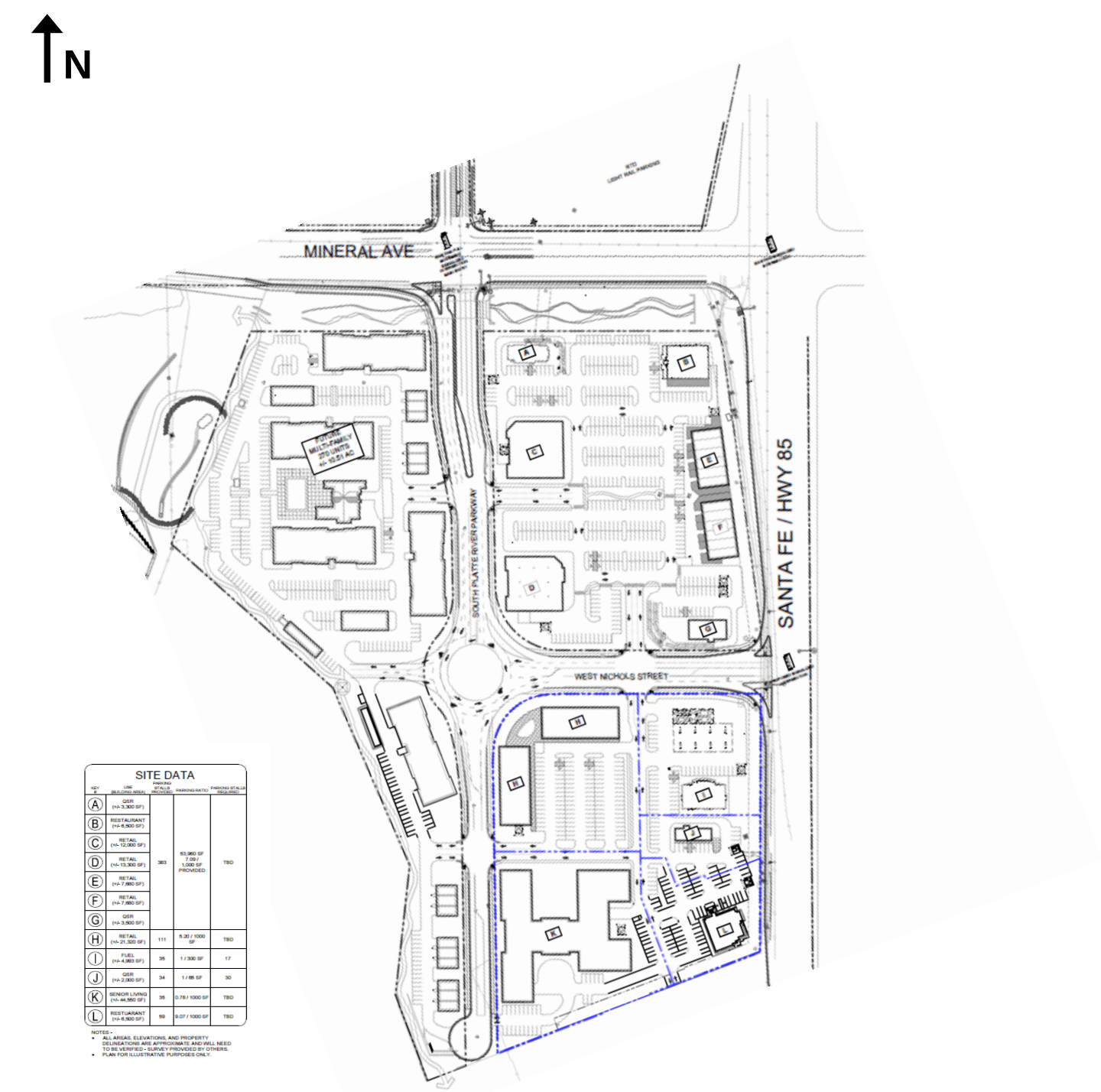
Vicinity Map

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 1



KEY #	USE (BUILDING AREA)	PARKING STALLS PROVIDED	PARKING RATIO	PARKING STALLS REQUIRED
A	QSR (+/- 3,300 SF)	383	93,960 SF 7.09 / 1,000 SF PROVIDED	TBD
B	RESTAURANT (+/- 6,500 SF)			
C	RETAIL (+/- 12,000 SF)			
D	RETAIL (+/- 13,300 SF)			
E	RETAIL (+/- 7,980 SF)			
F	RETAIL (+/- 7,980 SF)			
G	QSR (+/- 3,500 SF)			
H	RETAIL (+/- 21,320 SF)	111	5.20 / 1000 SF	TBD
I	FUEL (+/- 4,980 SF)	35	1 / 300 SF	17
J	QSR (+/- 2,000 SF)	34	1 / 65 SF	30
K	SENIOR LIVING (+/- 44,560 SF)	35	0.78 / 1000 SF	TBD
L	RESTAURANT (+/- 6,500 SF)	69	9.07 / 1000 SF	TBD

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RiverPark
Conceptual Site Plan

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

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Figure 2

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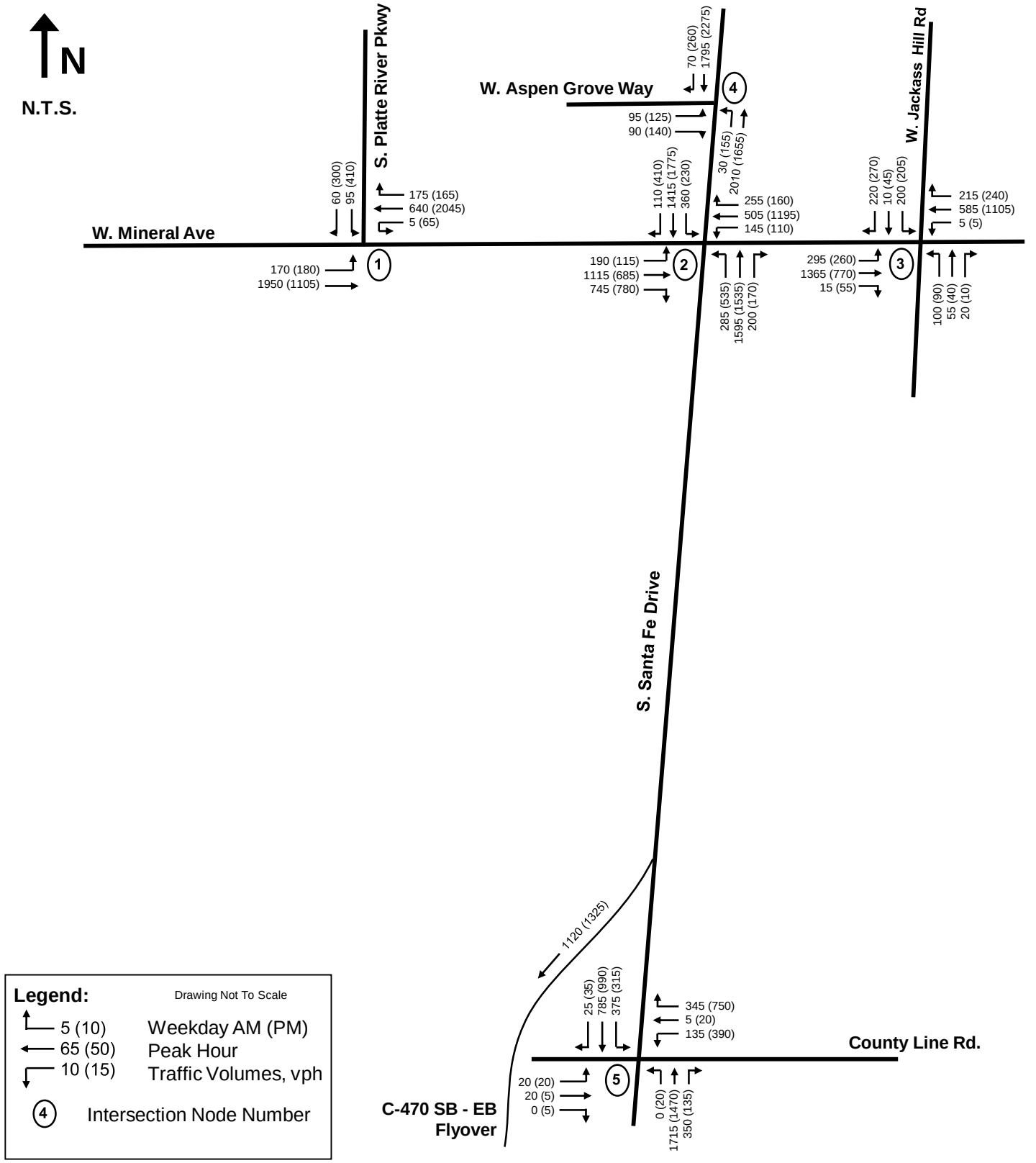
Santa Fe Park South
Conceptual Site Plan

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 3



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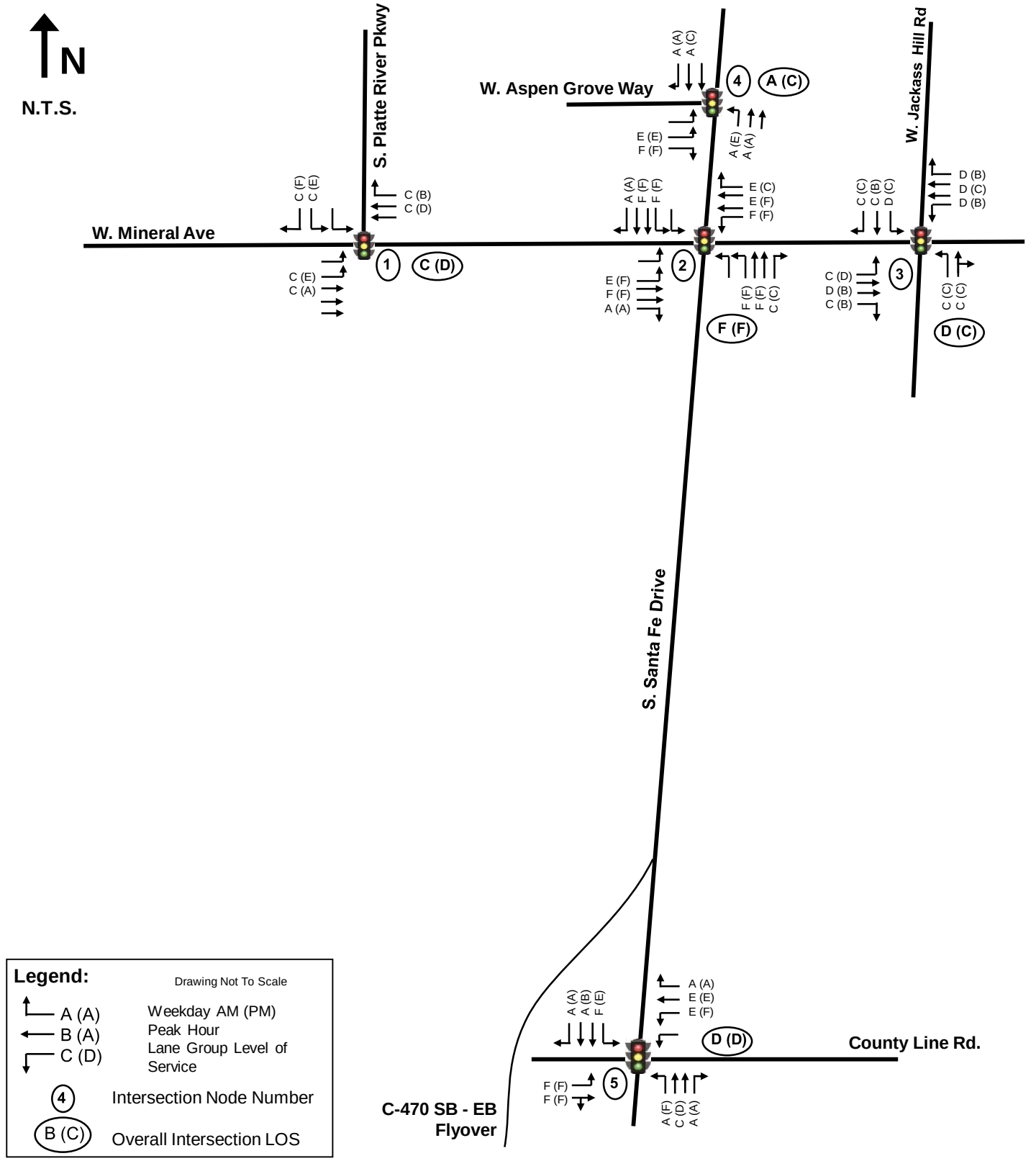
2019 Existing Traffic Volumes

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 4



Legend:

Drawing Not To Scale

A (A) / B (A) / C (D) — Weekday AM (PM) Peak Hour Lane Group Level of Service

4 — Intersection Node Number

B (C) — Overall Intersection LOS

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2019 Existing Traffic Operational Conditions

Combined RiverPark & Santa Fe Park South TIS

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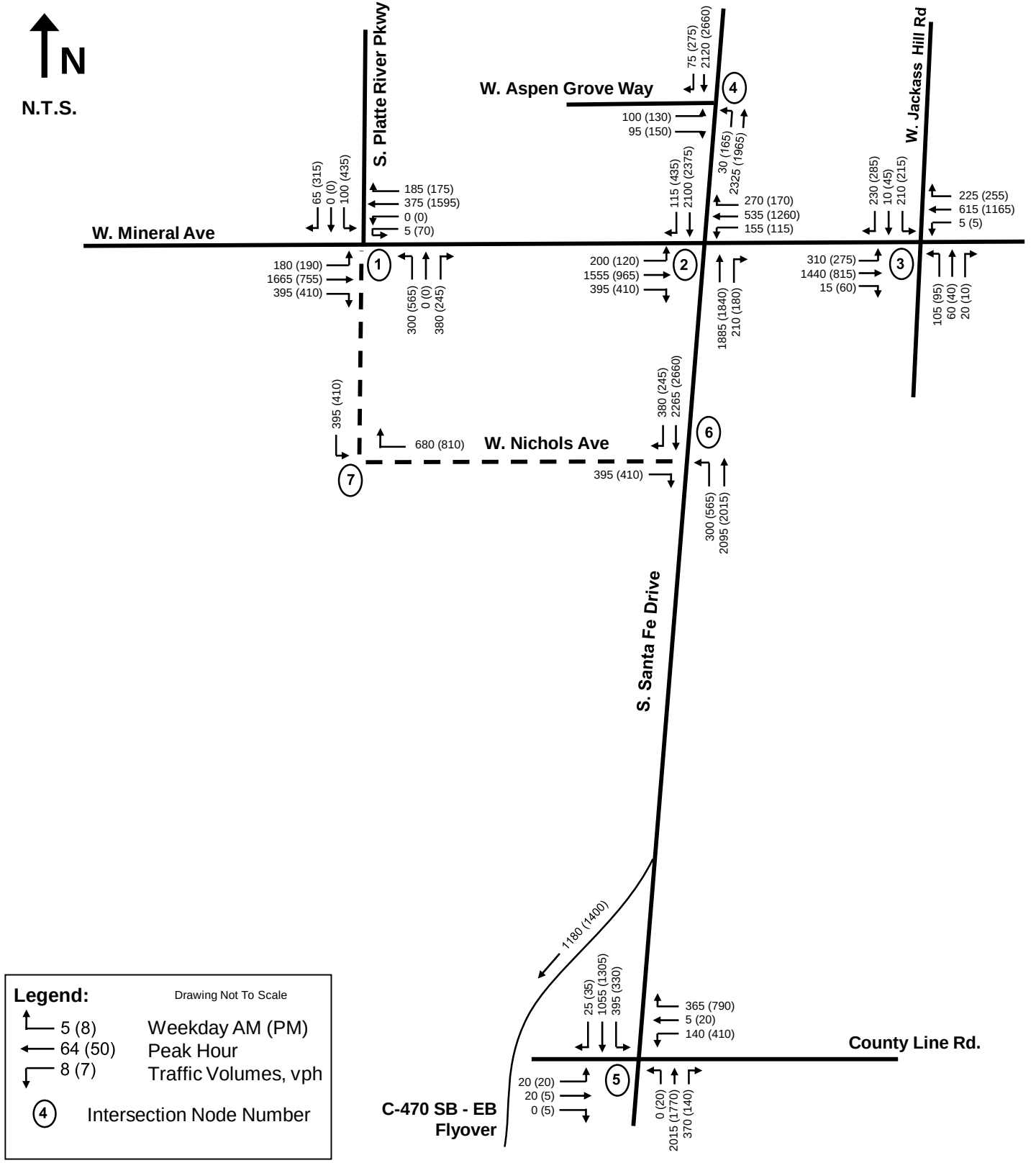
Figure 5



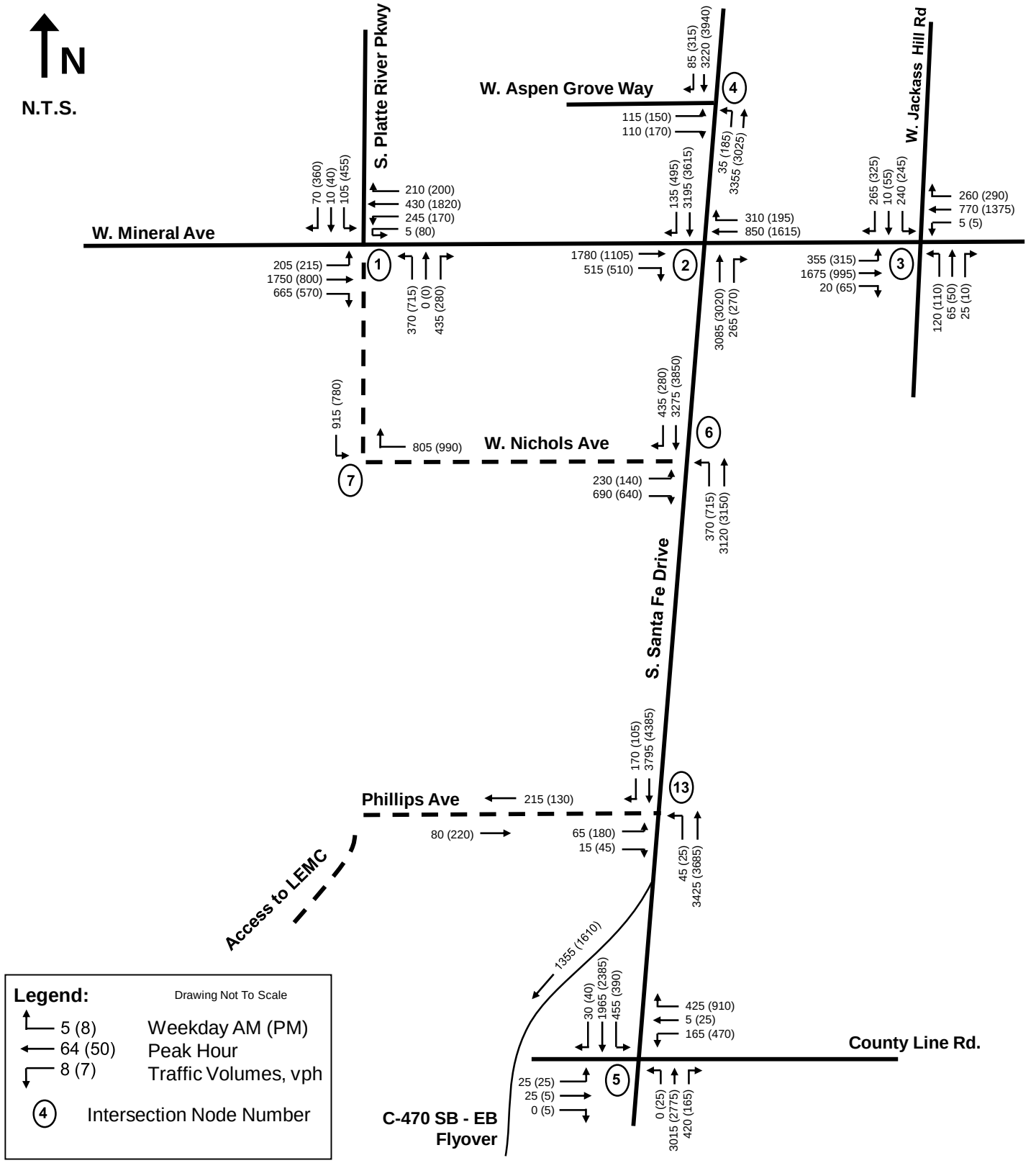
2025 Buildout Background Traffic Volumes

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 6



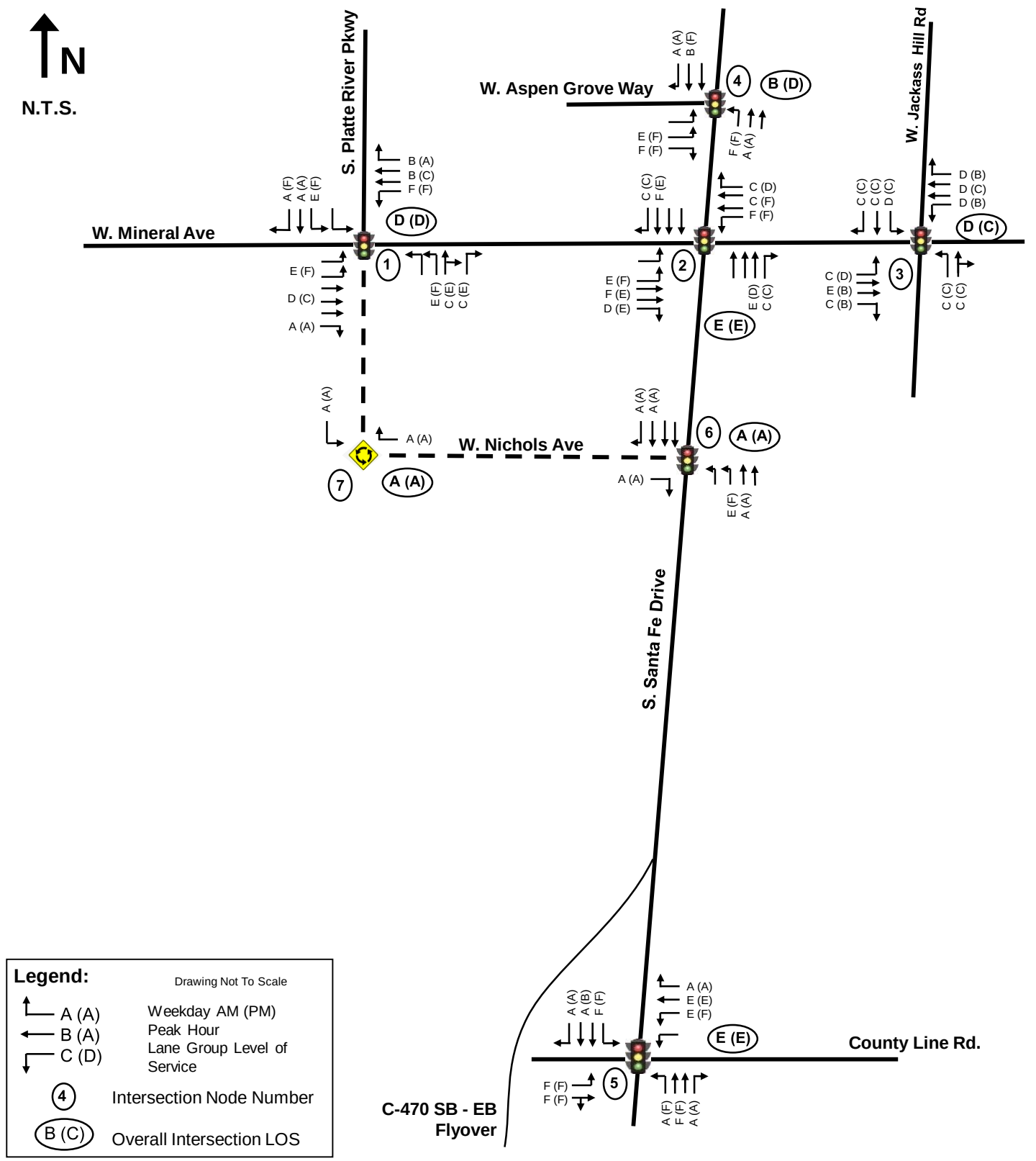
2040 Long Term Background Traffic Volumes (Includes LEMC Redevelopment)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 7



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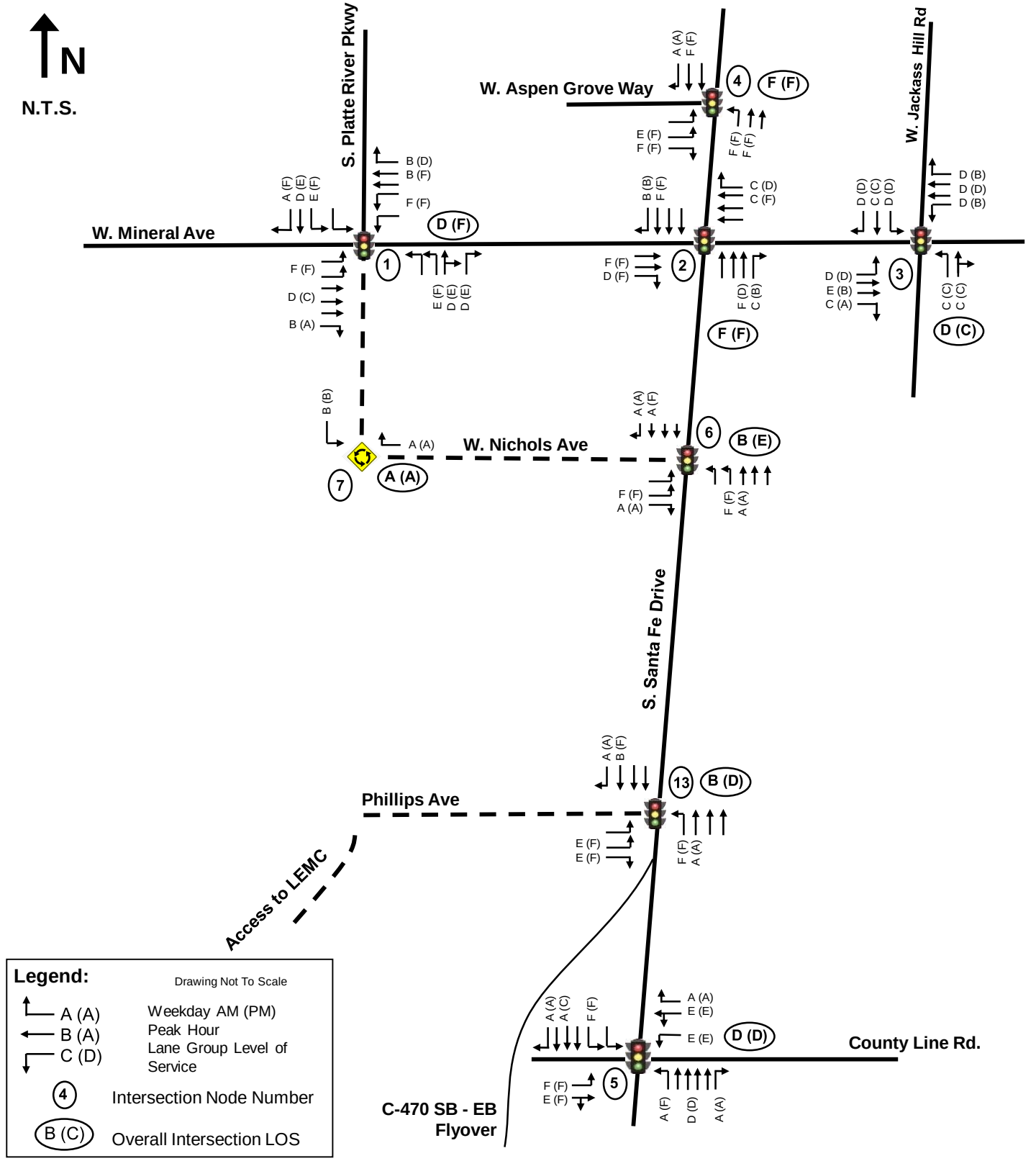
2025 Buildout Background Traffic Operational Conditions

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 8



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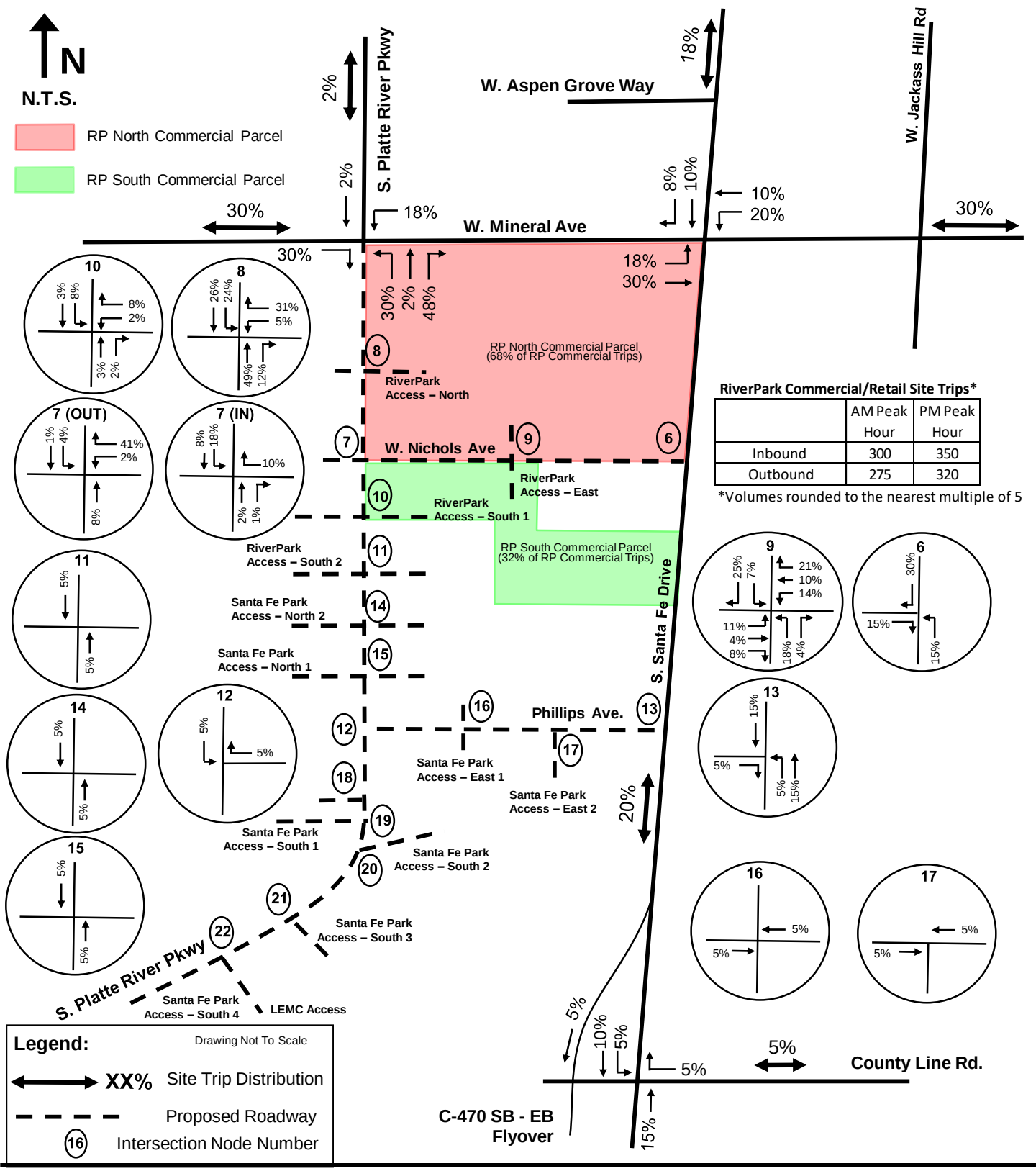
2040 Long Term Background Traffic Operational Conditions (Includes LEMC Redevelopment)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 9



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	300	350
Outbound	275	320

*Volumes rounded to the nearest multiple of 5

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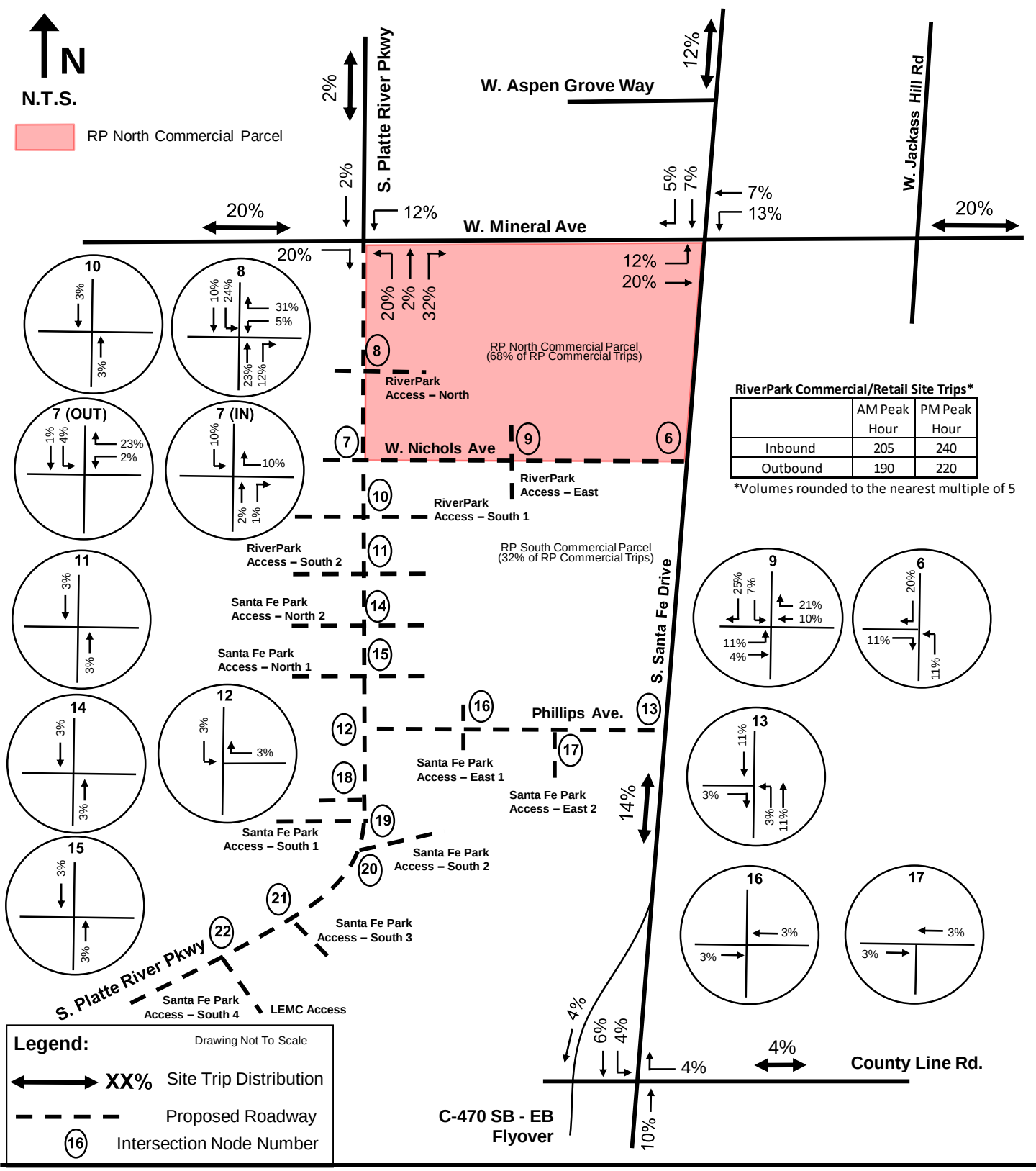
2025 Site Generated Trip Distribution: RiverPark Commercial/Retail

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 10



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	205	240
Outbound	190	220

*Volumes rounded to the nearest multiple of 5

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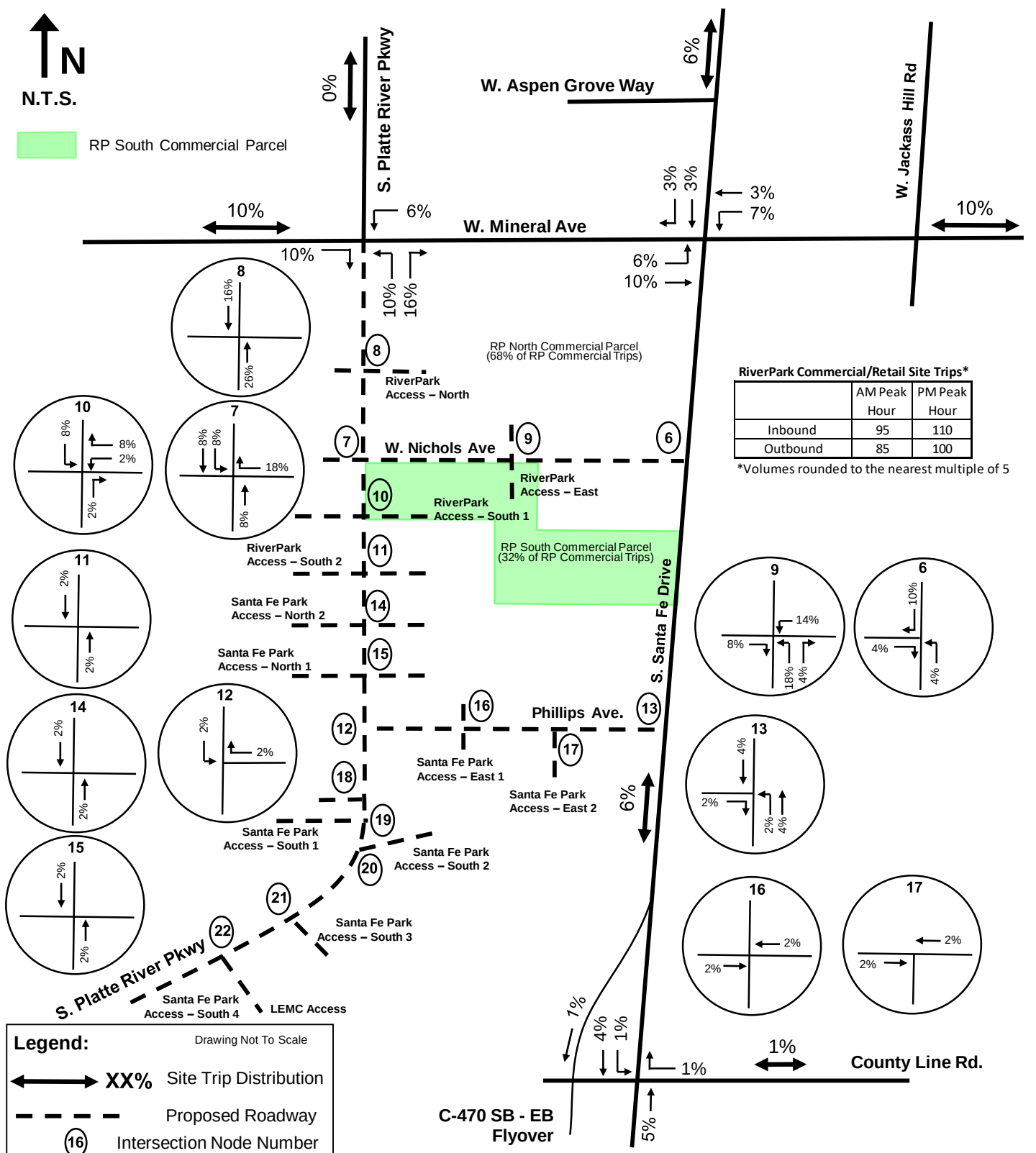
2025 Site Generated Trip Distribution: RiverPark Commercial/Retail (North Parcel)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 10A



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	95	110
Outbound	85	100

*Volumes rounded to the nearest multiple of 5

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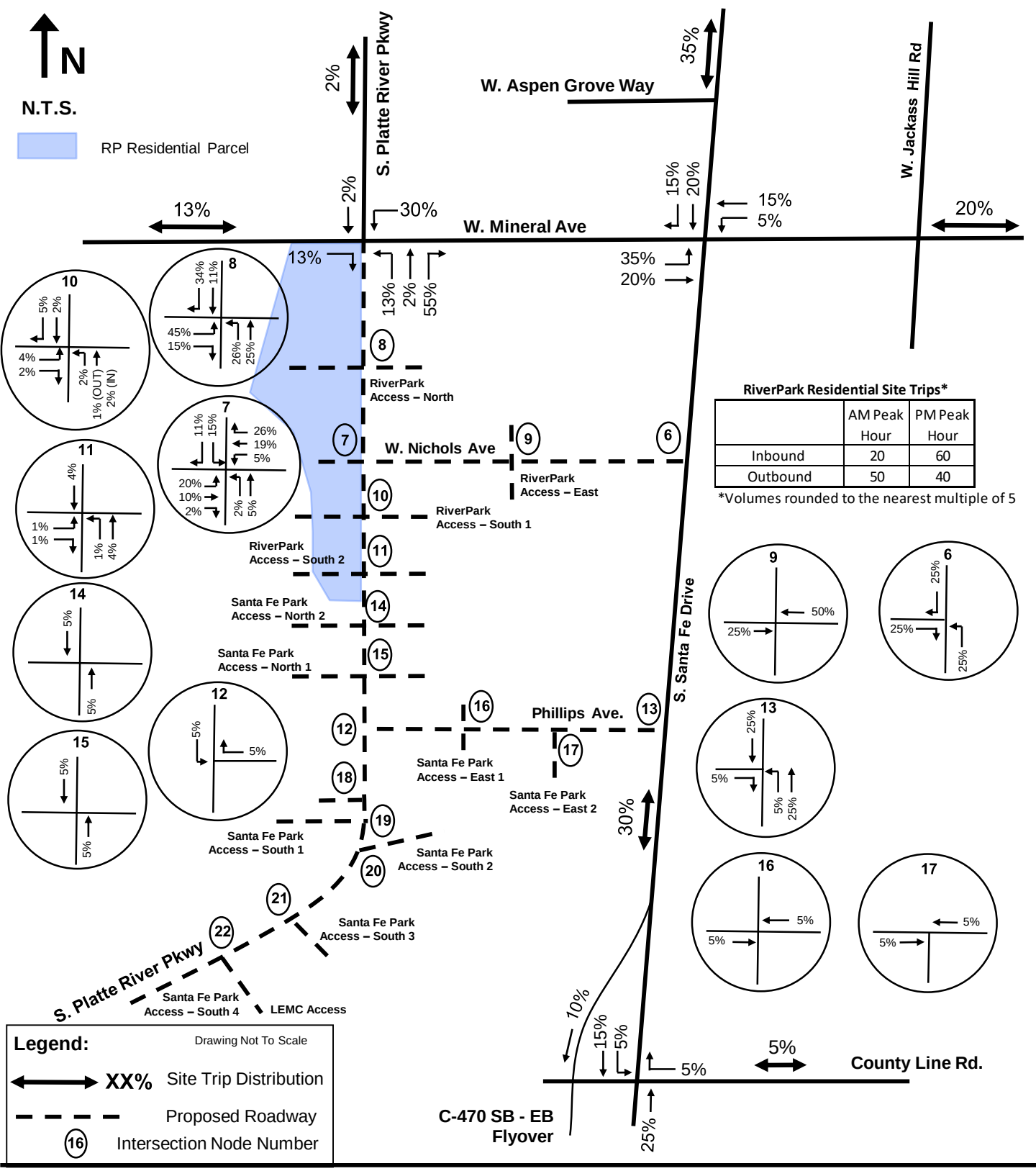
2025 Site Generated Trip Distribution: RiverPark Commercial/Retail (South Parcel)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 10B



RiverPark Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	20	60
Outbound	50	40

*Volumes rounded to the nearest multiple of 5

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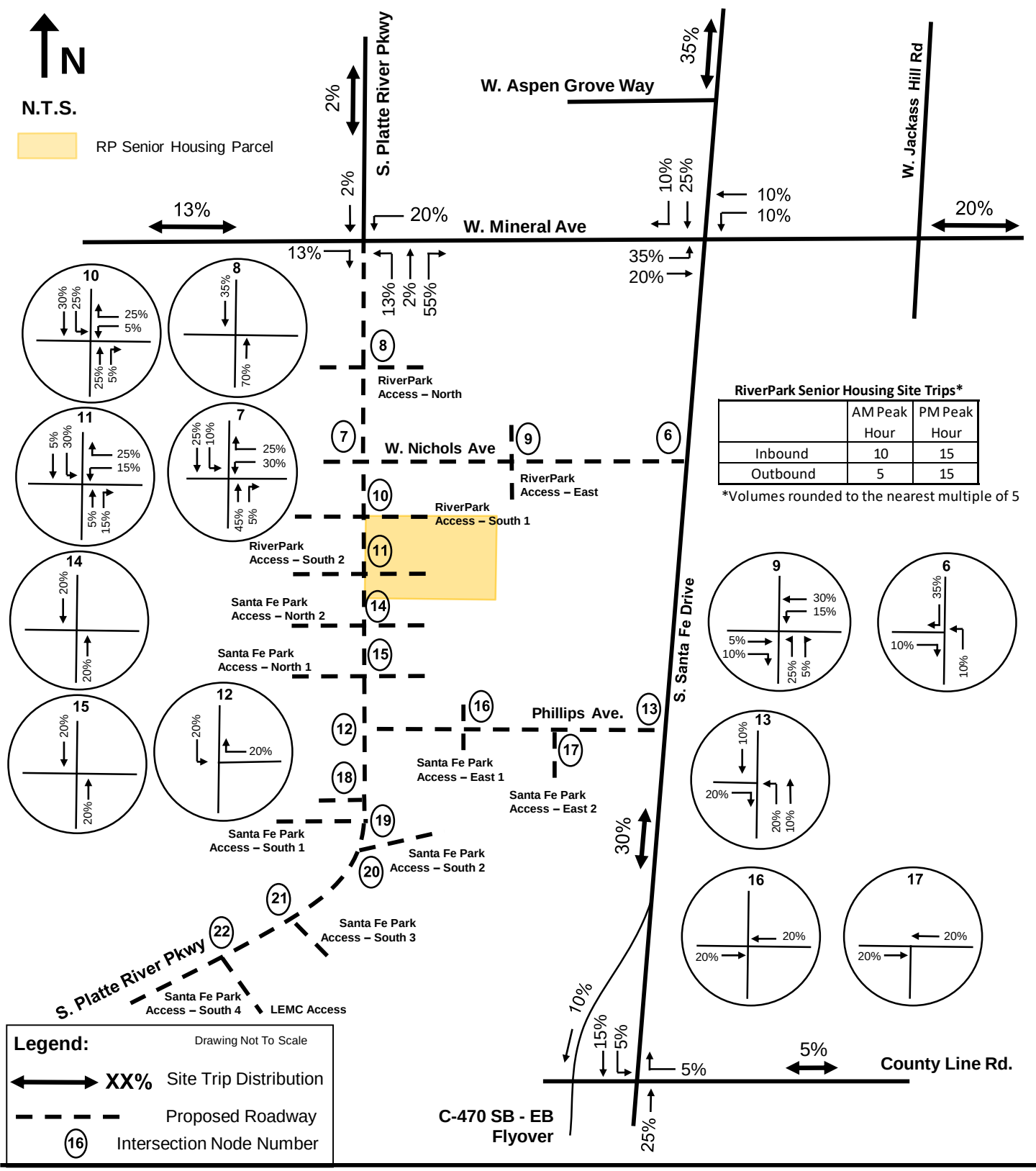
2025 Site Generated Trip Distribution: RiverPark Residential

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 11



RiverPark Senior Housing Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	10	15
Outbound	5	15

*Volumes rounded to the nearest multiple of 5

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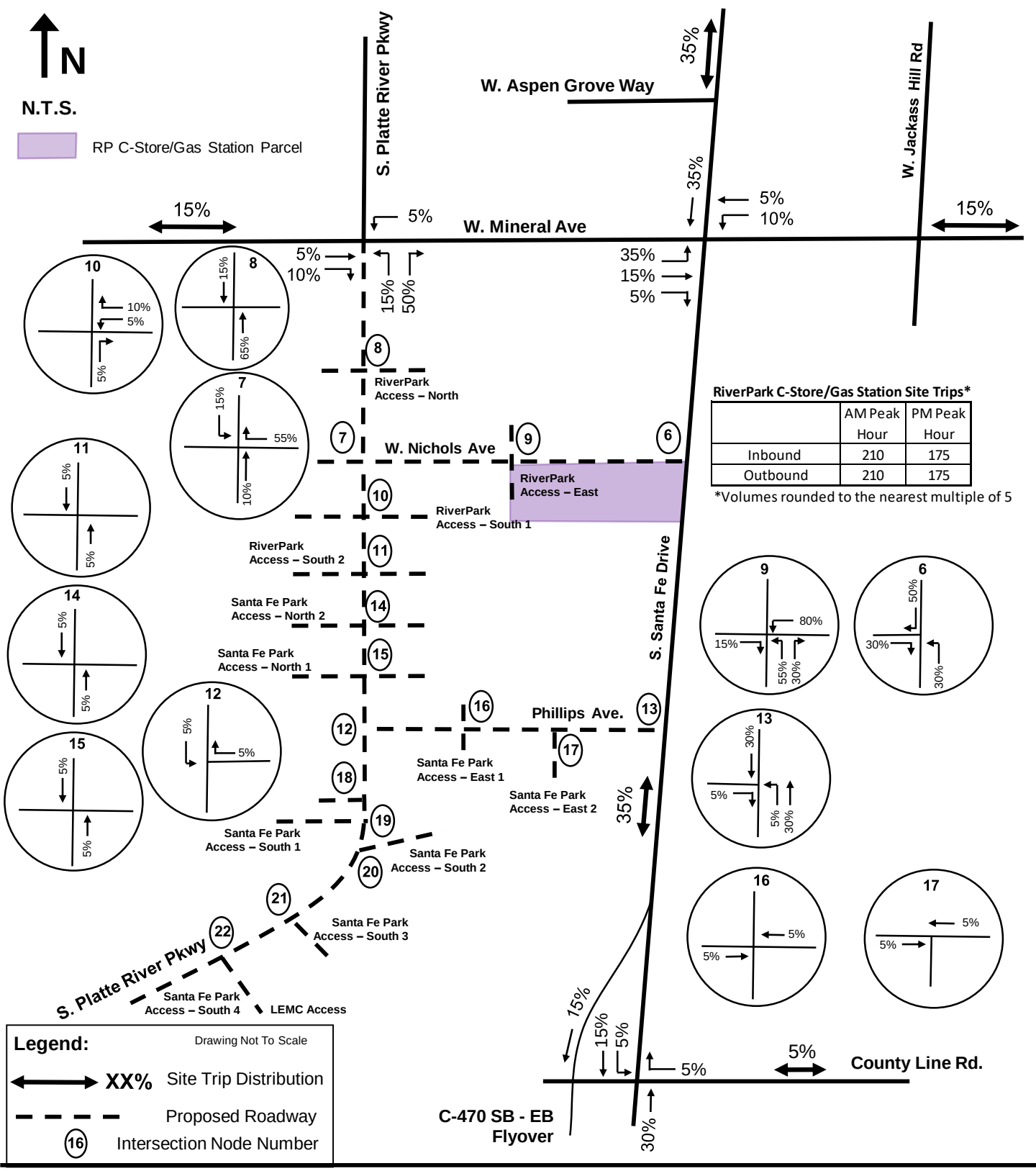
2025 Site Generated Trip Distribution: RiverPark Sr. Housing

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 12



RiverPark C-Store/Gas Station Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	210	175
Outbound	210	175

*Volumes rounded to the nearest multiple of 5

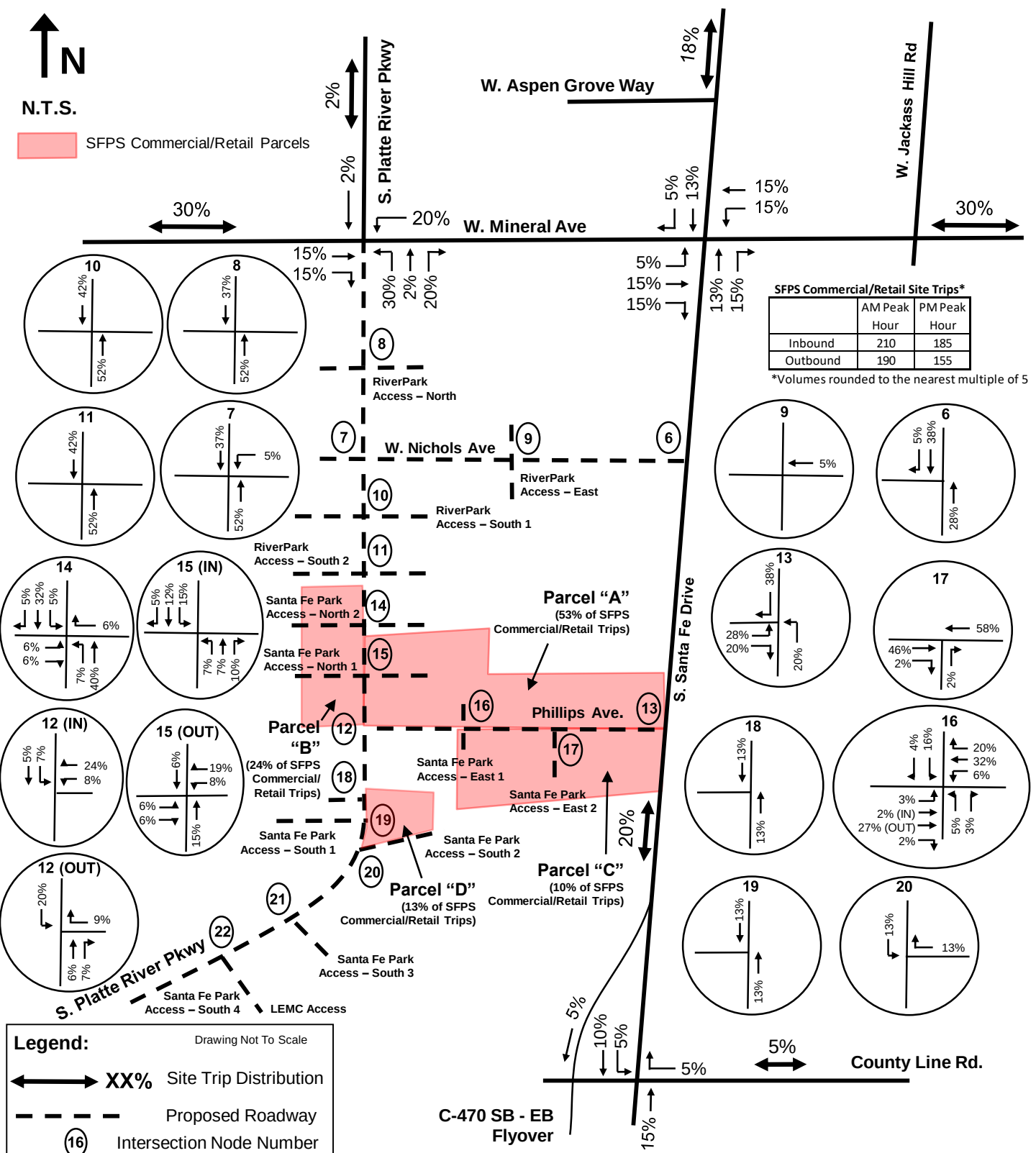
2025 Site Generated Trip Distribution: RiverPark C-Store/Gas Station

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 13



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

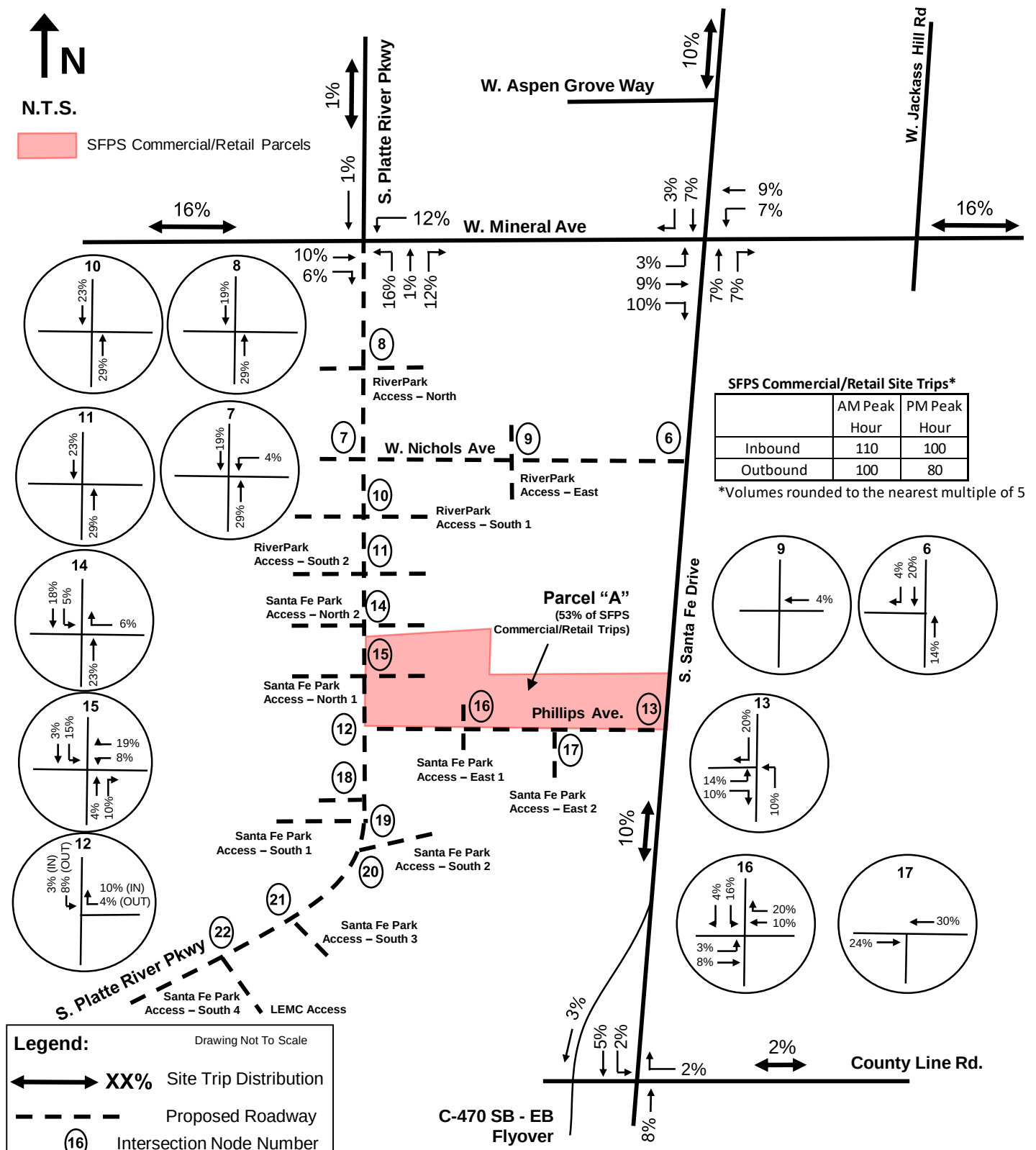
2025 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (All Commercial Parcels)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 14



SFPS Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	110	100
Outbound	100	80

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

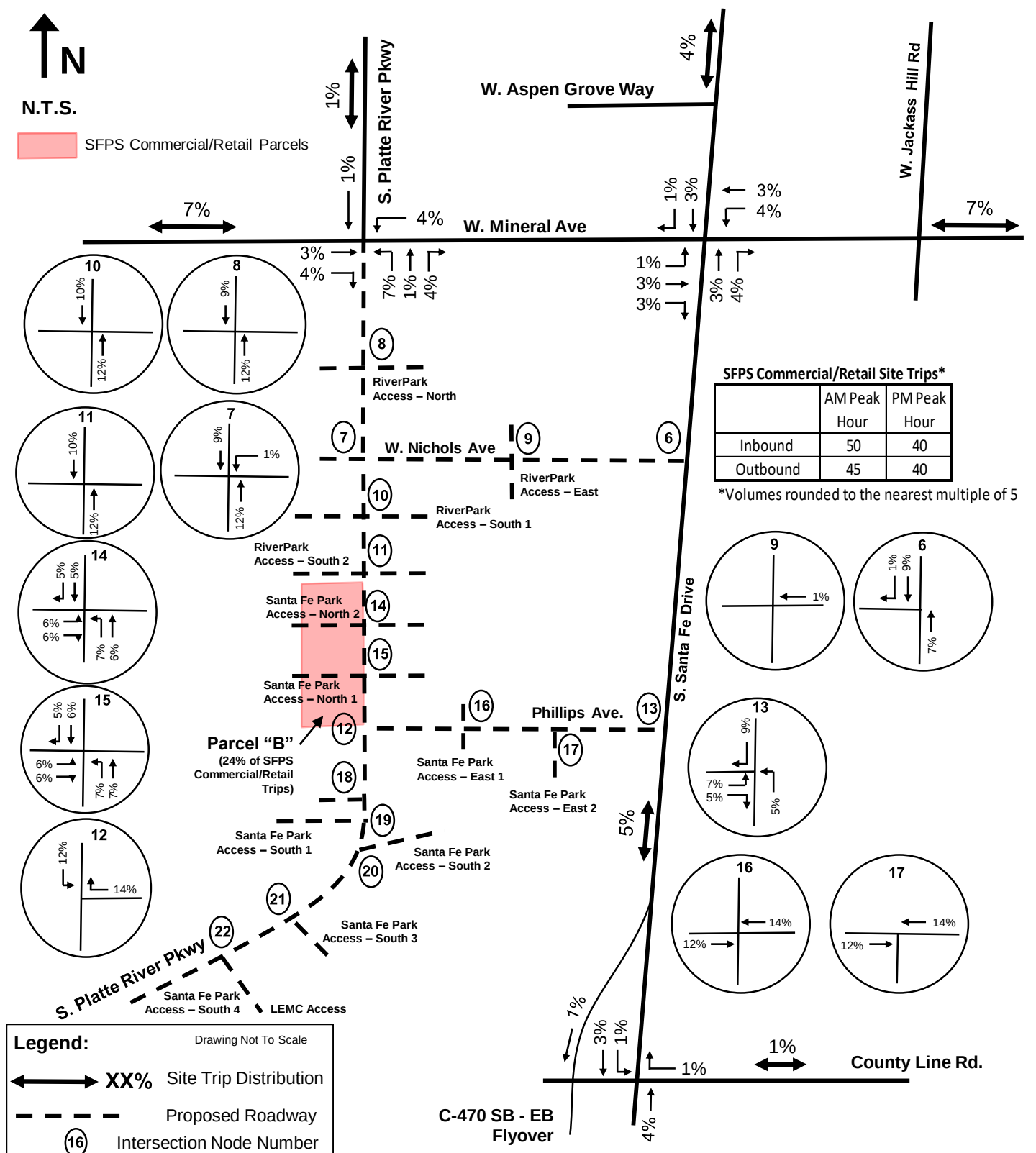
2025 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "A")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 14A



SFPS Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	50	40
Outbound	45	40

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

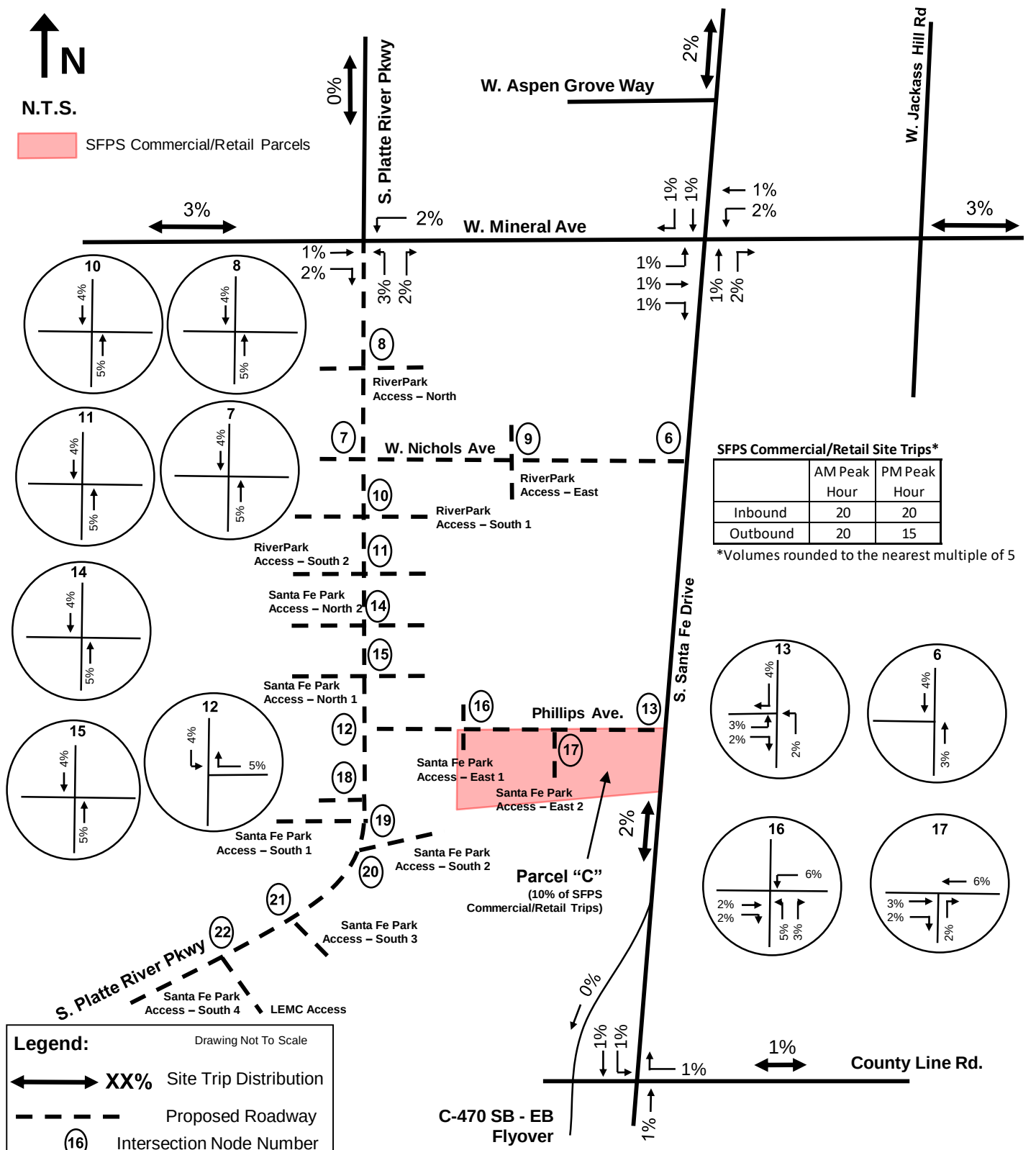
2025 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "B")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 14B



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

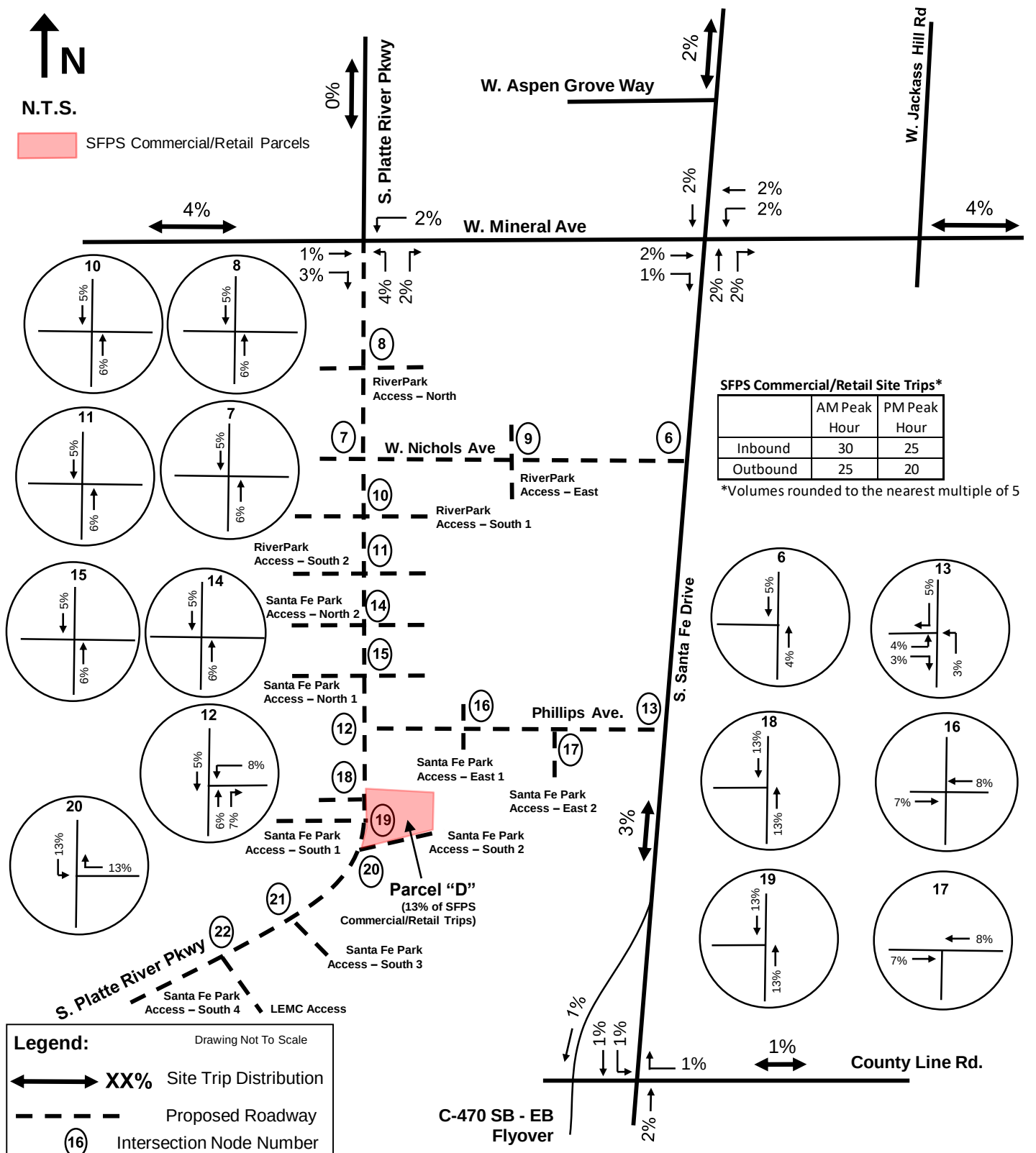
2025 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "C")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 14C



SFPS Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	30	25
Outbound	25	20

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

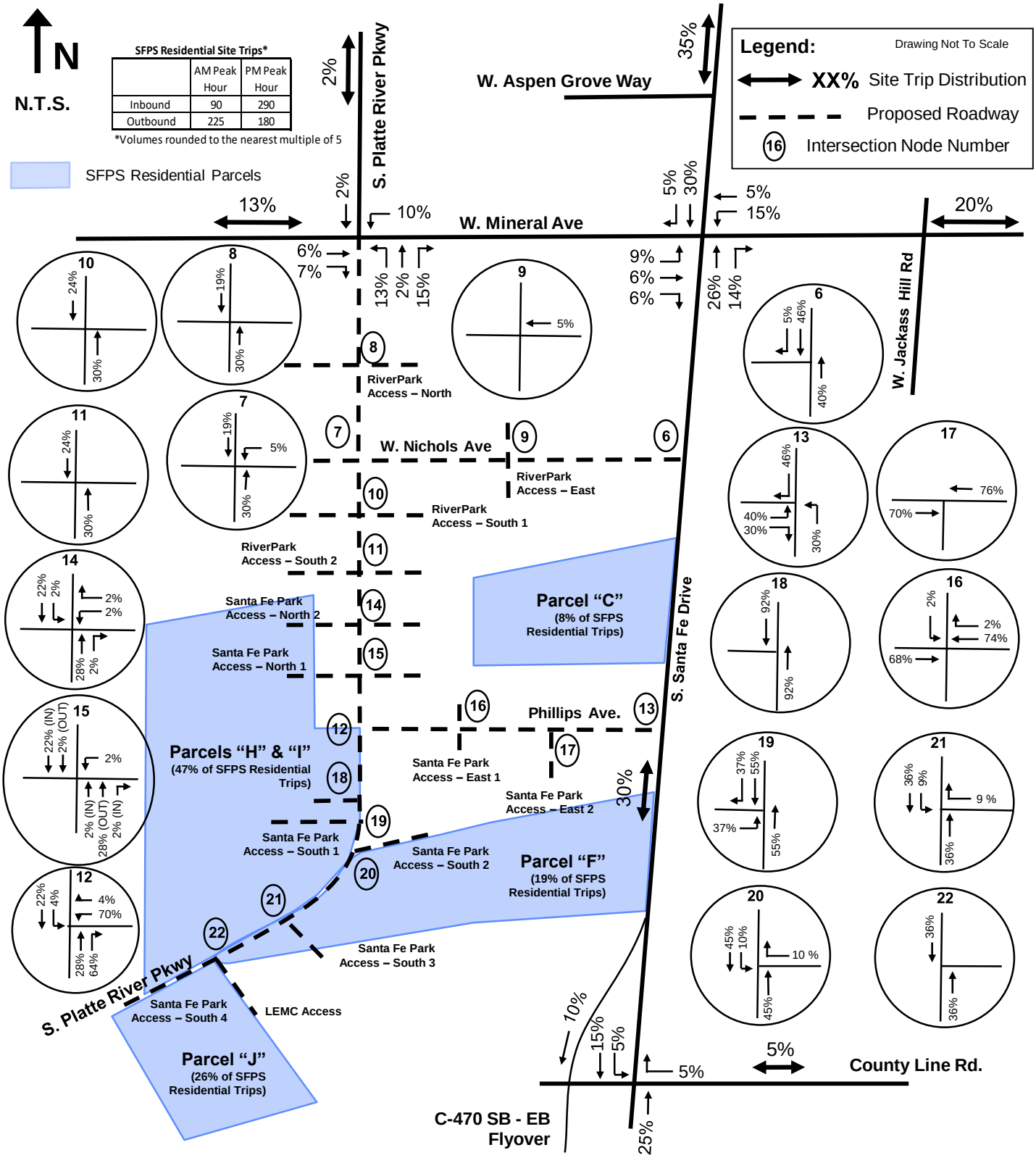
2025 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "D")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 14D



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

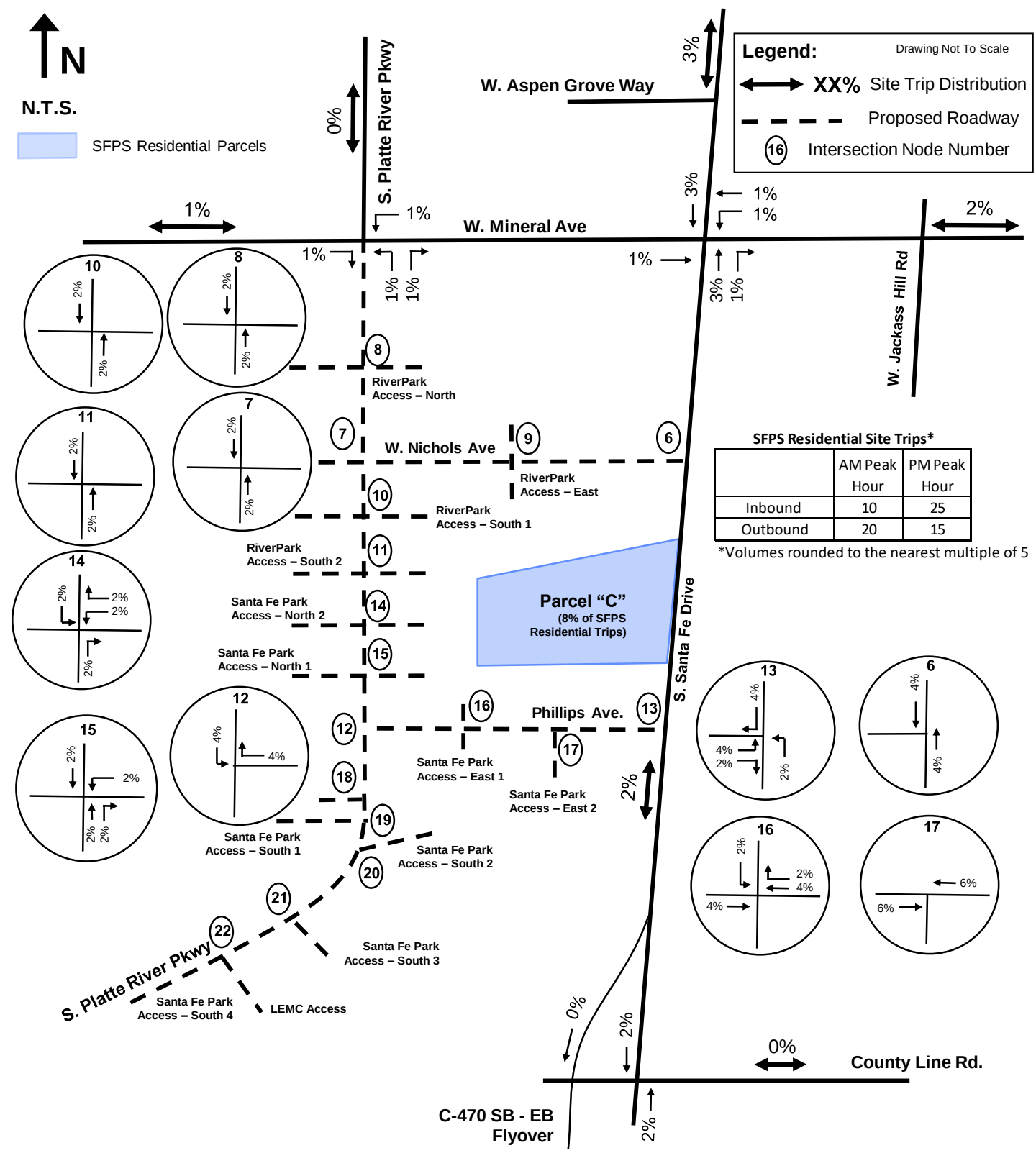
2025 Site Generated Trip Distribution: Santa Fe Park South Residential (All Residential Parcels)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 15



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	10	25
Outbound	20	15

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

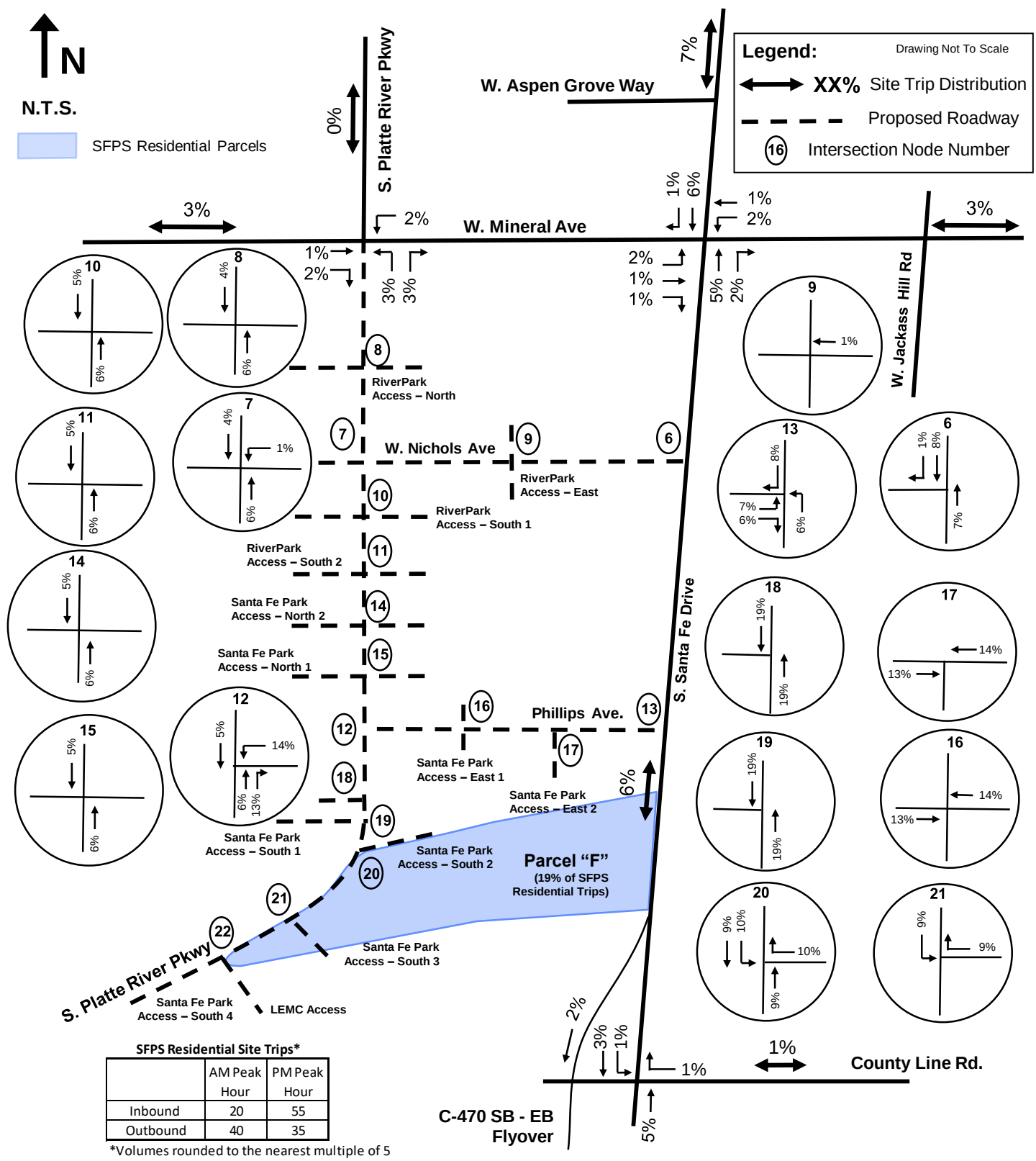
2025 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "C")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 15A



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	20	55
Outbound	40	35

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

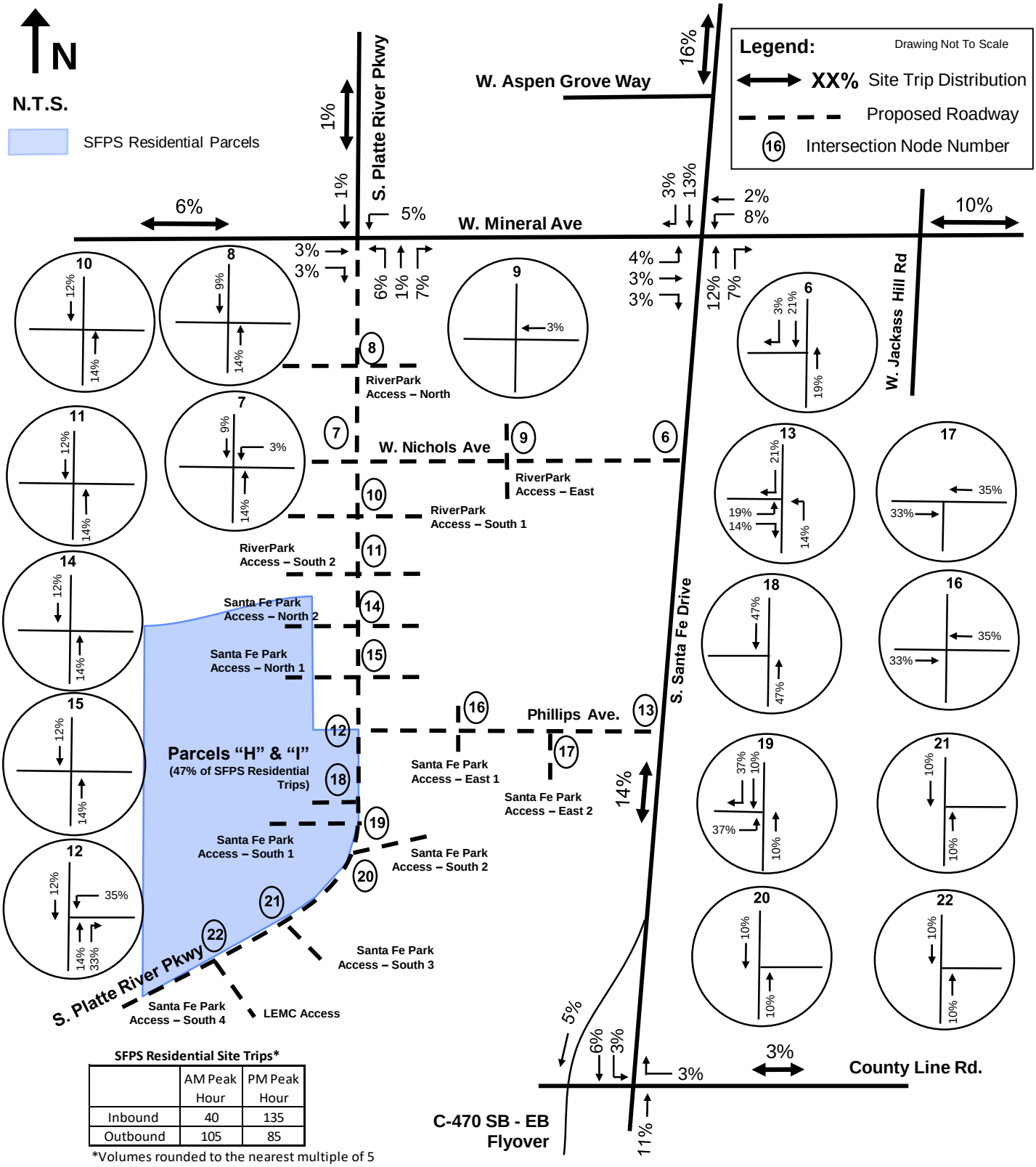
2025 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "F")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 15B



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	40	135
Outbound	105	85

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

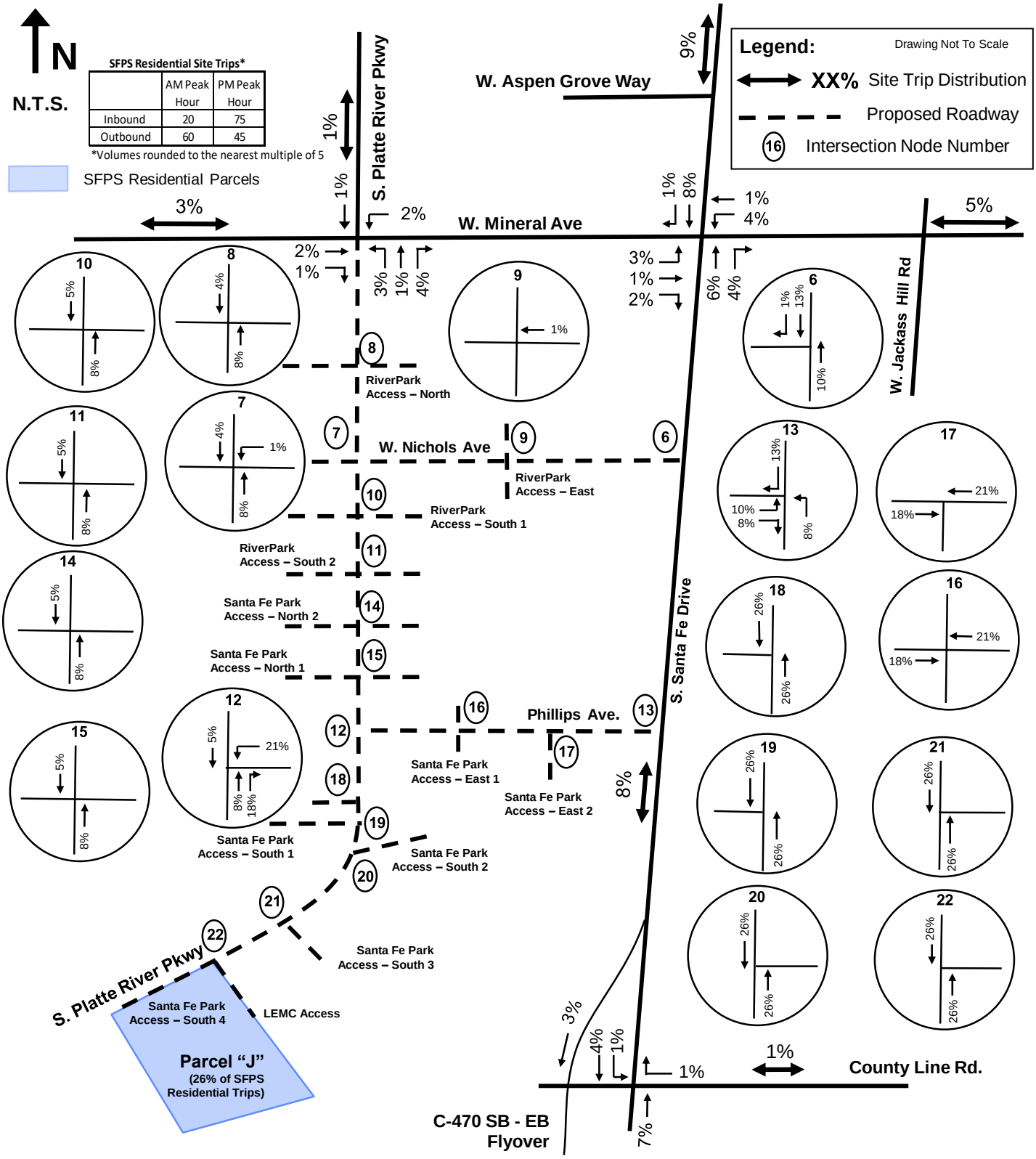
2025 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcels "H" & "I")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 15C



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

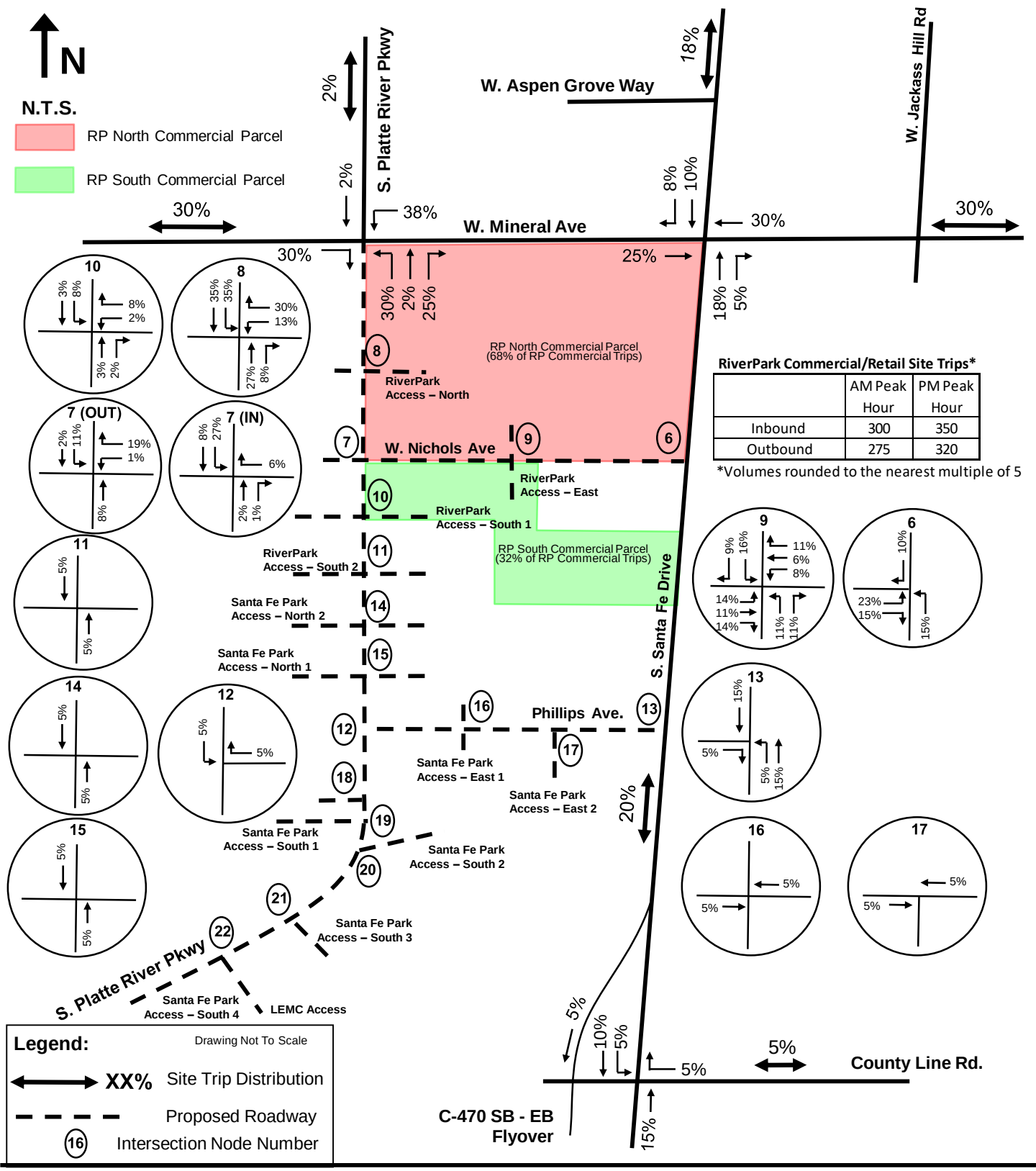
2025 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "J")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 15D



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	300	350
Outbound	275	320

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

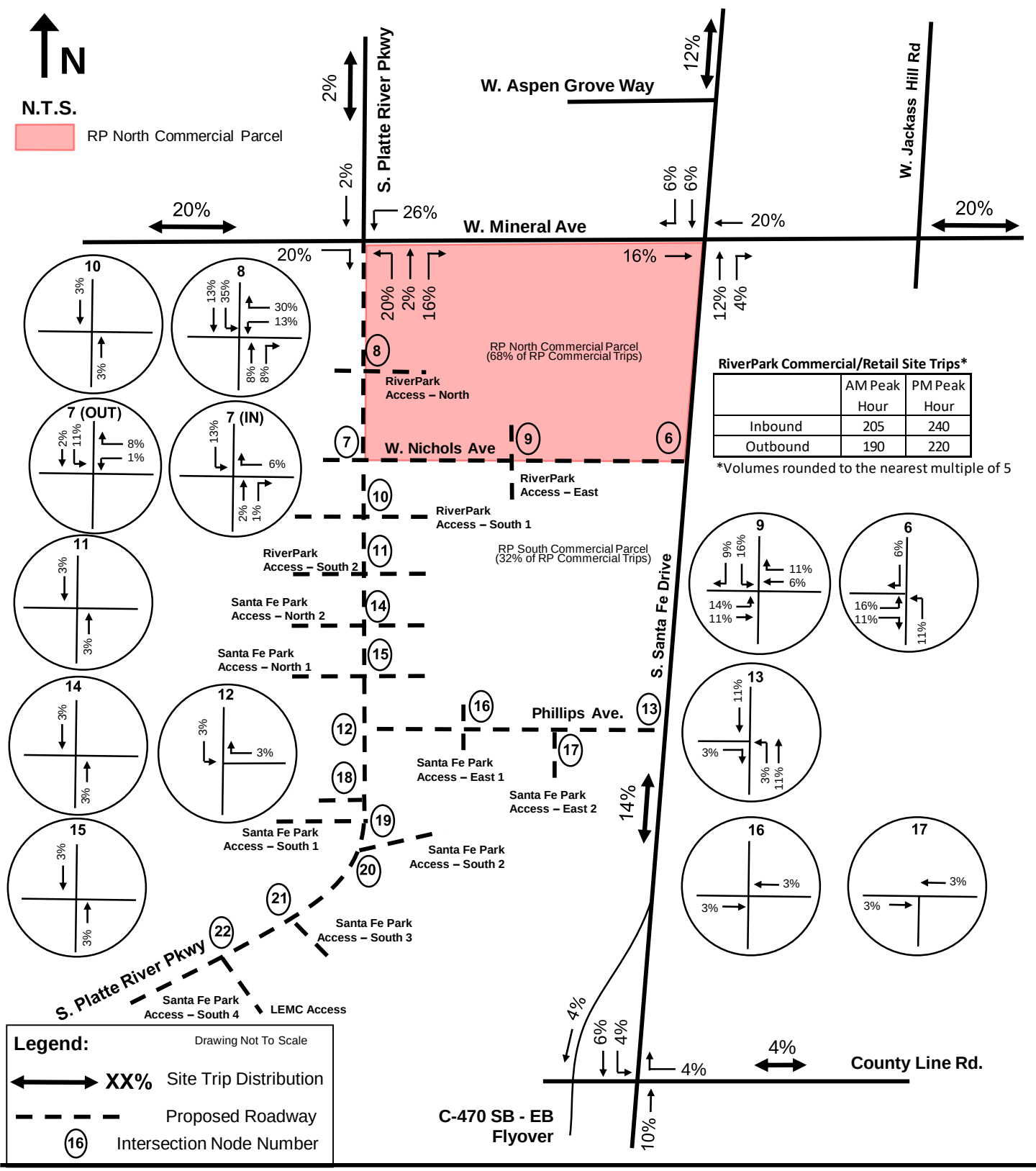
2040 Site Generated Trip Distribution: RiverPark Commercial/Retail

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 16



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	205	240
Outbound	190	220

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

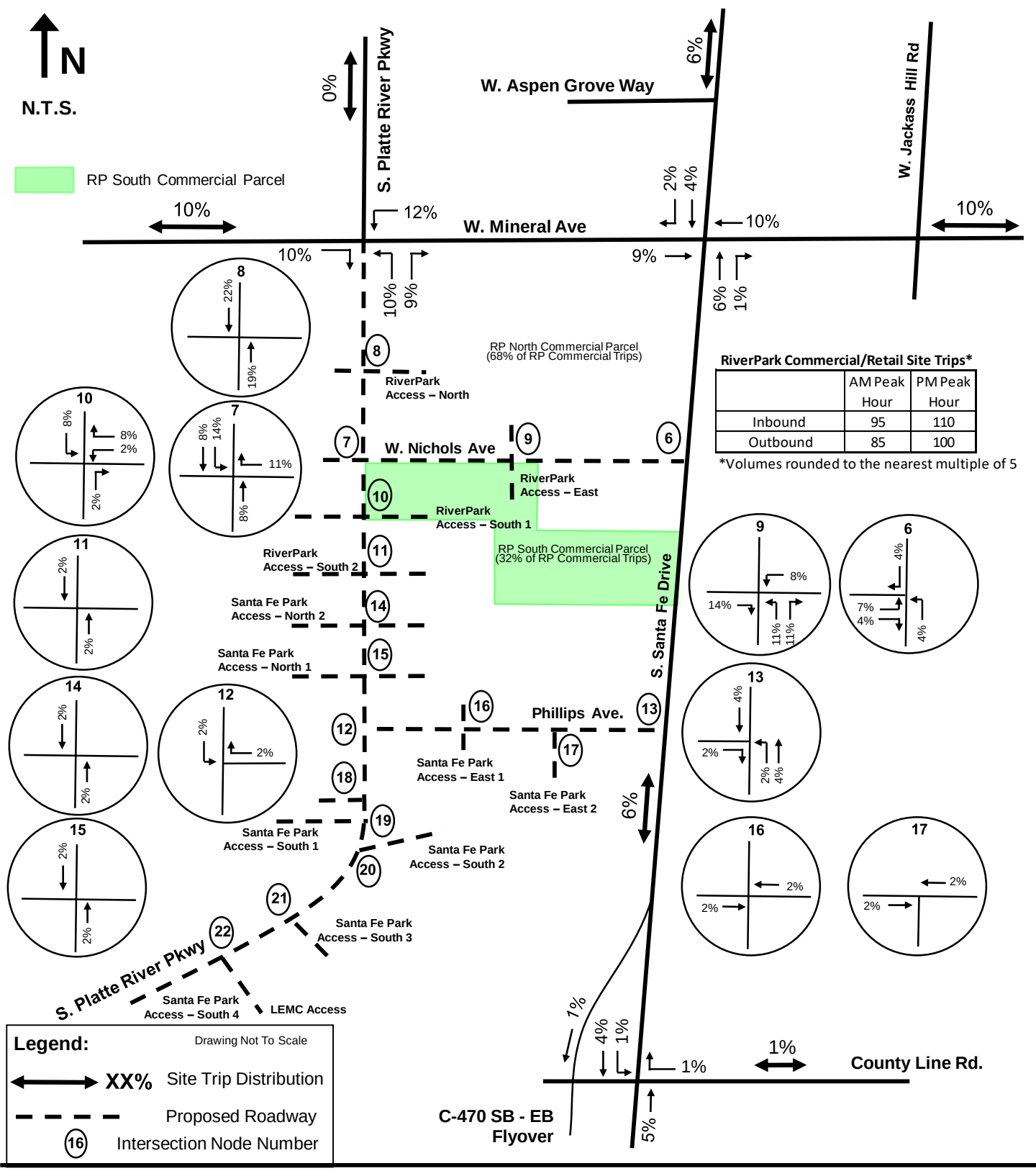
2040 Site Generated Trip Distribution: RiverPark Commercial/Retail (North Parcel)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 16A



RiverPark Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	95	110
Outbound	85	100

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

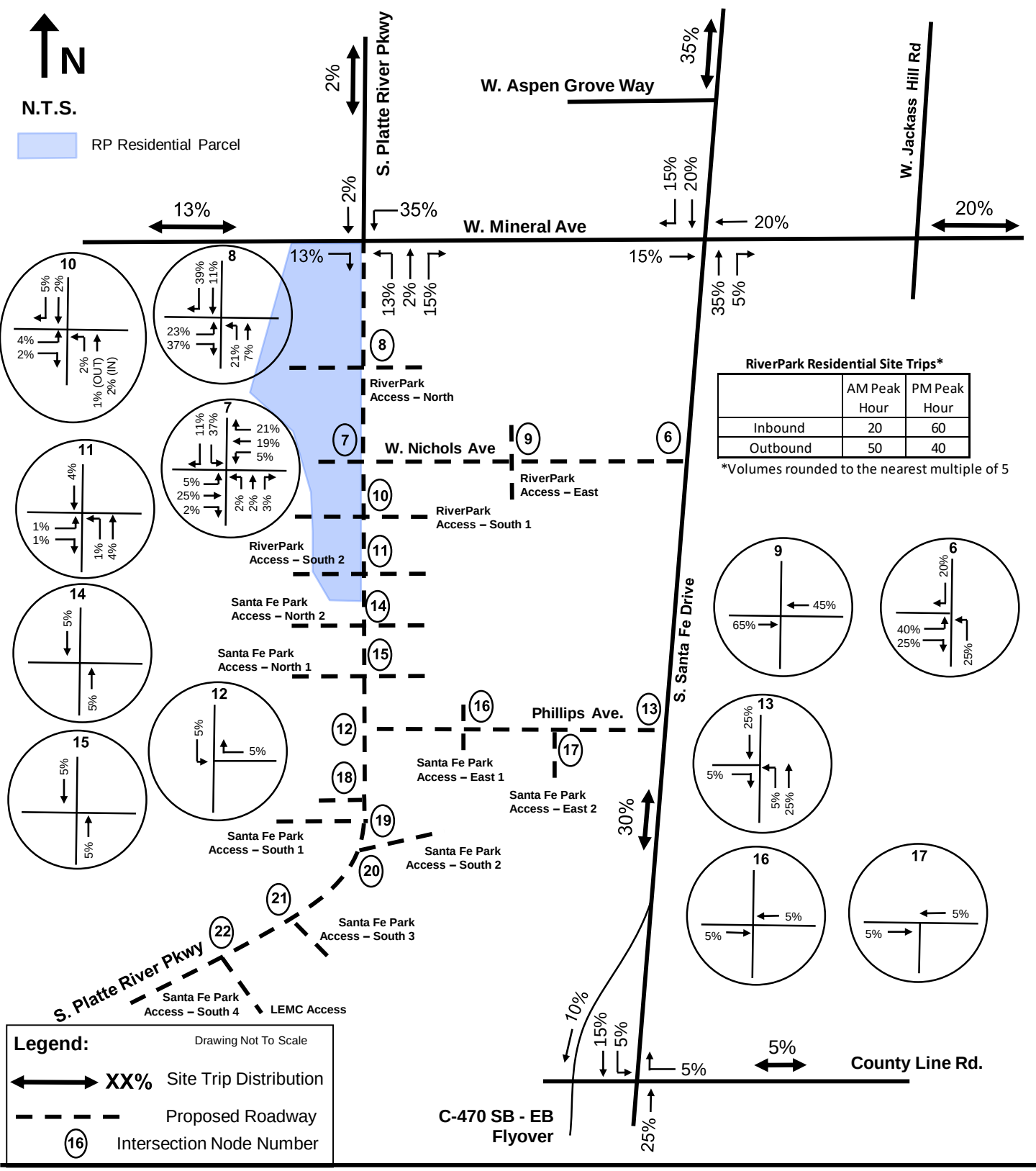
2040 Site Generated Trip Distribution: RiverPark Commercial/Retail (South Parcel)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 16B



RiverPark Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	20	60
Outbound	50	40

*Volumes rounded to the nearest multiple of 5

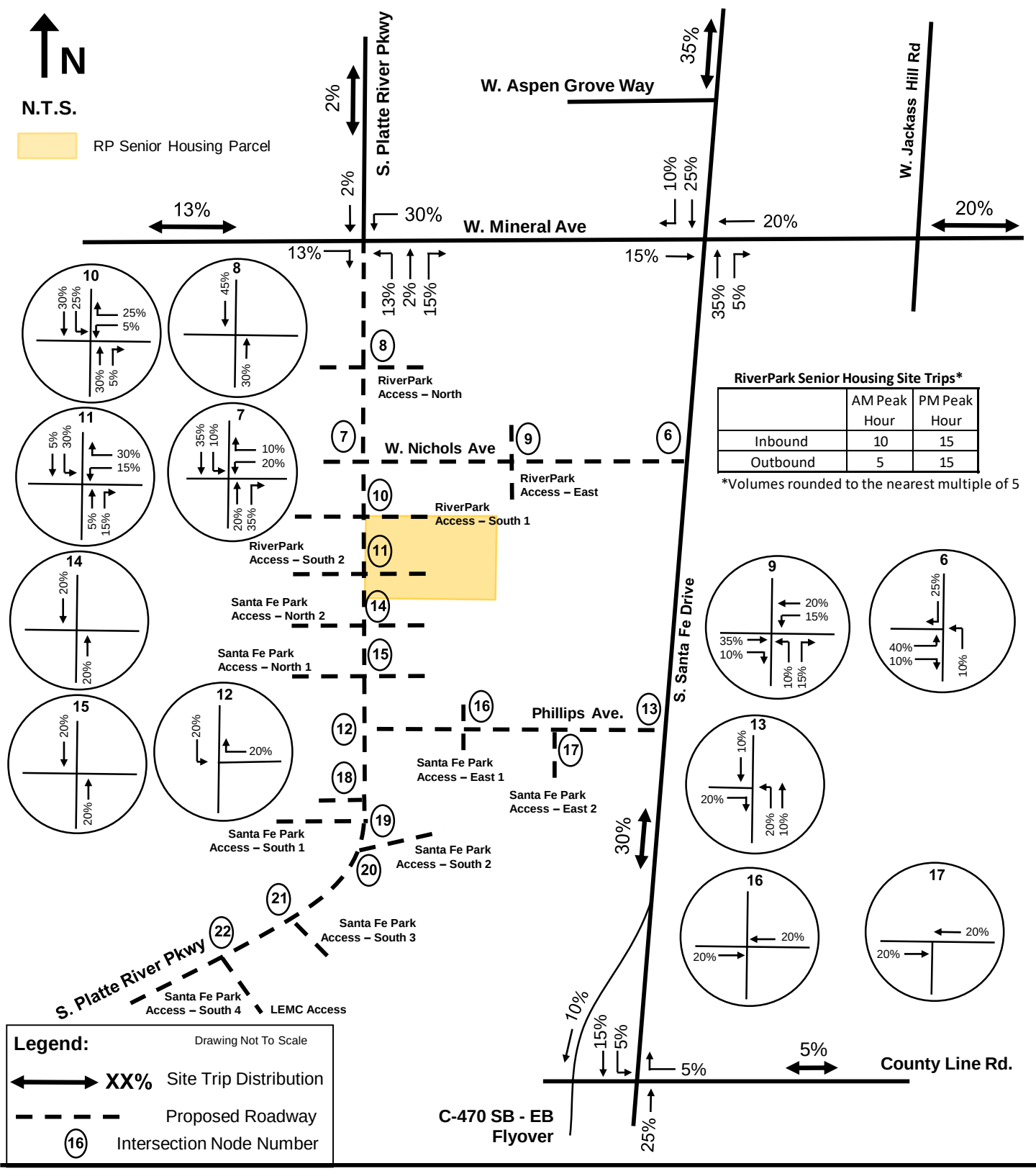
2040 Site Generated Trip Distribution: RiverPark Residential

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 17



RiverPark Senior Housing Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	10	15
Outbound	5	15

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

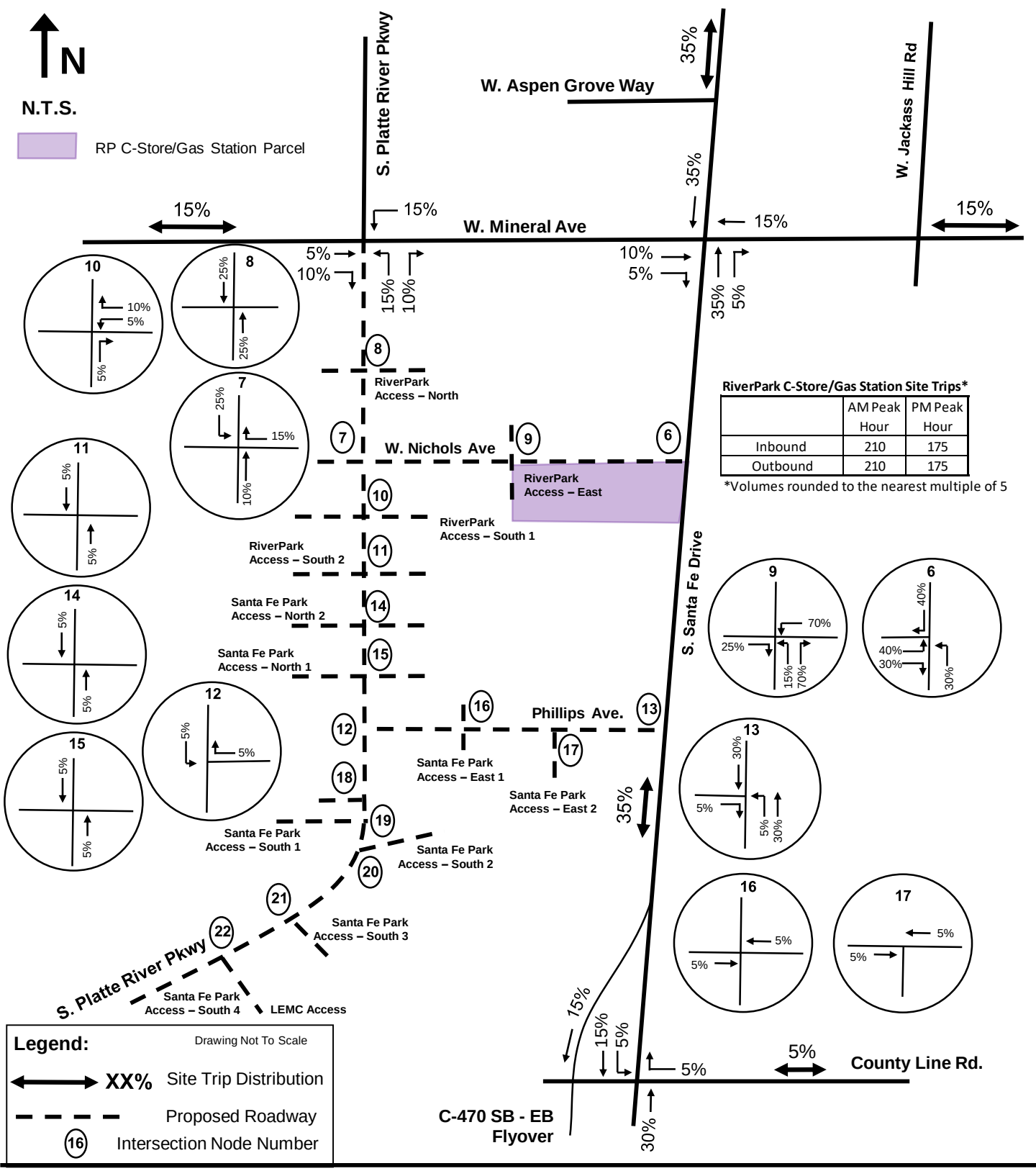
2040 Site Generated Trip Distribution: RiverPark Sr. Housing

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 18



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

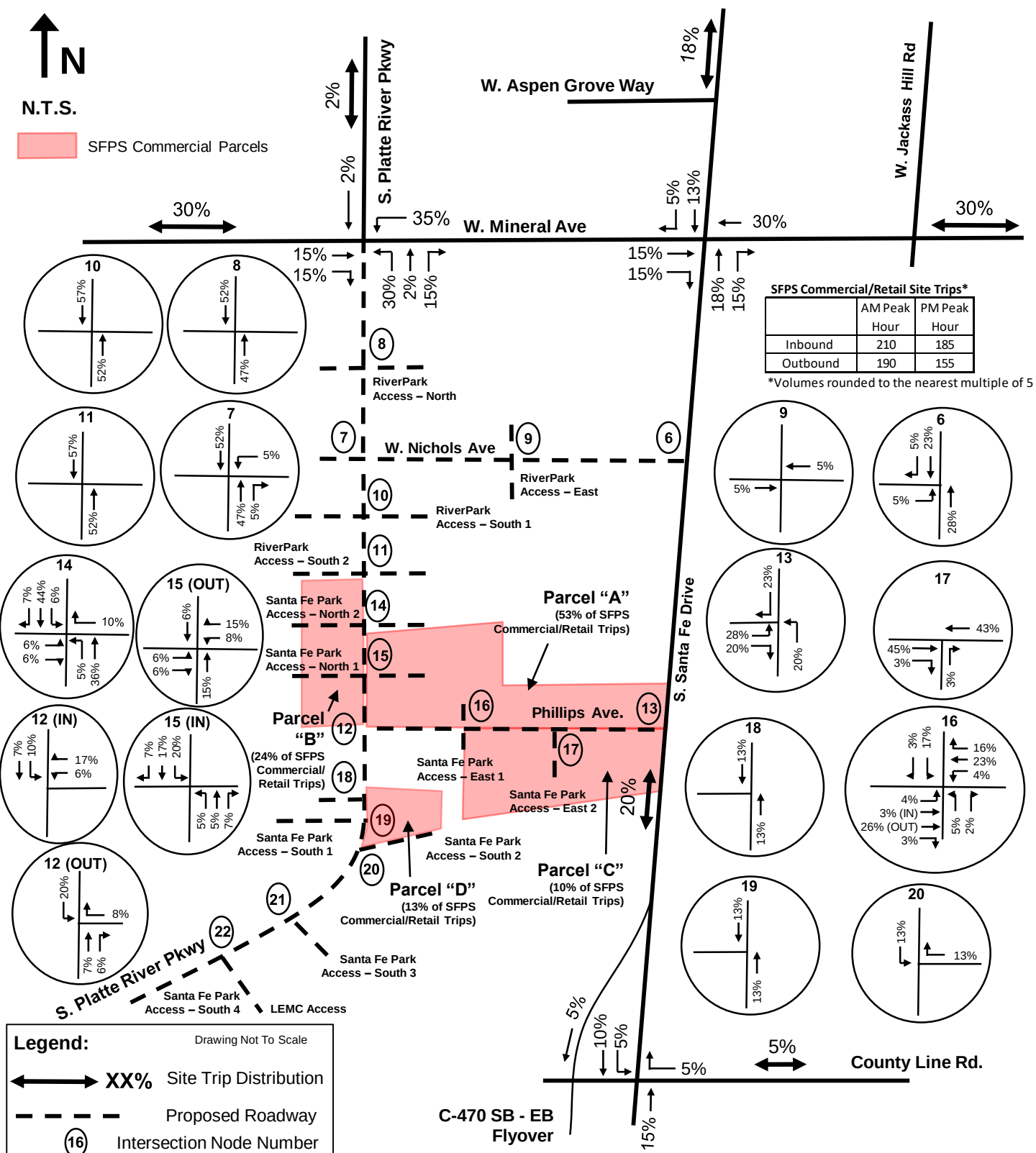
2040 Site Generated Trip Distribution: RiverPark C-Store/Gas Station

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 19



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

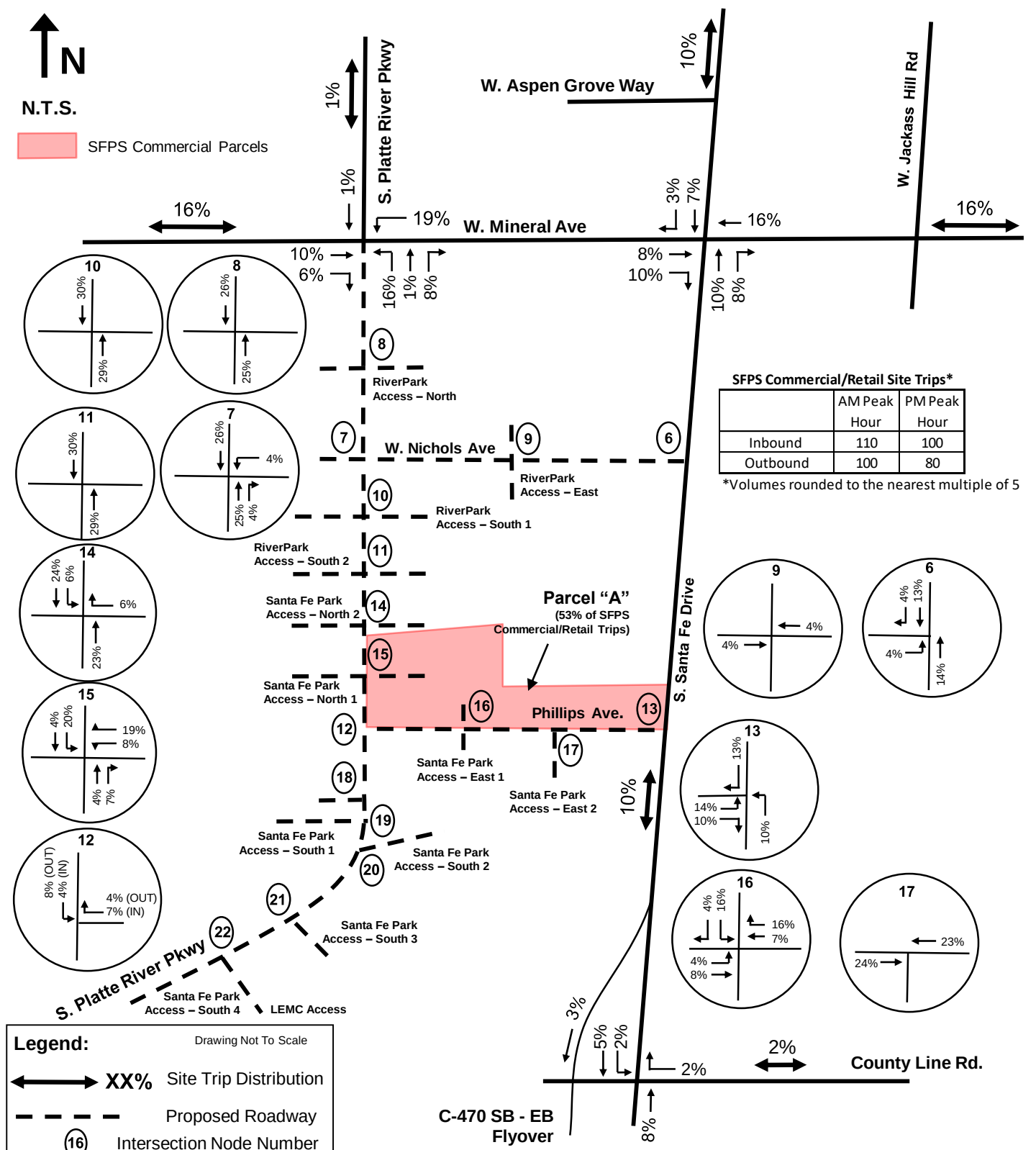
2040 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (All Commercial Parcels)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 20



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

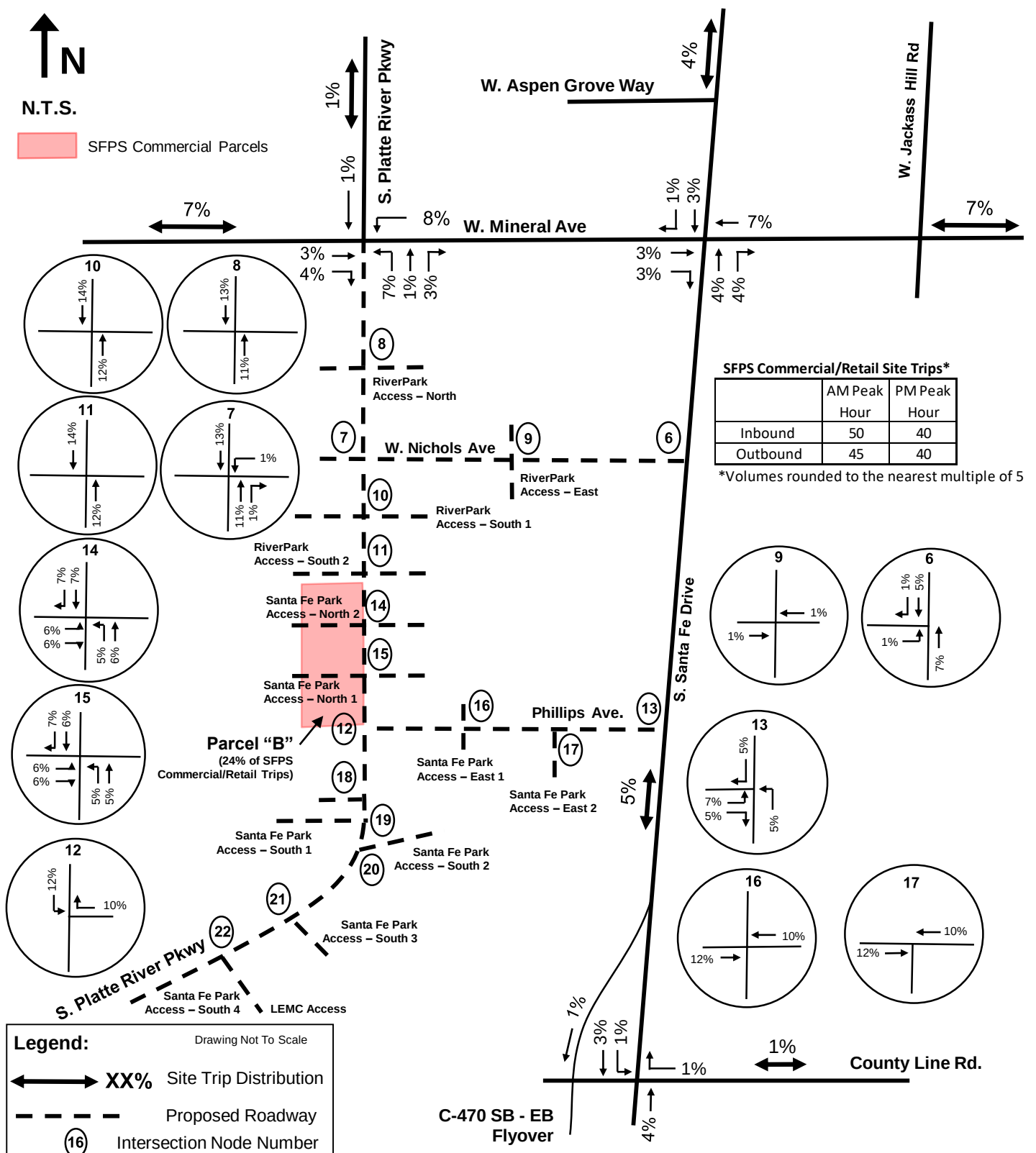
2040 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "A")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 20A



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

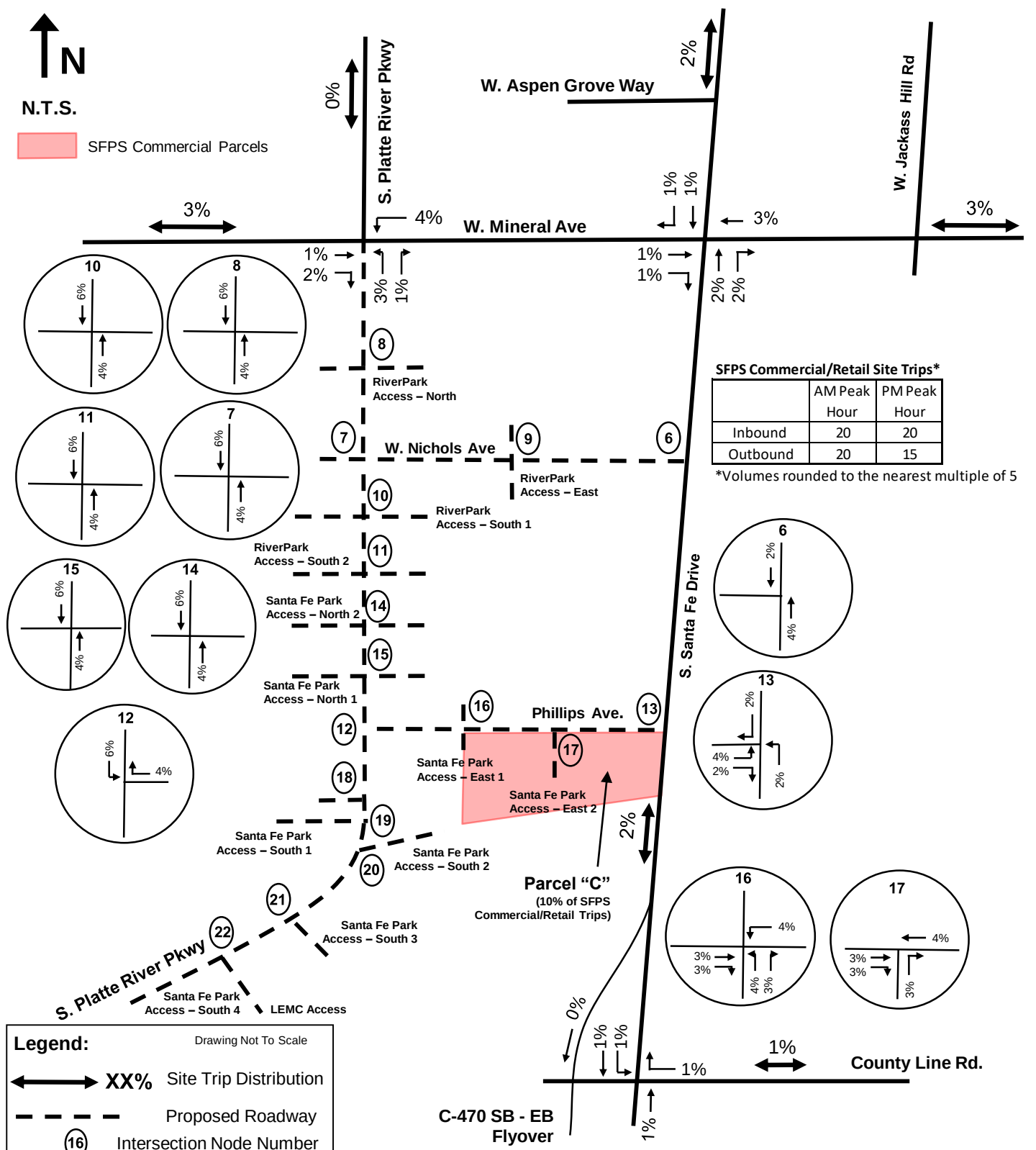
2040 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "B")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 20B



SFPS Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	20	20
Outbound	20	15

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

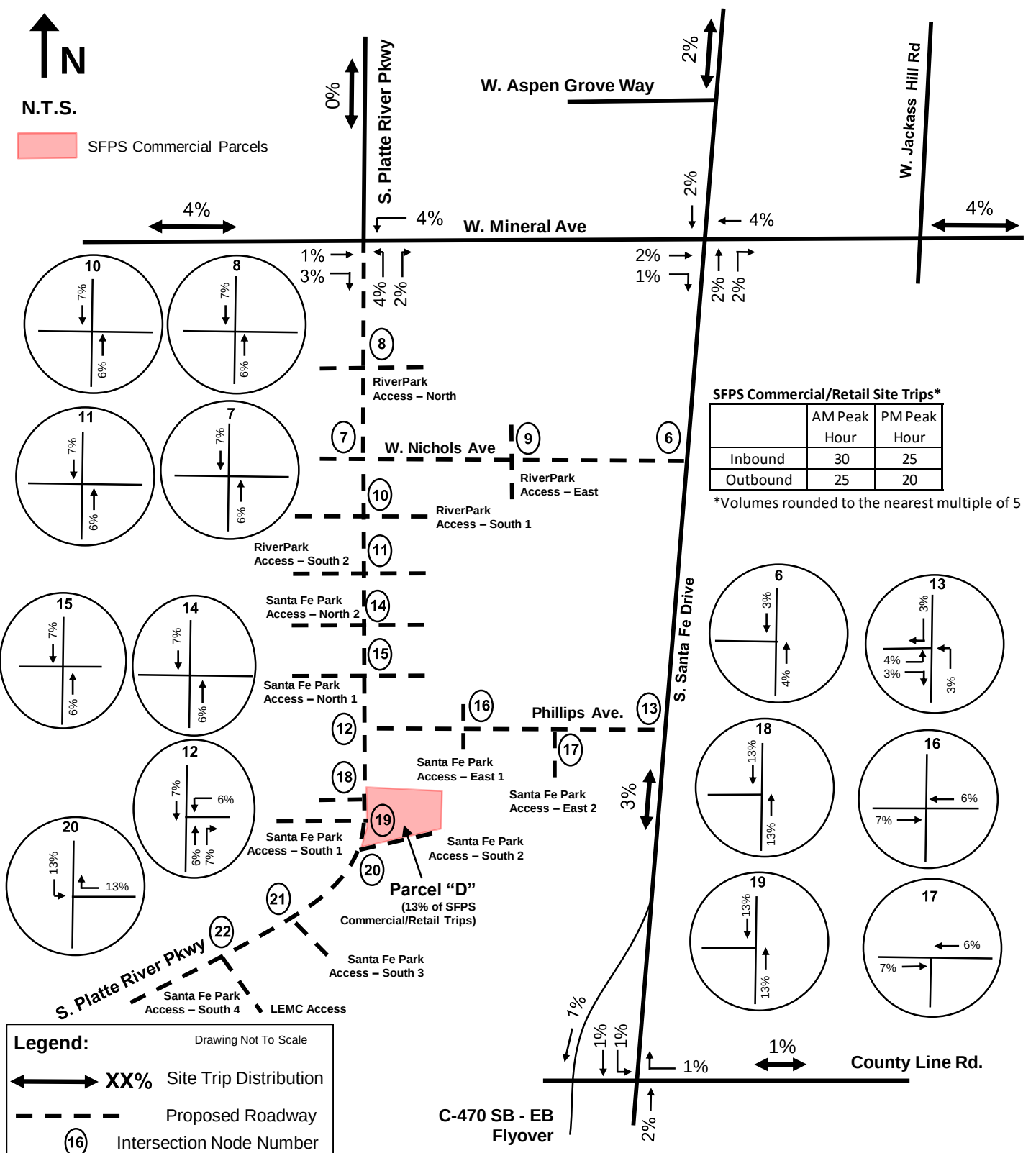
2040 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "C")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 20C



SFPS Commercial/Retail Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	30	25
Outbound	25	20

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

XX% Site Trip Distribution

Proposed Roadway

16 Intersection Node Number

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

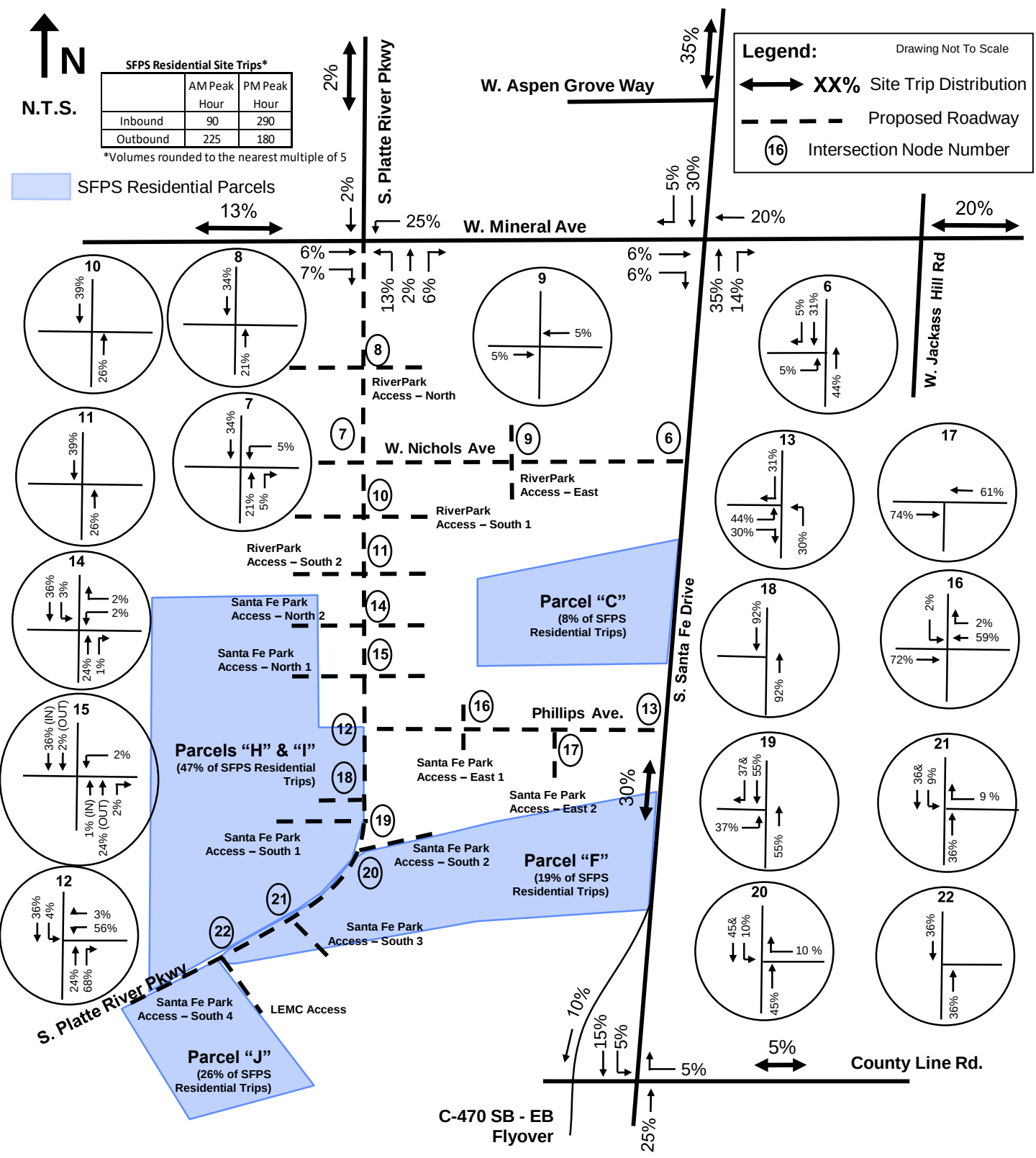
2040 Site Generated Trip Distribution: Santa Fe Park South Commercial/Retail (Parcel "D")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 20D



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

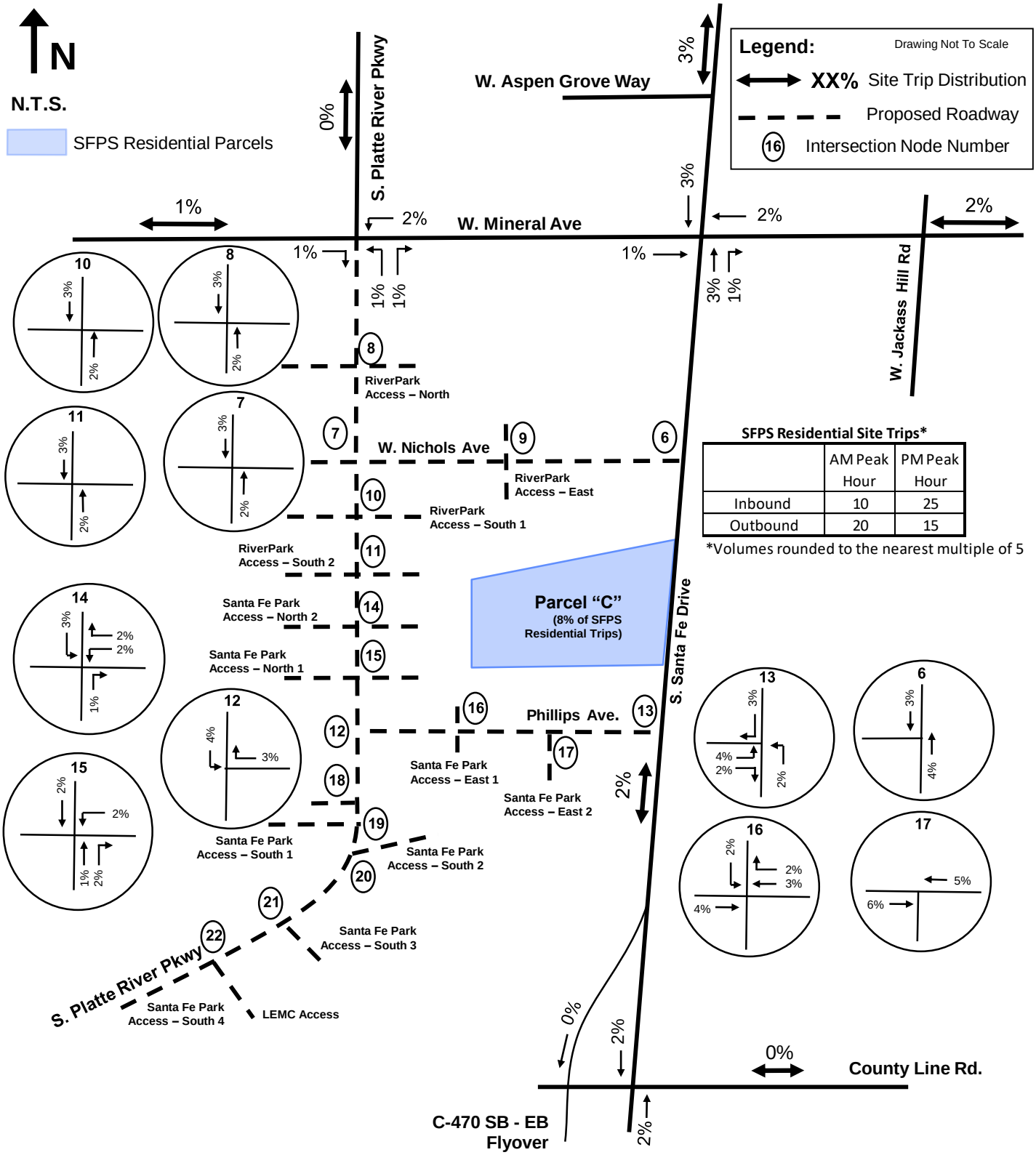
2040 Site Generated Trip Distribution: Santa Fe Park South Residential (All Residential Parcels)

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 21



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	10	25
Outbound	20	15

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

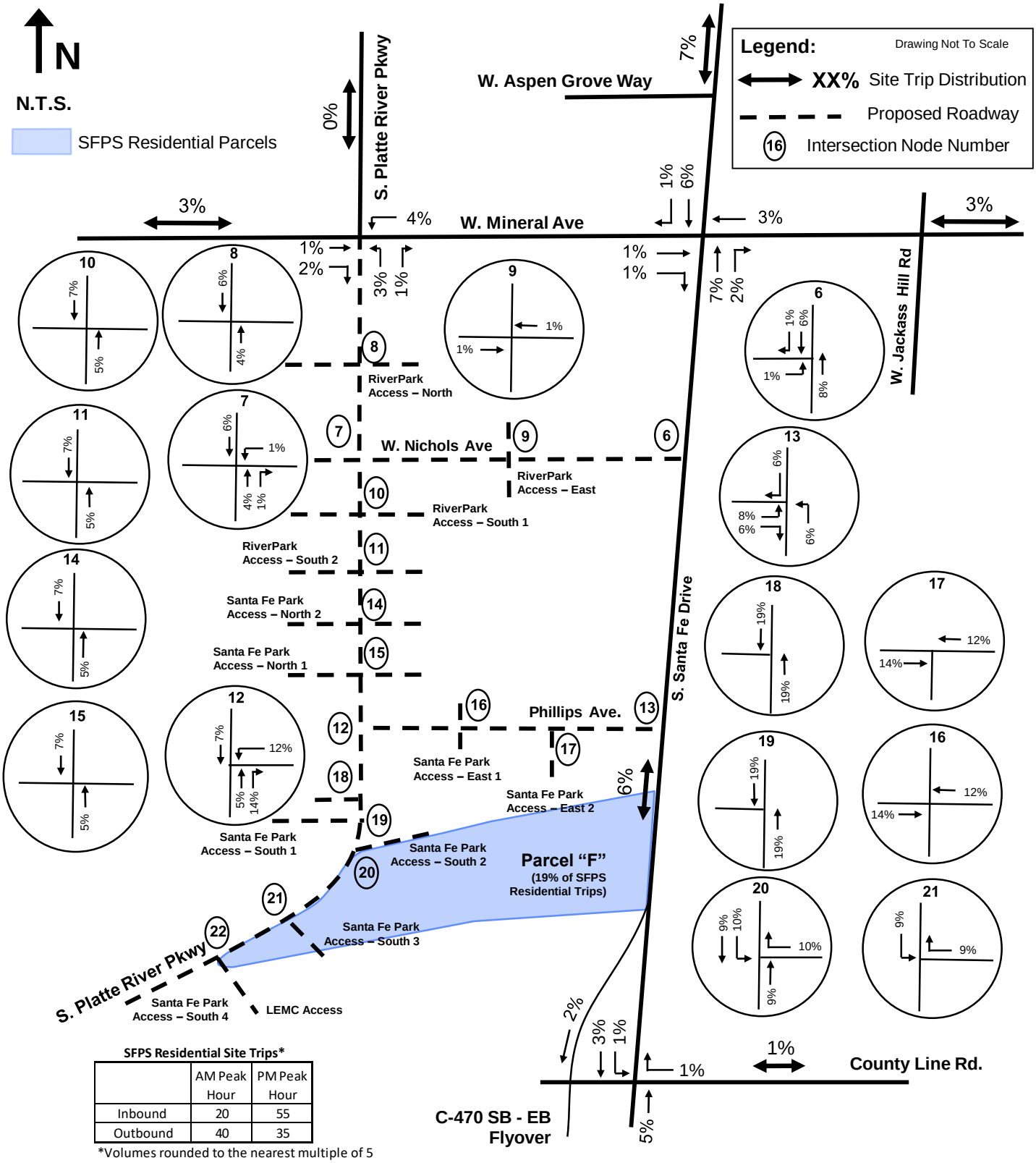
2040 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "C")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 21A



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	20	55
Outbound	40	35

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

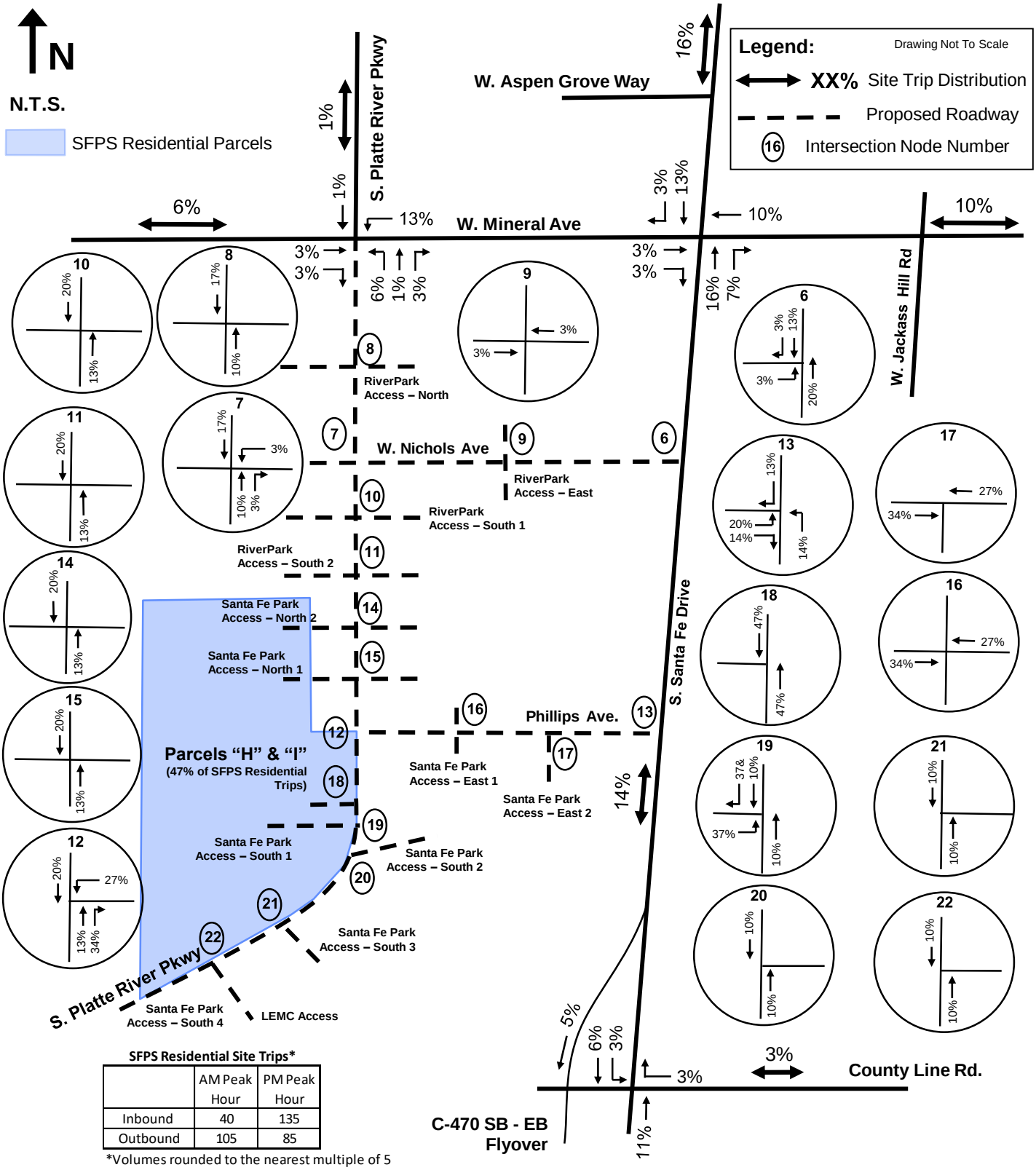
2040 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "F")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 21B



SFPS Residential Site Trips*

	AM Peak Hour	PM Peak Hour
Inbound	40	135
Outbound	105	85

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

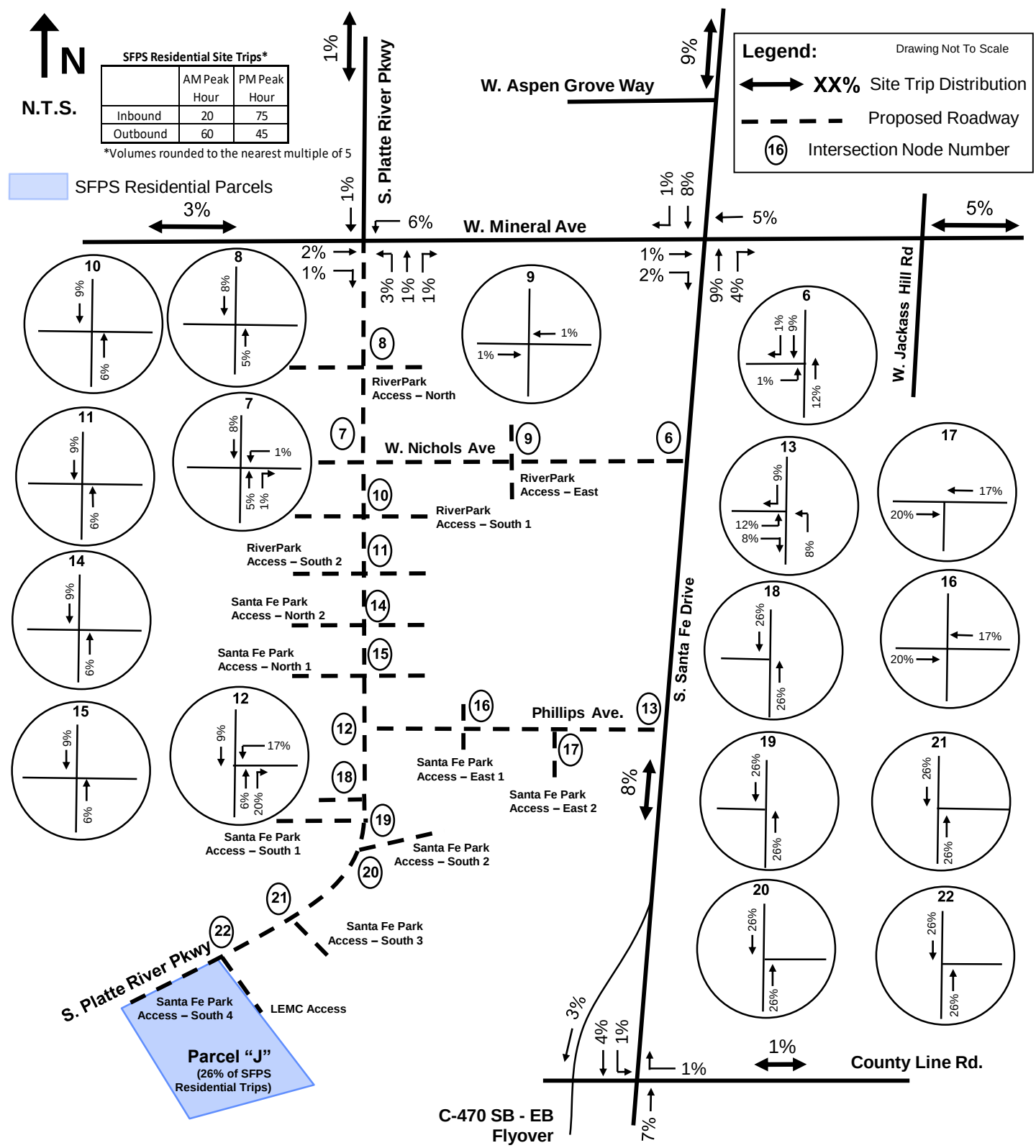
2040 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcels "H" & "I")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 21C



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

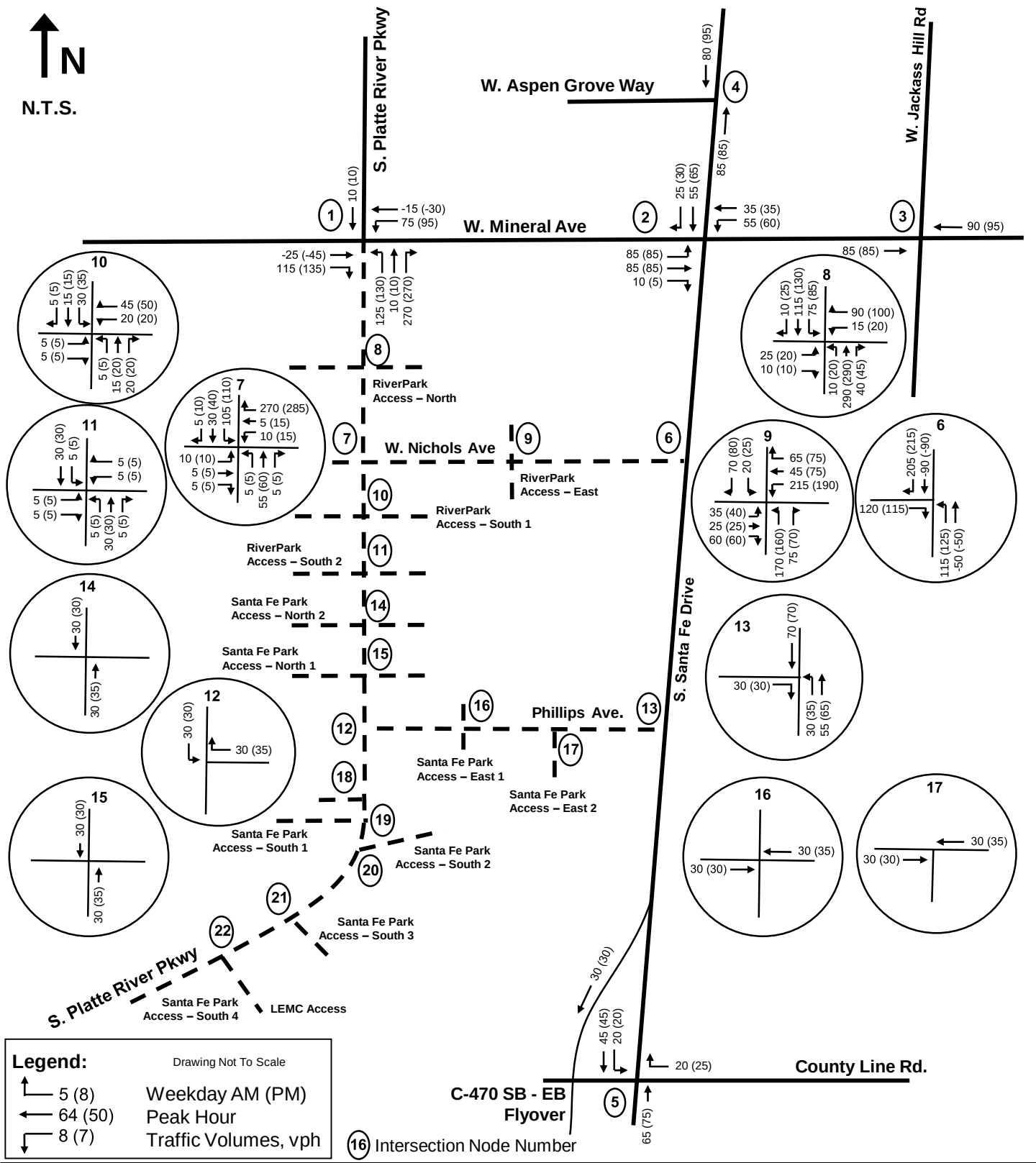
2040 Site Generated Trip Distribution: Santa Fe Park South Residential (Parcel "J")

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 21D



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

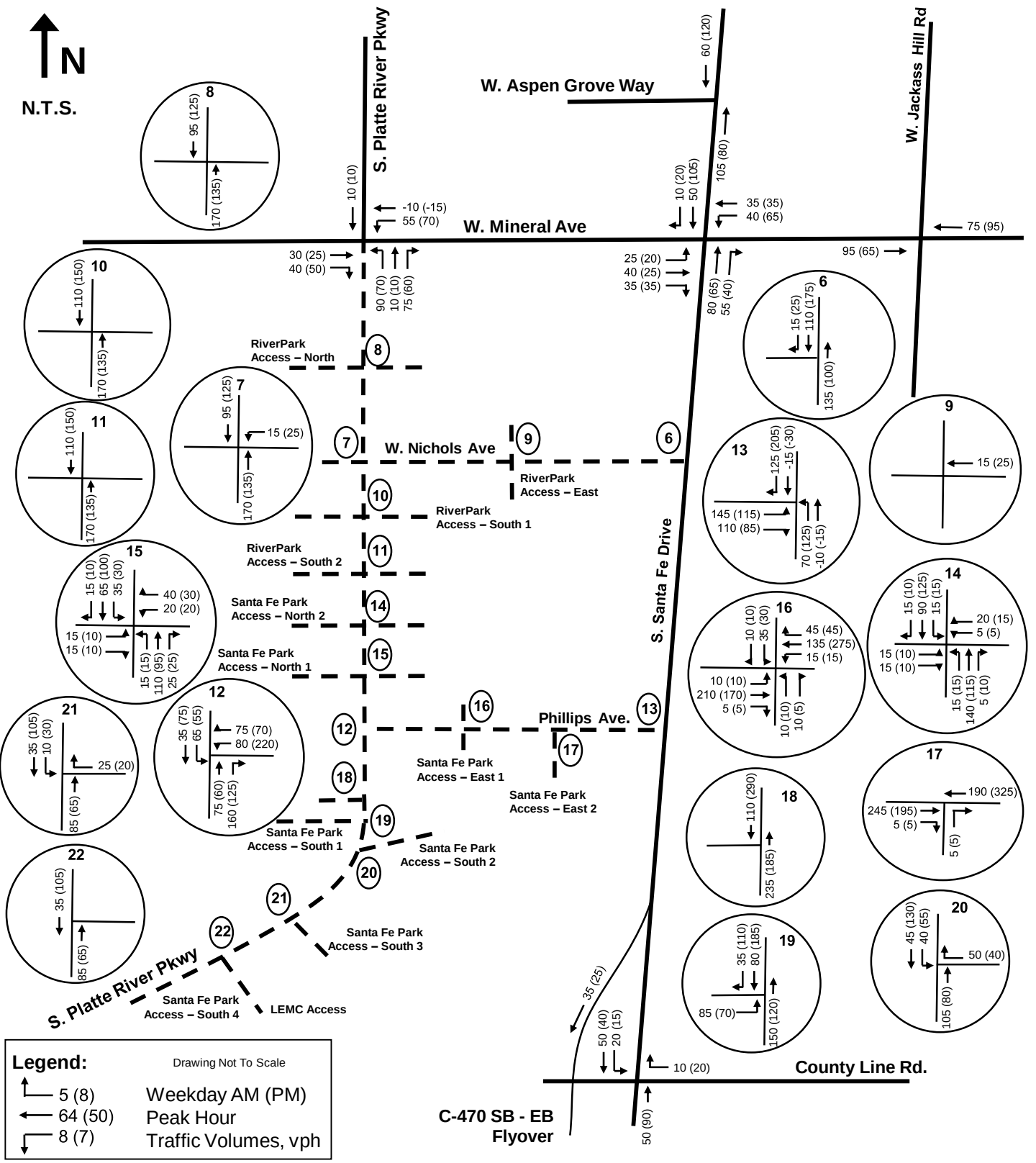
2025 Site Generated Trip Assignment: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 22



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

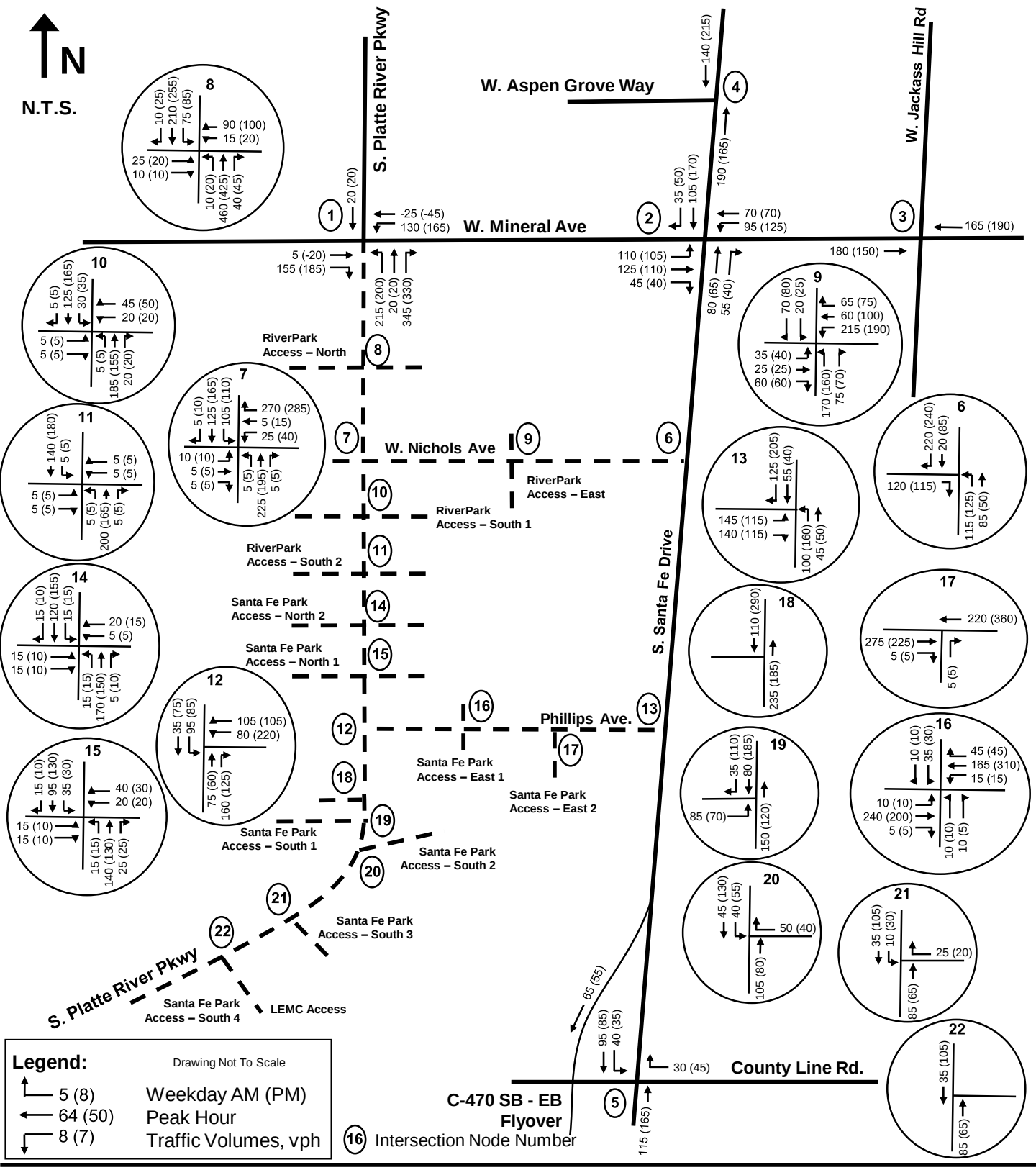
2025 Site Generated Trip Assignment: Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 23



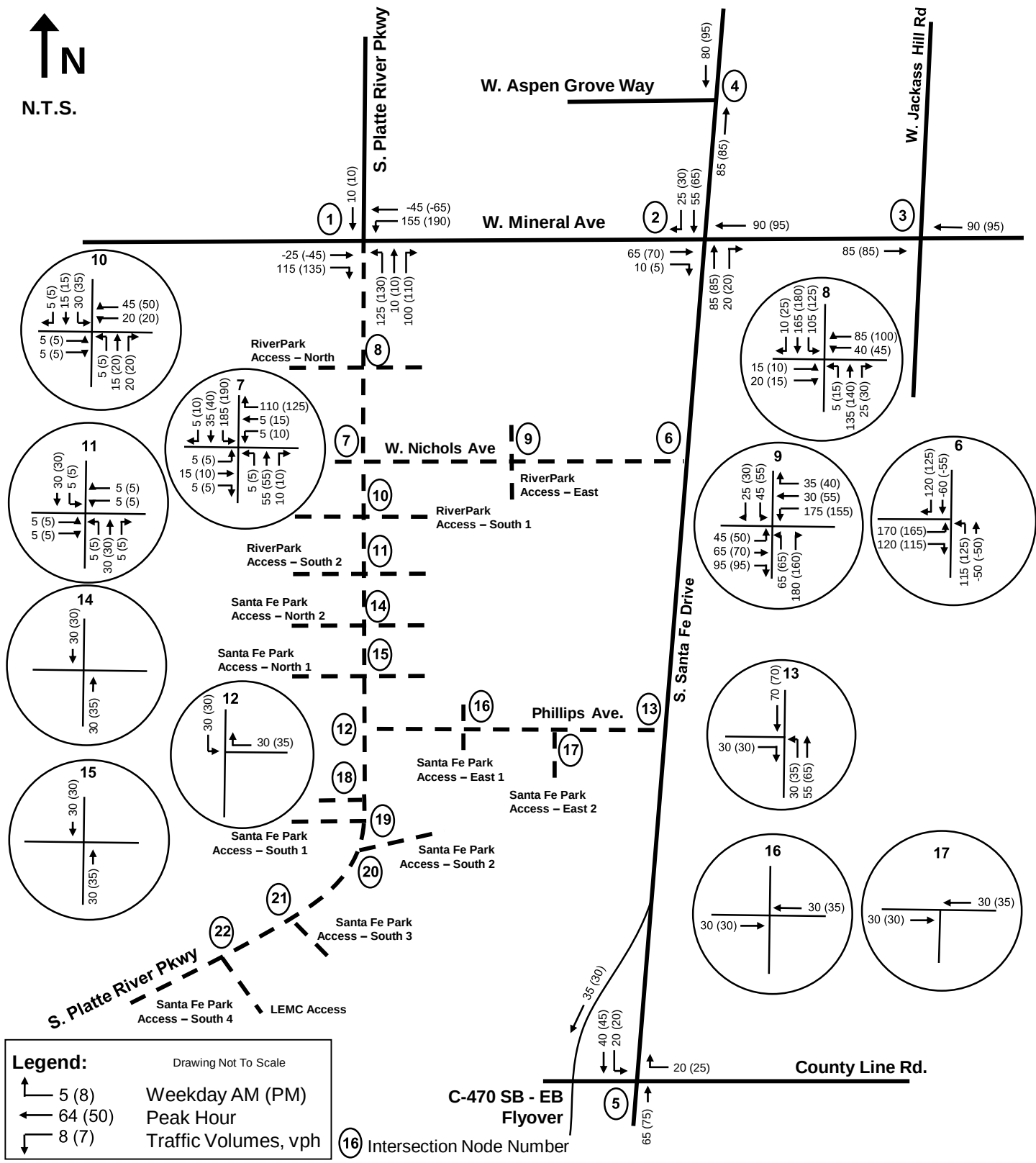
2025 Site Generated Trip Assignment: Combined RiverPark + Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 24



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

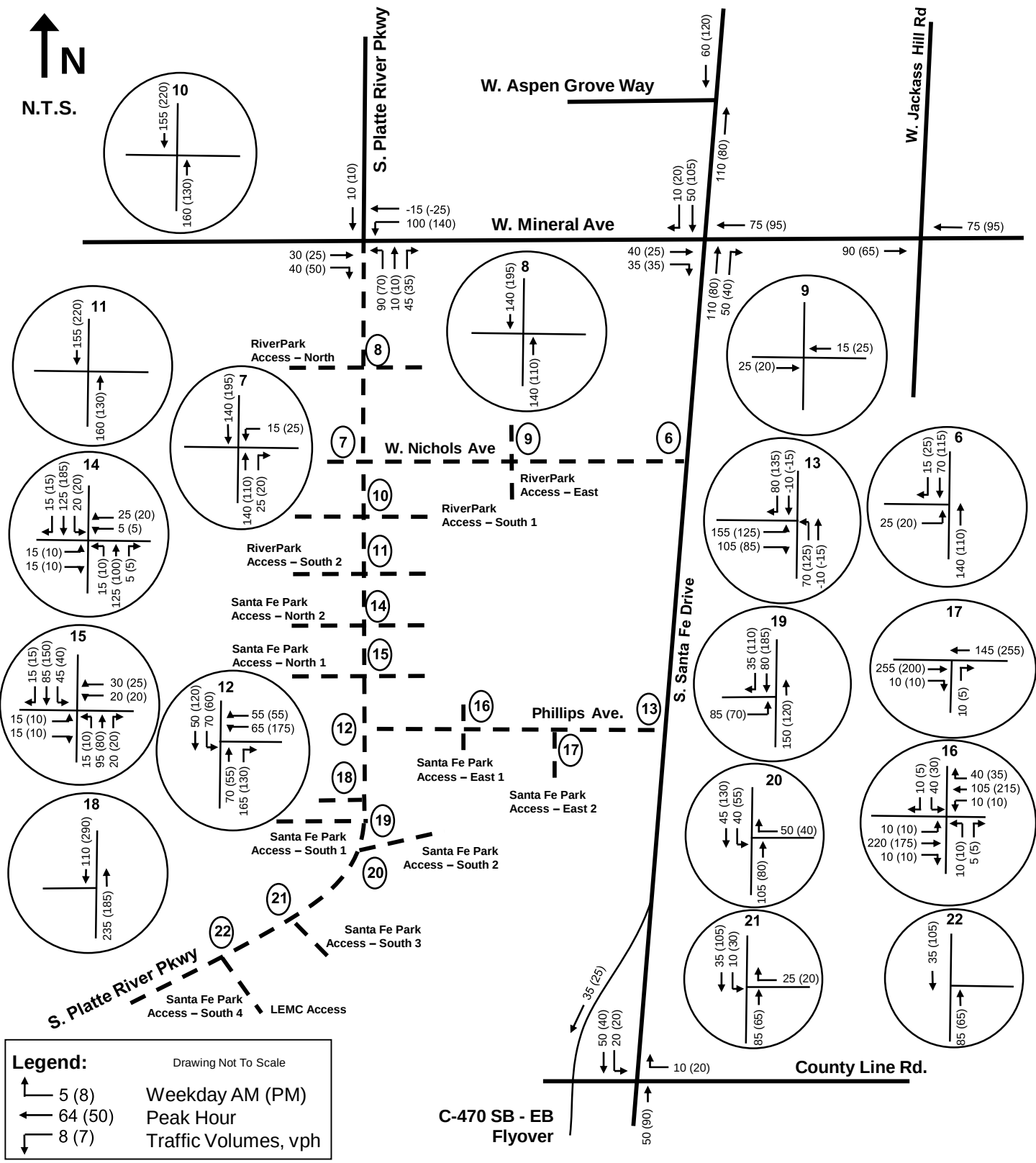
2040 Site Generated Trip Assignment: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 25



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

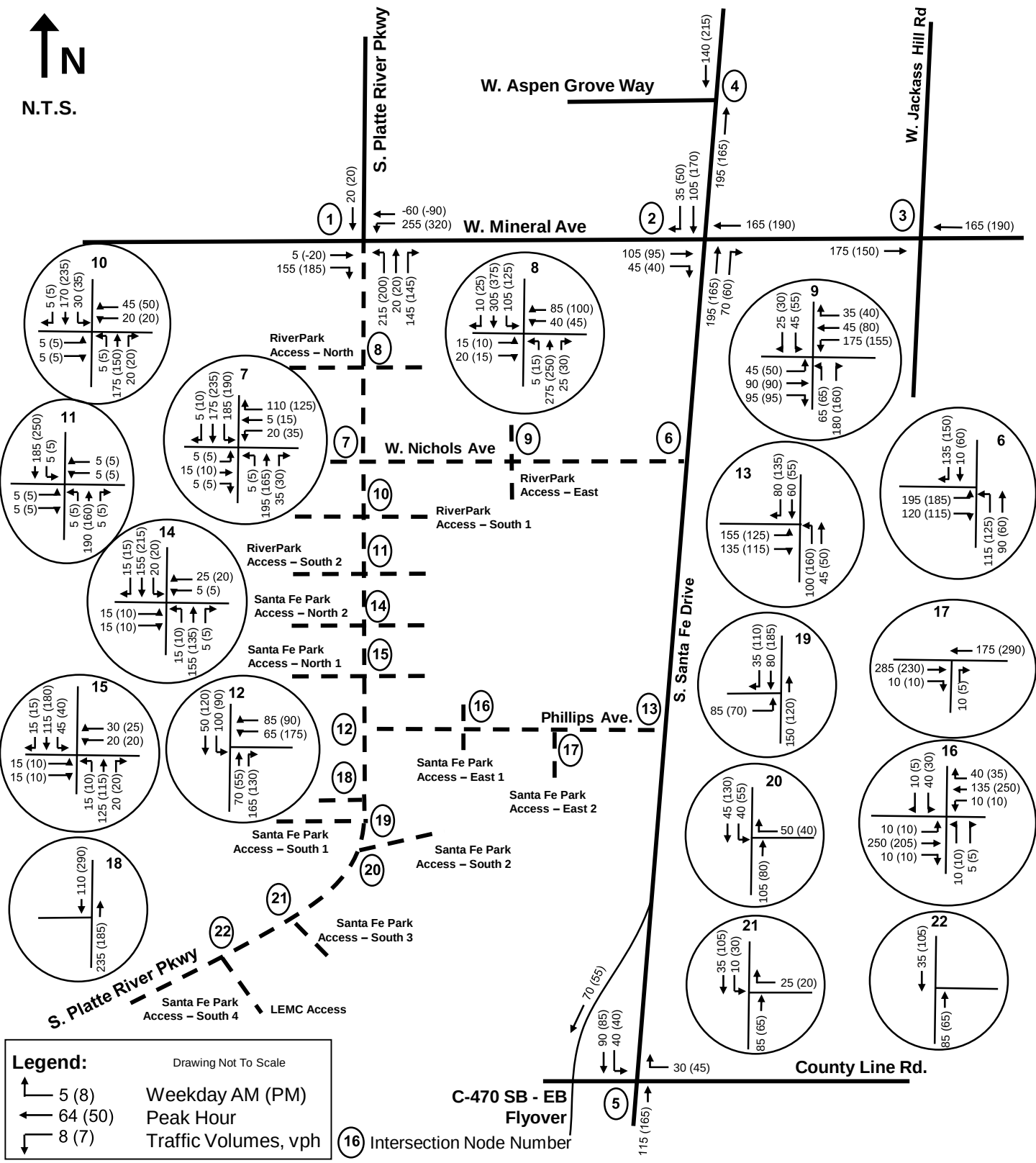
2040 Site Generated Trip Assignment: Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 26



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

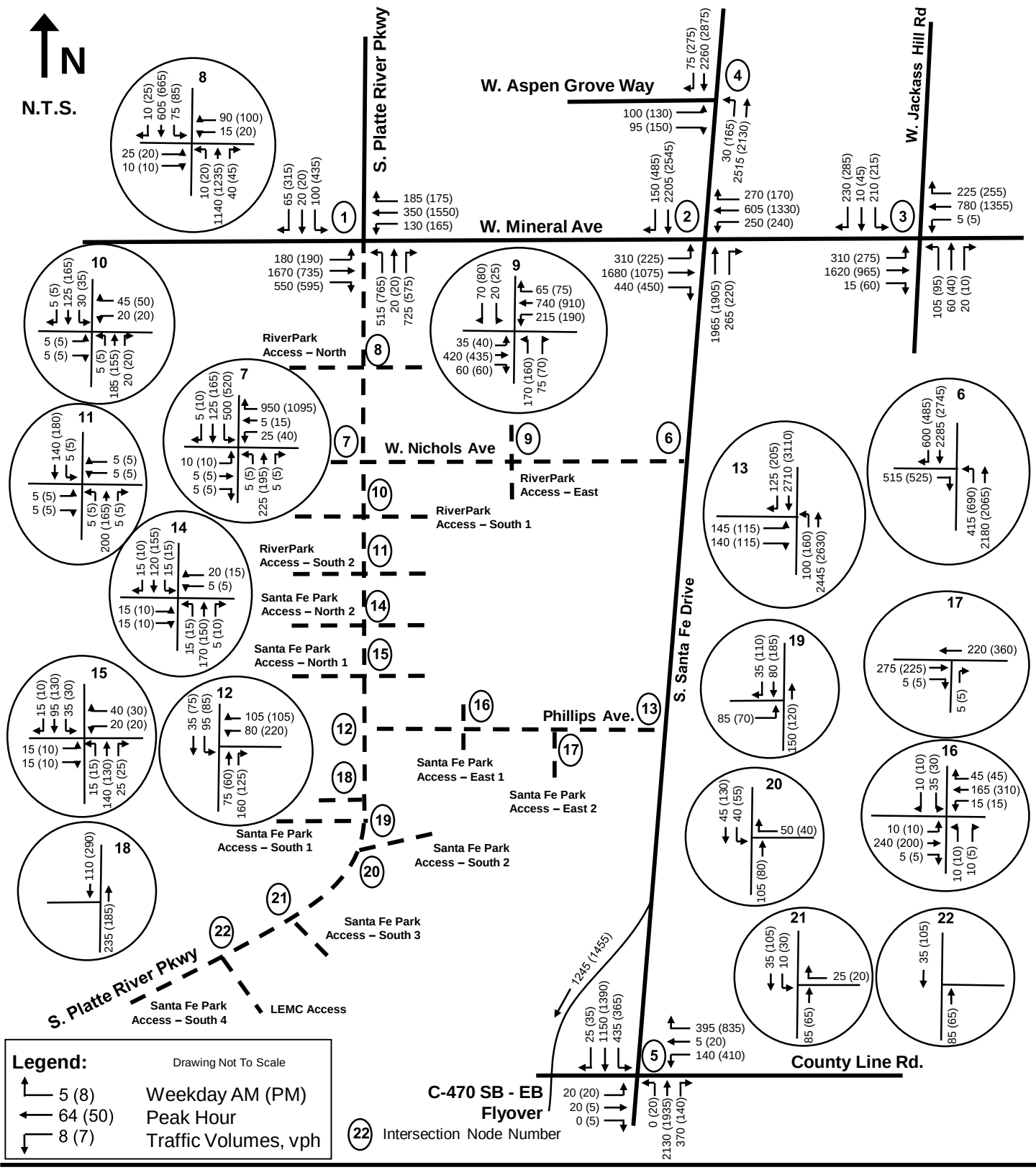
2040 Site Generated Trip Assignment: Combined RiverPark + Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 27



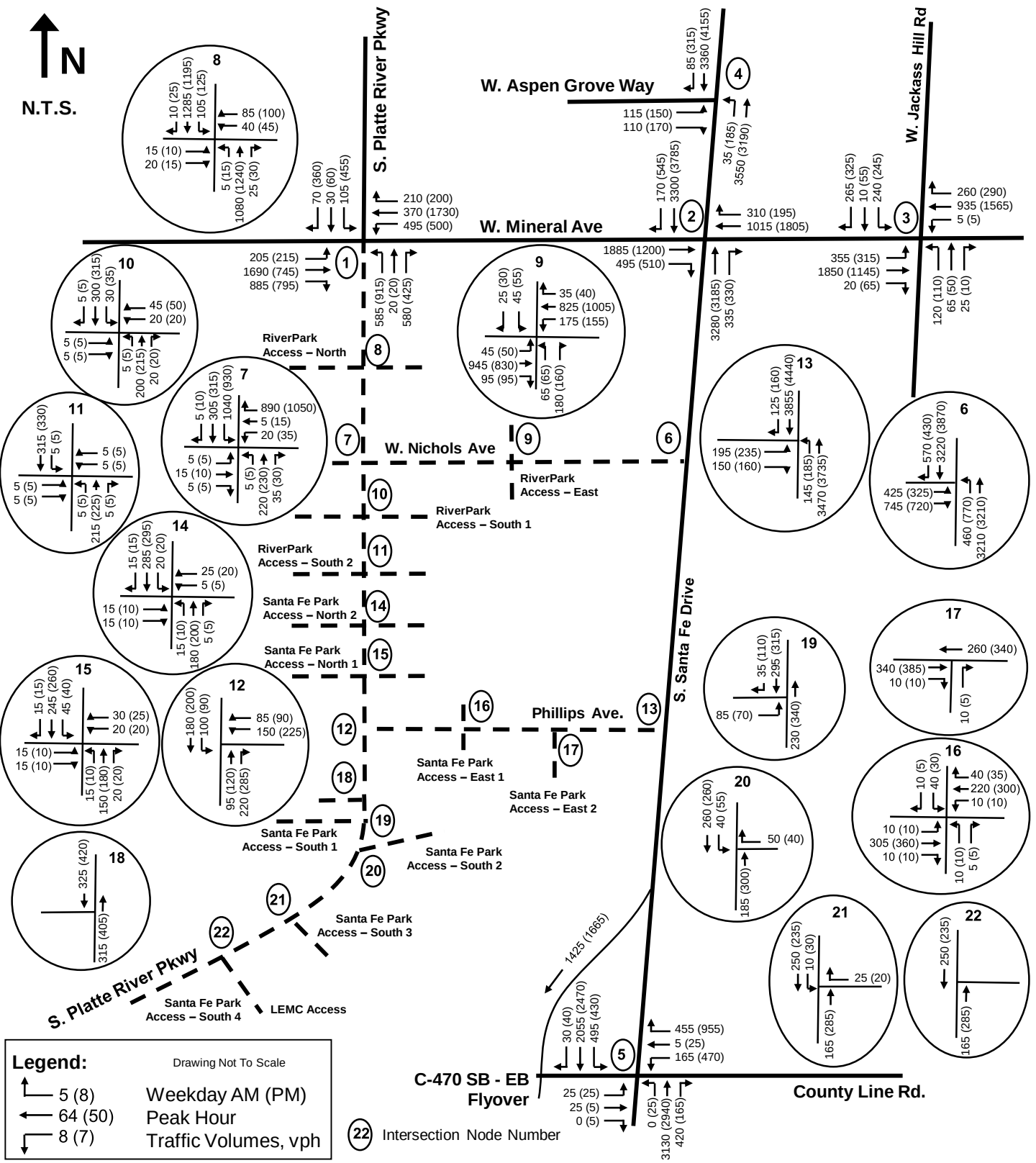
2025 Total Traffic Volumes: Background + Combined Developments

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 28



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

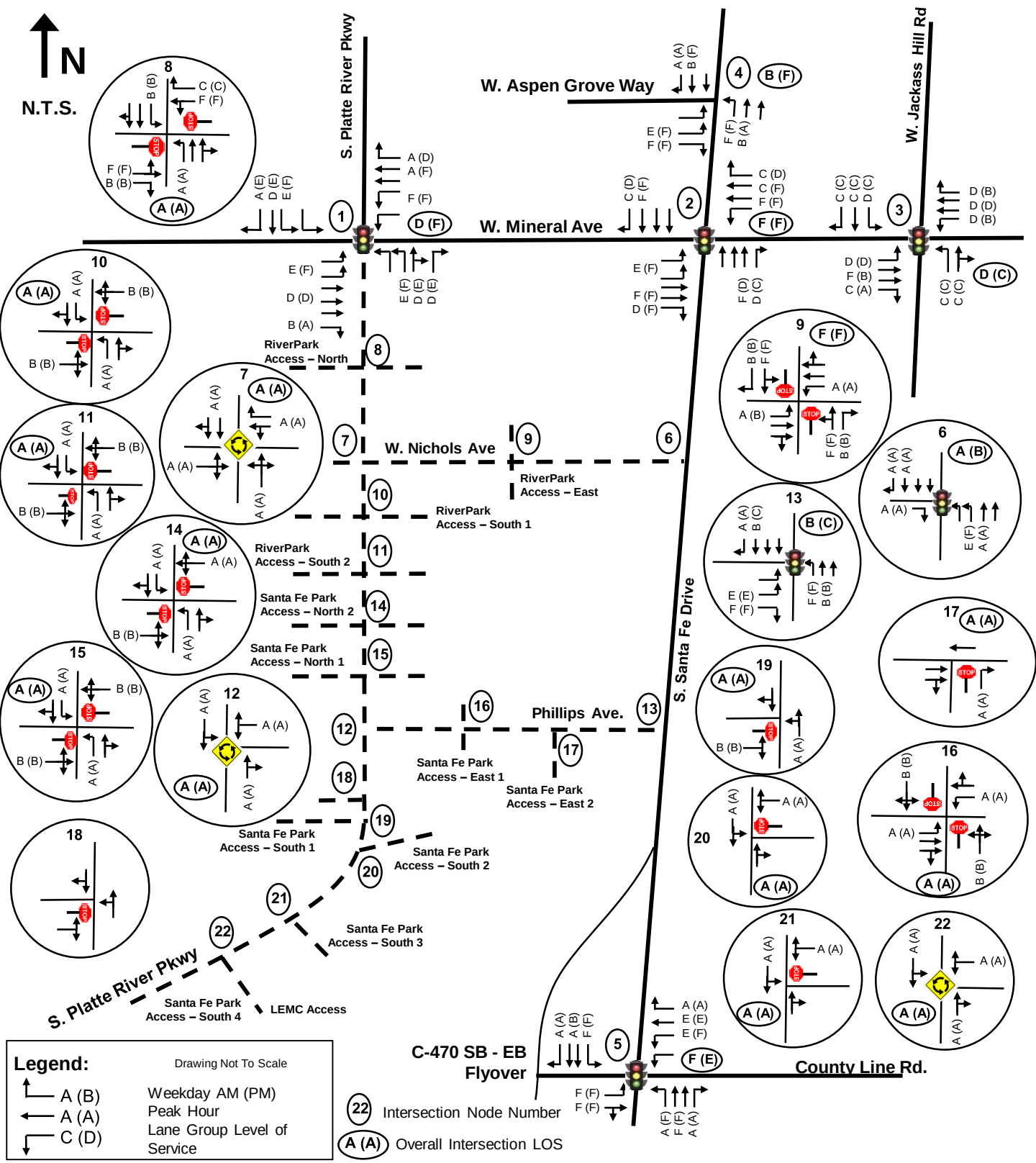
2040 Total Traffic Volumes: Background + Combined Developments

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 29



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

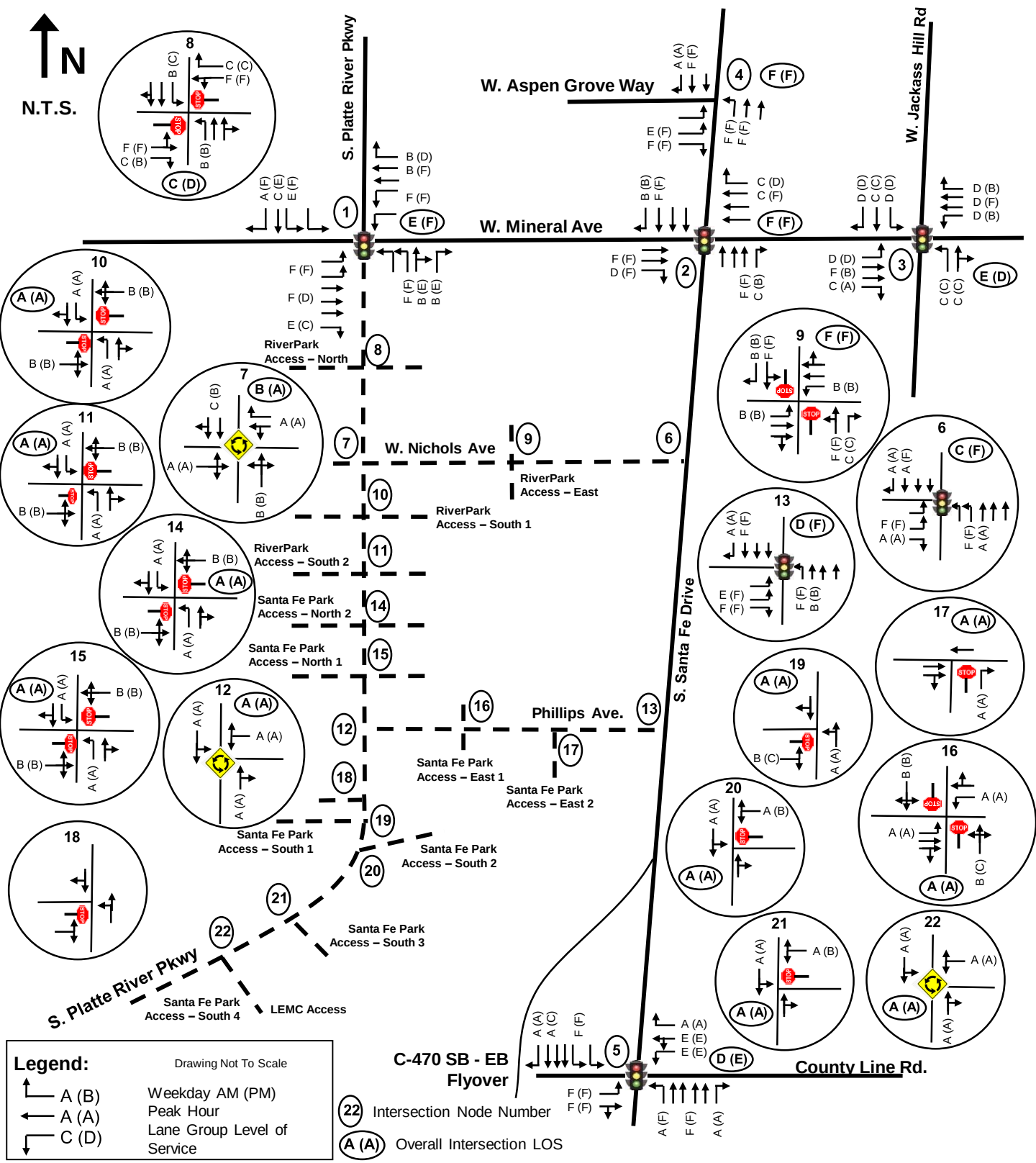
2025 Total Traffic Operational Conditions

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 30



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

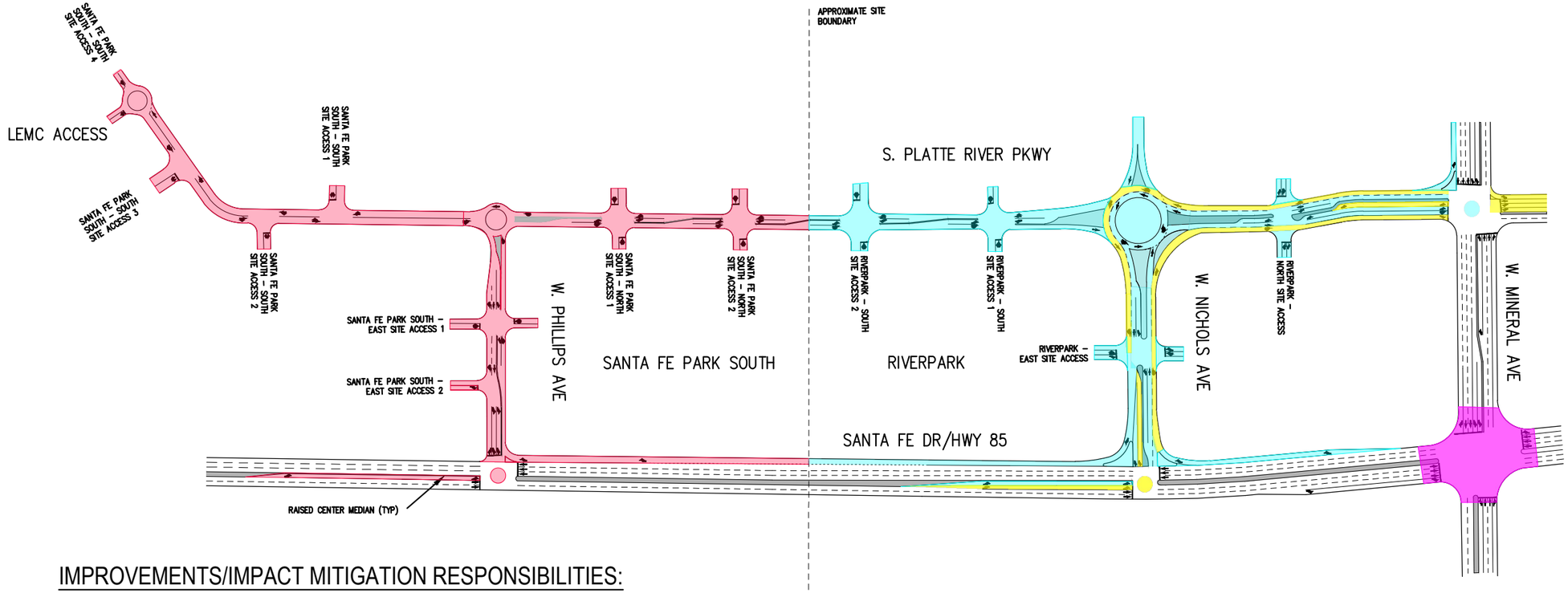
2040 Total Traffic Operational Conditions

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure 31



IMPROVEMENTS/IMPACT MITIGATION RESPONSIBILITIES:

- SANTA FE PARK SOUTH (SFPS) DEVELOPER
- RIVERPARK (RP) DEVELOPER
- CITY OF LITTLETON
- SHARED RESPONSIBILITY (RP/SFPS/CITY)
- TRAFFIC SIGNAL EQUIPMENT – SANTA FE PARK SOUTH (SFPS) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – RIVERPARK (RP) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – CITY OF LITTLETON

FIGURE 32: 2025 BUILDOUT - RECOMMENDED ROADWAY & INTERSECTION IMPROVEMENTS

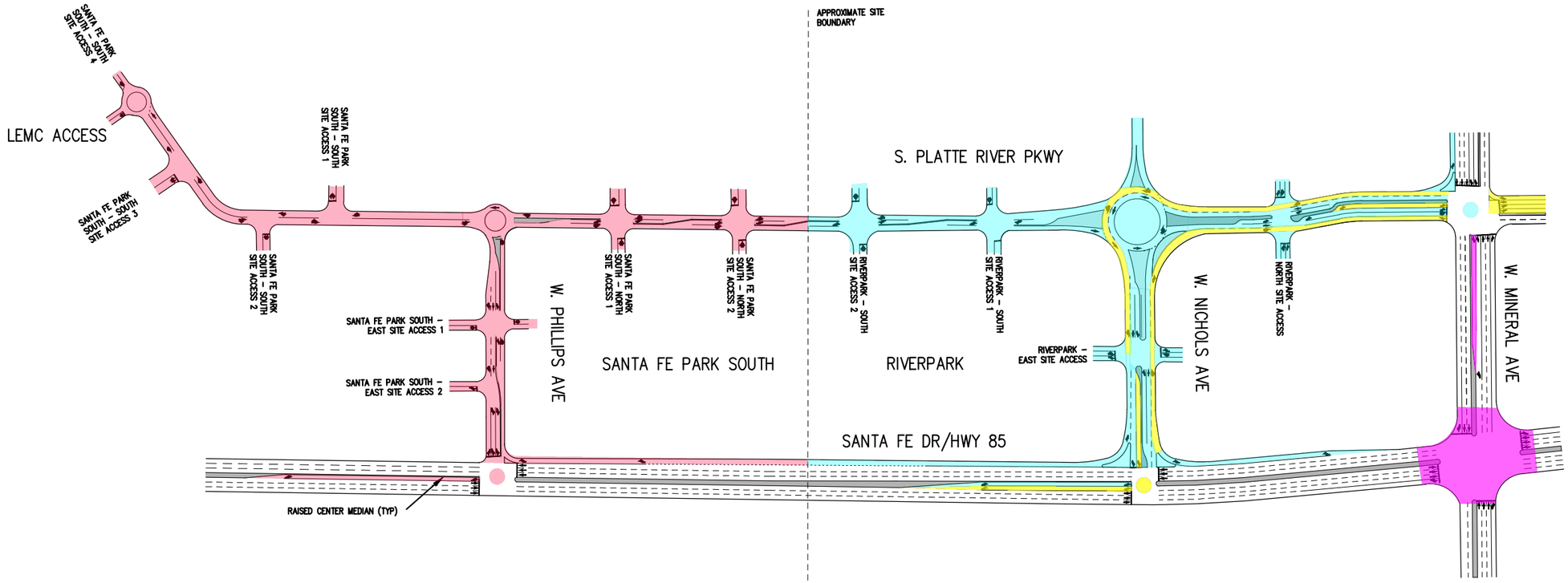
HARRIS KOCHER SMITH
1120 Lincoln Street, Suite 1000
Denver, Colorado 80203
P: 303.623.6300 F: 303.623.6311
HarrisKocherSmith.com

300 0 300 600

SCALE: 1" = 300'

PROJECT #: <######>

2025 COMBINED TIS EXHIBIT.DWG MON 02/22/21 10:12:22A BY: BEN LEECH



IMPROVEMENTS/IMPACT MITIGATION RESPONSIBILITIES:

- SANTA FE PARK SOUTH (SFPS) DEVELOPER
- RIVERPARK (RP) DEVELOPER
- CITY OF LITTLETON
- SHARED RESPONSIBILITY (RP/SFPS/CITY)
- TRAFFIC SIGNAL EQUIPMENT – SANTA FE PARK SOUTH (SFPS) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – RIVERPARK (RP) DEVELOPER
- TRAFFIC SIGNAL EQUIPMENT – CITY OF LITTLETON

FIGURE 33: 2040 LONG TERM - RECOMMENDED ROADWAY & INTERSECTION IMPROVEMENTS

HARRIS KOCHER SMITH
1120 Lincoln Street, Suite 1000
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HarrisKocherSmith.com

300 0 300 600

SCALE: 1" = 300'

PROJECT #: 160605

2040 COMBINED TIS EXHIBIT.DWG MON 02/22/21 10:11:20A BY: BEN LEECH

APPENDIX “A”

SUMMARY OF RESULTS
INTERSECTION CAPACITY ANALYSIS

2019 EXISTING CONDITIONS

2019 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS

INTERSECTION			INTERSECTION CONTROL	**2019** Existing Traffic			
				AM PEAK	AM PEAK	PM PEAK	PM PEAK
1.	**S Platte River Pkwy/W Mineral Ave**		**Signalized**				
	a.	EB L (Prot+Perm) (Dual)		C	20.9	E	75.7
	b.	EB T		C	29.7	A	9.6
	c.	EB R		-	-	-	-
	d.	WB L (Prot)		A	0	A	0
	e.	WB T		C	27.6	D	38.5
	f.	WB R		C	25.3	B	12.1
	g.	NB L		-	-	-	-
	h.	NB T		-	-	-	-
	i.	NB R		-	-	-	-
	j.	SB L (Perm) (Dual)		C	27.9	E	64.6
	k.	SB TR		C	28.5	F	99.7
	l.	INTERSECTION		**C**	**28.5**	**D**	**38.4**
2.	**S Santa Fe Dr/W Mineral Ave**		**Signalized**				
	a.	EB L (Prot) (Dual)		E	76.9	F	101.9
	b.	EB T		F	232.0	F	83.3
	c.	EB R (Free)		A	0.0	A	0.0
	d.	WB L (Prot)		F	124.8	F	100.0
	e.	WB T		E	60.8	F	161.8
	f.	WB R		E	64.5	C	29.6
	g.	NB L (Prot) (Dual)		F	86.3	F	171.7
	h.	NB T		F	132.6	F	73.8
	i.	NB R		C	31.3	C	30.2
	j.	SB L (Prot) (Dual)		F	141.3	F	83.7
	k.	SB T		F	48.5	F	199.6
	l.	SB R (Free)		A	0.0	A	0.0
	m.	INTERSECTION		**F**	**115.5**	**F**	**132.4**
3.	**Jackass Hill Rd/W Mineral Ave**		**Signalized**				
	a.	EB L (Prot+Perm)		C	27.5	D	42.9
	b.	EB T		D	45.8	B	14.0
	c.	EB R		C	26.2	B	11.0
	d.	WB L (Prot+Perm)		D	35.6	B	15.6
	e.	WB T		D	37.0	C	27.0
	f.	WB R		D	35.8	B	19.2
	g.	NB L (Perm)		C	30.4	C	23.7
	h.	NB TR		C	27.9	C	20.1
	j.	SB L (Perm)		D	36.7	C	27.0
	k.	SB T		C	26.5	B	20.0
	l.	SB R		C	32.6	C	27.3
	m.	INTERSECTION		**D**	**39.0**	**C**	**23.9**
4.	**S Santa Fe Dr/W Aspen Grove Way**		**Signalized**				
	a.	EB L (Prot) (Dual)		E	67.0	E	75.4
	b.	EB R		F	89.6	F	119.6
	c.	NB L (Prot+Perm)		A	7.8	E	71.4
	d.	NB T		A	0.1	A	0.1
	e.	SB T		A	7.8	C	21.4
	f.	SB R		A	3.2	A	8.5
	g.	INTERSECTION		**A**	**7.1**	**C**	**24.1**
5.	**S Santa Fe Dr/W County Line Rd**		**Signalized**				
	a.	EB L (Split)		F	85.5	F	115.0
	b.	EB TR		F	83.7	F	92.6
	c.	WB L (Split) (Dual)		E	74.7	F	97.3
	d.	WB T		E	66.9	E	68.4
	e.	WB R (Free)		A	0.0	A	0.0
	f.	NB L (Prot)		A	0.0	F	125.9
	g.	NB T		C	33.2	D	42.9
	h.	NB R (Free)		A	0	A	0
	i.	SB L (Prot)		F	169.2	F	101.5
	j.	SB T		A	3.9	B	11.5
	k.	SB R		A	2.9	A	7.9
	l.	INTERSECTION		**D**	**44.6**	**D**	**46.4**

2025 BACKGROUND & TOTAL TRAFFIC

2025 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS

INTERSECTION	INTERSECTION CONTROL	**2025** Background Traffic: 3/4 Movement @ Nichols				**2025** Total Traffic: 3/4 Movement @ Nichols			
		AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
1. S Platte River Pkwy/W Mineral Ave	**Signalized**								
a. EB L (Prot) (Dual)		E	75.8	F	140.5	E	79.2	F	172.3
b. EB T		D	41.9	C	27.4	D	53.4	D	40.9
c. EB R (Yield)		A	4.9	A	3.6	B	17.6	A	6.3
d. WB L (Prot)		F	119.2	F	97.0	F	93.8	F	106.6
e. WB T		B	15.4	C	23.1	A	9.4	F	124.8
f. WB R		B	15.8	A	1.8	A	9.7	D	51.6
g. NB L (Prot) (Dual)		E	74.3	F	101.7	E	77.3	F	116.2
h. NB TR		C	30.7	E	63.7	D	43.9	E	71.0
i. NB R		C	31.9	E	65.8	D	48.3	E	79.2
j. SB L (Prot) (Dual)		E	77.7	F	114.5	E	77.7	F	88.6
k. SB T		A	0.0	A	0.0	D	45.2	E	62.0
l. SB R (Yield)		A	0.3	F	91.9	A	2.9	E	75.9
m. INTERSECTION		**D**	**42.2**	**D**	**53.2**	**D**	**52.3**	**F**	**98.5**
2. S Santa Fe Dr/W Mineral Ave	**Signalized**								
a. EB L (Prot) (Dual)		E	79.4	F	153.8	E	79.9	F	196.3
b. EB T		F	104.3	E	62.0	F	178.5	F	138.1
c. EB R		D	35.7	E	64.3	D	43.8	F	125.4
d. WB L (Prot)		F	200.5	F	117.1	F	192.1	F	149.9
e. WB T		C	29.3	F	81.3	C	31.8	F	117.7
f. WB R		C	30.3	D	39.0	C	32.0	D	41.2
g. NB T		E	56.9	D	37.6	F	85.0	D	39.8
h. NB R		C	31.6	C	25.3	D	36.2	C	26.9
i. SB T		F	89.8	E	58.8	F	137.8	F	85.0
j. SB R		C	28.7	C	33.7	C	31.8	D	37.2
k. INTERSECTION		**E**	**74.5**	**E**	**57.8**	**F**	**111.2**	**F**	**88.4**
3. Jackass Hill Rd/W Mineral Ave	**Signalized**								
a. EB L (Prot+Perm)		C	30.7	D	39.0	D	37.4	D	50.0
b. EB T		E	60.0	B	13.5	F	70.3	B	12.4
c. EB R		C	32.7	B	10.4	C	32.3	A	8.9
d. WB L (Prot+Perm)		D	37.6	B	15.9	D	40.5	B	14.4
e. WB T		D	37.5	C	31.4	D	40.1	D	39.2
f. WB R		D	36.2	B	19.9	D	35.9	B	18.0
g. NB L (Perm)		C	30.8	C	25.1	C	31.2	C	28.0
h. NB TR		C	28.0	C	21.0	C	28.4	C	23.3
j. SB L (Perm)		D	37.6	C	28.9	D	38.2	C	32.8
k. SB T		C	26.5	C	20.8	C	26.9	C	23.1
l. SB R		C	33.0	C	29.7	C	33.5	C	34.7
m. INTERSECTION		**D**	**45.9**	**C**	**25.4**	**D**	**52.1**	**C**	**29.3**
4. S Santa Fe Dr/W Aspen Grove Way	**Signalized**								
a. EB L (Prot) (Dual)		E	66.9	F	97.3	E	66.9	F	97.3
b. EB R		F	104.0	F	508.2	F	104.0	F	651.8
c. NB L (Prot)		F	98.6	F	168.9	F	107.0	F	95.4
d. NB T		A	9.6	A	4.6	B	13.6	A	5.5
e. SB T		B	12.0	F	60.7	B	14.6	F	109.7
f. SB R		A	3.5	A	6.8	A	3.5	A	7.8
g. INTERSECTION		**B**	**14.2**	**D**	**54.1**	**B**	**17.2**	**F**	**117.1**

2025 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS (CONTINUED)

INTERSECTION	INTERSECTION CONTROL	**2025** Background Traffic: 3/4 Movement @ Nichols				**2025** Total Traffic: 3/4 Movement @ Nichols			
		AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
5. S Santa Fe Dr/W County Line Rd	**Signalized**								
a. EB L (Split)		F	85.4	F	107.9	F	85.4	F	107.9
c. EB TR		F	83.6	F	92.6	F	83.6	F	92.6
d. WB L (Split) (Dual)		E	74.6	F	99.0	E	74.6	F	99.0
e. WB T		E	66.7	E	67.5	E	66.7	E	67.5
f. WB R (Free)		A	0.0	A	0.0	A	0.0	A	0.0
g. NB L (Prot)		A	0.0	F	125.9	A	0.0	F	125.9
h. NB T		F	57.4	F	64.9	F	89.1	F	102.3
i. NB R (Free)		A	0.0	A	0.0	A	0.0	A	0.0
j. SB L (Prot)		F	233.3	F	140.9	F	246.0	F	166.7
k. SB T		A	4.6	B	13.6	A	4.9	B	14.3
l. SB R		A	2.9	A	7.9	A	2.9	A	7.9
m. INTERSECTION		**E**	**61.7**	**E**	**57.9**	**F**	**80.7**	**E**	**77.7**
6. S Santa Fe Dr/Nichols Ave	**Signalized**								
a. EB R (Free)		A	0.0	A	0.0	A	0.0	A	0.0
b. NB L (Prot) (Dual)		E	75.2	F	92.1	E	72.4	F	89.2
c. NB T		A	1.3	A	1.1	A	1.4	A	1.1
d. SB T		A	0.1	A	0.1	A	0.1	A	0.2
e. SB R		A	0.0	A	0.0	A	0.0	A	0.0
f. INTERSECTION		**A**	**5.4**	**A**	**5.4**	**A**	**6.8**	**B**	**11.7**
7. S Platte River Pkwy/Nichols Ave	**Roundabout**								
a. EB		-	-	-	-	A	4.5	A	4.8
b. WB		A	0.0	A	0.0	A	0.1	A	0.2
c. NB		-	-	-	-	A	7.2	A	6.9
d. SB		A	5.6	A	5.4	A	6.3	A	6.6
e. INTERSECTION		**A**	**2.1**	**A**	**1.8**	**A**	**3.1**	**A**	**3.0**
8. S Platte River Pkwy/RiverPark Access North	**TWSC**								
a. EB L	Stop	-	-	-	-	F	107.4	F	172.7
b. EB TR	Stop	-	-	-	-	B	10.5	B	10.9
c. WB L	Stop	-	-	-	-	F	124.9	F	256.8
d. WB TR	Stop	-	-	-	-	C	16.3	C	18.0
e. NB L		-	-	-	-	A	9.0	A	9.3
f. NB TR		-	-	-	-	A	0.0	A	0.0
g. SB L		-	-	-	-	B	12.9	B	14.1
h. SB TR		-	-	-	-	A	0.0	A	0.0
i. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**3.6**	**A**	**5.3**
9. Nichols Ave/RiverPark Access East	**TWSC**								
a. EB L		-	-	-	-	A	9.9	B	11.0
b. EB TR		-	-	-	-	A	0.0	A	0.0
c. WB L		-	-	-	-	A	9.5	A	9.4
d. WB TR		-	-	-	-	A	0.0	A	0.0
f. NB L	Stop	-	-	-	-	F	967.7	F	1131.2
f. NB TR	Stop	-	-	-	-	B	10.5	B	10.5
g. SB L	Stop	-	-	-	-	F	127.5	F	221.6
h. SB TR	Stop	-	-	-	-	B	12.3	B	13.9
i. INTERSECTION		**-**	**-**	**-**	**-**	**F**	**91.5**	**F**	**93.2**
10. S Platte River Pkwy/RiverPark Access South 1	**TWSC**								
a. EB LTR	Stop	-	-	-	-	B	10.9	B	11.1
b. WB LTR	Stop	-	-	-	-	B	10.7	B	10.6
c. NB L		-	-	-	-	A	7.5	A	7.6
d. NB TR		-	-	-	-	A	0.0	A	0.0
e. SB L		-	-	-	-	A	7.7	A	7.7
f. SB TR		-	-	-	-	A	0.0	A	0.0
g. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**2.4**	**A**	**2.5**

2025 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS (CONTINUED)

INTERSECTION	INTERSECTION CONTROL	**2025** Background Traffic: 3/4 Movement @ Nichols				**2025** Total Traffic: 3/4 Movement @ Nichols			
		AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
11. S Platte River Pkwy/RiverPark Access South 2	**TWSC**								
a. EB LTR	Stop	-	-	-	-	B	10.3	B	10.5
b. WB LTR	Stop	-	-	-	-	B	10.5	B	10.4
c. NB L		-	-	-	-	A	7.5	A	7.6
d. NB TR		-	-	-	-	A	0.0	A	0.0
e. SB L		-	-	-	-	A	7.7	A	7.6
f. SB TR		-	-	-	-	A	0.0	A	0.0
g. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**0.8**	**A**	**0.7**
12. S Platte River Pkwy/Phillips Ave	**Roundabout**								
a. WB		-	-	-	-	A	4.3	A	5.3
b. NB		-	-	-	-	A	4.8	A	4.3
c. SB		-	-	-	-	A	3.9	A	4.9
d. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**4.4**	**A**	**5.0**
13. S Santa Fe Dr/Phillips Ave	**Signalized**								
a. EB L (Prot) (Dual)		-	-	-	-	E	57.1	E	76.6
b. EB R		-	-	-	-	F	91.3	F	121.3
c. NB L (Prot)		-	-	-	-	F	83.8	F	114.6
d. NB T		-	-	-	-	B	11.2	B	12.8
e. SB T		-	-	-	-	B	13.0	C	21.7
f. SB R (Yield)		-	-	-	-	A	2.0	A	3.2
g. INTERSECTION		**-**	**-**	**-**	**-**	**B**	**16.6**	**C**	**23.3**
14. S Platte River Pkwy/Santa Fe Park Access North 2	**TWSC**								
a. EB LTR	Stop	-	-	-	-	B	10.6	B	10.7
b. WB LTR	Stop	-	-	-	-	A	9.9	A	9.9
c. NB L		-	-	-	-	A	7.5	A	7.6
d. NB TR		-	-	-	-	A	0.0	A	0.0
e. SB L		-	-	-	-	A	7.6	A	7.6
f. SB TR		-	-	-	-	A	0.0	A	0.0
g. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**2.0**	**A**	**1.6**
15. S Platte River Pkwy/Santa Fe Park Access North 1	**TWSC**								
a. EB LTR	Stop	-	-	-	-	B	10.7	B	10.7
b. WB LTR	Stop	-	-	-	-	B	10.4	B	10.6
c. NB L		-	-	-	-	A	7.5	A	7.5
d. NB TR		-	-	-	-	A	0.0	A	0.0
e. SB L		-	-	-	-	A	7.6	A	7.6
f. SB TR		-	-	-	-	A	0.0	A	0.0
g. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**3.2**	**A**	**2.6**
16. Phillips Ave/Santa Fe Park Access East 1	**TWSC**								
a. EB L		-	-	-	-	A	7.7	A	8.1
b. EB TR		-	-	-	-	A	0.0	A	0.0
c. WB L		-	-	-	-	A	7.8	A	7.7
d. WB TR		-	-	-	-	A	0.0	A	0.0
e. NB LTR	Stop	-	-	-	-	B	11.4	B	13.2
f. SB LTR	Stop	-	-	-	-	B	11.7	B	13.2
g. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.7**	**A**	**1.4**

2025 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS (CONTINUED)

INTERSECTION	INTERSECTION CONTROL	**2025** Background Traffic: 3/4 Movement @ Nichols				**2025** Total Traffic: 3/4 Movement @ Nichols			
		AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
17. Phillips Ave/Santa Fe Park Access East 2	**TWSC**								
a. EB TR		-	-	-	-	A	0.0	A	0.0
b. WB L		-	-	-	-	A	0.0	A	0.0
c. WB T		-	-	-	-	A	0.0	A	0.0
d. NB LR	Stop	-	-	-	-	A	9.2	A	9.0
e. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**0.1**	**A**	**0.1**
18. S Platte River Pkwy/Parking Lot Access	**TWSC**								
a. EB LR	Stop	-	-	-	-	-	-	-	-
b. NB LT		-	-	-	-	-	-	-	-
c. SB TR		-	-	-	-	-	-	-	-
d. INTERSECTION		**NOT ANALYZED**							
19. S Platte River Pkwy/Santa Fe Park Access South 1	**TWSC**								
a. EB LR	Stop	-	-	-	-	B	10.7	B	11.7
b. NB LT		-	-	-	-	A	0.0	A	0.0
c. SB TR		-	-	-	-	A	0.0	A	0.0
d. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**2.6**	**A**	**1.7**
20. S Platte River Pkwy/Santa Fe Park Access South 2	**TWSC**								
a. WB LR	Stop	-	-	-	-	A	9.1	A	8.9
b. NB TR		-	-	-	-	A	0.0	A	0.0
c. SB LT		-	-	-	-	A	7.5	A	7.5
d. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**3.1**	**A**	**2.5**
21. S Platte River Pkwy/Santa Fe Park Access South 3	**TWSC**								
a. WB LR	Stop	-	-	-	-	A	8.8	A	8.7
b. NB TR		-	-	-	-	A	0.0	A	0.0
c. SB LT		-	-	-	-	A	7.4	A	7.4
d. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.9**	**A**	**1.8**
22. S Platte River Pkwy/Santa Fe Park Access South 4/L	**Roundabout**								
a. EB		-	-	-	-	A	3.2	A	3.1
b. NB		-	-	-	-	A	0.0	A	0.0
c. SB		-	-	-	-	A	2.9	A	3.3
d. INTERSECTION		**-**	**-**	**-**	**-**	**A**	**3.1**	**A**	**3.2**

2040 BACKGROUND & TOTAL TRAFFIC

2040 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS

INTERSECTION			INTERSECTION CONTROL	**2040** Background Traffic: Full Movement @ NIchols				**2040** Total Traffic: Full Movement @ NIchols			
				AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
1.	**S Platte River Pkwy/W Mineral Ave**		**Signalized**								
	a.	EB L (Prot) (Dual)		F	80	F	221.2	F	80.0	F	221.2
	b.	EB T		D	49.6	C	33.9	F	88.4	D	49.4
	c.	EB R (Yield)		B	19.1	A	4.8	E	63.6	C	25.6
	d.	WB L (Prot) (Dual)		F	80.7	F	97.6	F	113.9	F	116.6
	e.	WB T		B	14.7	F	142.3	B	15.3	F	189.7
	f.	WB R		B	15.1	D	38.4	B	15.9	D	54.0
	g.	NB L (Prot) (Dual)		E	79.3	F	158.8	F	106.1	F	195.8
	h.	NB TR		D	39.9	E	63.8	B	17.9	E	61.6
	i.	NB R		D	41.9	E	66.4	B	18.6	E	64.4
	j.	SB L (Prot) (Dual)		E	78.7	F	104.4	E	78.7	F	94.8
	k.	SB T		D	42.3	E	64	C	24.0	E	62.5
	l.	SB R (Yield)		A	3.5	F	112.6	A	0.8	F	94.4
	m.	INTERSECTION		**D**	**50.1**	**F**	**114.7**	**E**	**73.0**	**F**	**139.7**
2.	**S Santa Fe Dr/W Mineral Ave**		**Signalized**								
	a.	EB T		F	182.0	F	141.4	F	215.6	F	161.9
	b.	EB R		D	48.5	F	167.5	D	45.5	F	149.3
	c.	WB T		C	30.9	F	146.4	C	32.4	F	183.8
	d.	WB R		C	32.7	D	52.4	C	32.7	D	50.7
	e.	NB T		F	149.9	D	39.2	F	184.7	F	59.9
	f.	NB R		C	21.7	B	13.3	C	23.5	B	15.2
	g.	SB T		F	169.6	F	107.9	F	188.4	F	142.0
	h.	SB R		B	19.0	B	17.4	B	19.6	B	19.9
	i.	INTERSECTION		**F**	**137.9**	**F**	**93.2**	**F**	**158.5**	**F**	**117.4**
3.	**Jackass Hill Rd/W Mineral Ave**		**Signalized**								
	a.	EB L (Prot+Perm)		D	43.9	D	49.6	D	54.4	D	53.5
	b.	EB T		E	68.1	B	11.0	F	92.5	B	11.2
	c.	EB R		C	31.0	A	7.9	C	24.1	A	7.4
	d.	WB L (Prot+Perm)		D	41.1	B	14.3	D	41.7	B	13.8
	e.	WB T		D	41.4	D	41.4	D	48.1	F	71.5
	f.	WB R		D	38.7	B	18.5	D	40.5	B	17.8
	g.	NB L (Perm)		C	34.4	C	32.6	C	34.8	C	34.0
	h.	NB TR		C	30.7	C	25.4	C	31.0	C	26.4
	j.	SB L (Perm)		D	43.9	D	40.3	D	44.5	D	43.0
	k.	SB T		C	28.8	C	25.3	C	29.1	C	26.2
	l.	SB R		D	37.6	D	47.3	D	38.0	D	53.1
	m.	INTERSECTION		**D**	**52.5**	**C**	**31.6**	**E**	**66.2**	**D**	**43.5**
4.	**S Santa Fe Dr/W Aspen Grove Way**		**Signalized**								
	a.	EB L (Prot) (Dual)		E	70.4	F	112.6	E	70.4	F	112.6
	c.	EB R		F	198.7	F	616.7	F	198.7	F	616.7
	g.	NB L (Prot)		F	134.3	F	243.5	F	134.3	F	243.5
	h.	NB T		F	105.6	F	43.7	F	136.4	F	66.4
	k.	SB T		F	122.3	F	280.2	F	145.9	F	318.6
	l.	SB R		A	3.3	A	6.8	A	3.3	A	6.8
	m.	INTERSECTION		**F**	**113.1**	**F**	**180.5**	**F**	**139.1**	**F**	**208.7**
5.	**S Santa Fe Dr/W County Line Rd**		**Signalized**								
	a.	EB L (Split)		F	84.3	F	106.5	F	84.2	F	106.5
	c.	EB TR		F	82.5	F	90.2	F	82.5	F	90.2
	d.	WB L (Split)		E	73.9	E	78.0	E	73.8	E	78.0
	e.	WB LT		E	73.9	E	78.0	E	73.8	E	78.0
	f.	WB R (Yield)		A	0.0	A	0.0	A	0.0	A	0.0
	g.	NB L (Prot)		A	0.0	F	126.3	A	0.0	F	126.3
	h.	NB T		D	36.8	D	48.5	F	54.3	F	61.6
	i.	NB R (Free)		A	0	A	0	A	0.0	A	0.0
	j.	SB L (Prot) (Dual)		F	204.2	F	236.9	F	187.3	F	332.2
	k.	SB T		A	6.0	C	21.0	A	6.2	C	21.9
	l.	SB R		A	3.3	A	9.9	A	3.3	A	9.9
	m.	INTERSECTION		**D**	**40.9**	**D**	**52.5**	**D**	**49.3**	**E**	**65.8**

2040 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS (CONTINUED)

INTERSECTION			INTERSECTION CONTROL	**2040** Background Traffic: Full Movement @ NIchols				**2040** Total Traffic: Full Movement @ NIchols			
				AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
6.	**S Santa Fe Dr/Nichols Ave**		**Signalized**								
	a.	EB L (Prot) (Dual)		F	80.6	F	91	F	237.5	F	180.0
	b.	EB R (Free)		A	0	A	0	A	0.0	A	0.0
	c.	NB L (Prot) (Dual)		F	140.4	F	205.8	F	153.5	F	195.3
	d.	NB T		A	6.2	A	4.2	A	7.9	A	7.0
	e.	SB T		A	1.2	F	81.5	A	4.2	F	125.5
	f.	SB R (Yield)		A	0.0	A	0.0	A	0.0	A	0.0
	g.	INTERSECTION		**B**	**13.4**	**E**	**62**	**C**	**28.7**	**F**	**87.7**
7.	**S Platte River Pkwy/Nichols Ave**		**Roundabout**								
	a.	EB		-	-	-	-	A	8.9	A	7.9
	b.	WB		A	0	A	0	A	0.1	A	0.2
	c.	NB		-	-	-	-	B	13.5	B	11.9
	d.	SB		B	14.2	B	10.6	C	18.8	B	14.3
	e.	INTERSECTION		**A**	**7.6**	**A**	**4.7**	**B**	**11.5**	**A**	**8.1**
8.	**S Platte River Pkwy/RiverPark Access North**		**TWSC**								
	a.	EB L	Stop	-	-	-	-	F	555.5	F	634.1
	b.	EB TR	Stop	-	-	-	-	C	15.1	B	14.3
	c.	WB L	Stop	-	-	-	-	F	828.5	F	1535.3
	d.	WB TR	Stop	-	-	-	-	C	15.3	C	17.9
	e.	NB L		-	-	-	-	B	12.6	B	12.2
	f.	NB TR		-	-	-	-	A	0.0	A	0.0
	g.	SB L		-	-	-	-	B	12.8	C	15.1
	h.	SB TR		-	-	-	-	A	0.0	A	0.0
	i.	INTERSECTION		**-**	**-**	**-**	**-**	**C**	**16.7**	**D**	**28.4**
9.	**Nichols Ave/RiverPark Access East**		**TWSC**								
	a.	EB L		-	-	-	-	B	10.3	B	11.5
	b.	EB TR		-	-	-	-	A	0.0	A	0.0
	c.	WB L		-	-	-	-	B	13.5	B	12.0
	d.	WB TR		-	-	-	-	A	0.0	A	0.0
	e.	NB L	Stop	-	-	-	-	F	1216.9	F	1040.0
	f.	NB TR	Stop	-	-	-	-	C	18.1	C	15.5
	g.	SB L	Stop	-	-	-	-	F	1219.0	F	1483.4
	h.	SB TR	Stop	-	-	-	-	B	12.0	B	13.3
	i.	INTERSECTION		**-**	**-**	**-**	**-**	**F**	**57.6**	**F**	**62.2**
10.	**S Platte River Pkwy/RiverPark Access South 1**		**TWSC**								
	a.	EB LTR	Stop	-	-	-	-	B	12.9	B	13.4
	b.	WB LTR	Stop	-	-	-	-	B	11.8	B	12.1
	c.	NB L		-	-	-	-	A	7.9	A	8.0
	d.	NB TR		-	-	-	-	A	0.0	A	0.0
	e.	SB L		-	-	-	-	A	7.8	A	7.8
	f.	SB TR		-	-	-	-	A	0.0	A	0.0
	g.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.9**	**A**	**1.9**
11.	**S Platte River Pkwy/RiverPark Access South 2**		**TWSC**								
	a.	EB LTR	Stop	-	-	-	-	B	12.1	B	12.4
	b.	WB LTR	Stop	-	-	-	-	B	11.8	B	12.1
	c.	NB L		-	-	-	-	A	8.0	A	8.0
	d.	NB TR		-	-	-	-	A	0.0	A	0.0
	e.	SB L		-	-	-	-	A	7.7	A	7.7
	f.	SB TR		-	-	-	-	A	0.0	A	0.0
	g.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**0.6**	**A**	**0.6**
12.	**S Platte River Pkwy/Phillips Ave**		**Roundabout**								
	a.	WB		-	-	-	-	A	4.8	A	5.7
	b.	NB		-	-	-	-	A	5.6	A	6.4
	c.	SB		-	-	-	-	A	5.6	A	6.4
	d.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**5.4**	**A**	**6.2**
13.	**S Santa Fe Dr/Phillips Ave**		**Signalized**								
	a.	EB L (Prot) (Dual)		E	76.6	F	92.8	E	65.9	F	97.8
	b.	EB R		E	73.8	F	81.3	F	125.1	F	234.3
	c.	NB L (Prot)		F	212.9	F	142.1	F	265.2	F	321.4
	d.	NB T		A	3.6	A	7.8	B	10.3	B	11.4
	e.	SB T		B	13.0	F	65.9	F	68.3	F	128.1
	f.	SB R (Yield)		A	0.3	A	1.4	A	1.0	A	2.2
	g.	INTERSECTION		**B**	**10.5**	**D**	**41.1**	**D**	**47.2**	**F**	**83.5**

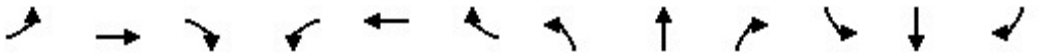
2040 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS (CONTINUED)

INTERSECTION			INTERSECTION CONTROL	**2040** Background Traffic: Full Movement @ NIchols				**2040** Total Traffic: Full Movement @ NIchols			
				AM PEAK	AM PEAK	PM PEAK	PM PEAK	AM PEAK	AM PEAK	PM PEAK	PM PEAK
14.	**S Platte River Pkwy/Santa Fe Park Access North 2**		**TWSC**								
	a.	EB LTR	Stop	-	-	-	-	B	12.6	B	12.6
	b.	WB LTR	Stop	-	-	-	-	B	10.3	B	10.6
	c.	NB L		-	-	-	-	A	8.0	A	8.0
	d.	NB TR		-	-	-	-	A	0.0	A	0.0
	e.	SB L		-	-	-	-	A	7.7	A	7.7
	f.	SB TR		-	-	-	-	A	0.0	A	0.0
	g.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.7**	**A**	**1.3**
15.	**S Platte River Pkwy/Santa Fe Park Access North 1**		**TWSC**								
	a.	EB LTR	Stop	-	-	-	-	B	12.5	B	12.6
	b.	WB LTR	Stop	-	-	-	-	B	11.7	B	12.2
	c.	NB L		-	-	-	-	A	7.8	A	7.9
	d.	NB TR		-	-	-	-	A	0.0	A	0.0
	e.	SB L		-	-	-	-	A	7.7	A	7.8
	f.	SB TR		-	-	-	-	A	0.0	A	0.0
	g.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**2.5**	**A**	**2.0**
16.	**Phillips Ave/Santa Fe Park Access East 1**		**TWSC**								
	a.	EB L		-	-	-	-	A	7.8	A	8.0
	b.	EB TR		-	-	-	-	A	0.0	A	0.0
	c.	WB L		-	-	-	-	A	8.0	A	8.1
	d.	WB TR		-	-	-	-	A	0.0	A	0.0
	e.	NB LTR	Stop	-	-	-	-	B	13.4	C	15.3
	f.	SB LTR	Stop	-	-	-	-	B	12.7	B	14.3
	g.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.5**	**A**	**1.1**
17.	**Phillips Ave/Santa Fe Park Access East 2**		**TWSC**								
	a.	EB TR		-	-	-	-	A	0.0	A	0.0
	b.	WB L		-	-	-	-	A	0.0	A	0.0
	c.	WB T		-	-	-	-	A	0.0	A	0.0
	d.	NB LR	Stop	-	-	-	-	A	9.5	A	9.6
	e.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**0.2**	**A**	**0.1**
18.	**S Platte River Pkwy/Parking Lot Access**		**TWSC**								
	a.	EB LR	Stop	-	-	-	-	-	-	-	-
	b.	NB LT		-	-	-	-	-	-	-	-
	c.	SB TR		-	-	-	-	-	-	-	-
	d.	INTERSECTION		**NOT ANALYZED**							
19.	**S Platte River Pkwy/Santa Fe Park Access South 1**		**TWSC**								
	a.	EB LR	Stop	-	-	-	-	B	14.5	C	17.3
	b.	NB LT		-	-	-	-	A	0.0	A	0.0
	c.	SB TR		-	-	-	-	A	0.0	A	0.0
	d.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.9**	**A**	**1.5**
20.	**S Platte River Pkwy/Santa Fe Park Access South 2**		**TWSC**								
	a.	WB LR	Stop	-	-	-	-	A	9.6	B	10.4
	b.	NB TR		-	-	-	-	A	0.0	A	0.0
	c.	SB LT		-	-	-	-	A	7.7	A	8.1
	d.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**1.5**	**A**	**1.3**
21.	**S Platte River Pkwy/Santa Fe Park Access South 3**		**TWSC**								
	a.	WB LR	Stop	-	-	-	-	A	9.3	B	10.1
	b.	NB TR		-	-	-	-	A	0.0	A	0.0
	c.	SB LT		-	-	-	-	A	7.6	A	8.0
	d.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**0.7**	**A**	**0.8**
22.	**S Platte River Pkwy/Santa Fe Park Access South 4/LEMC Access**		**Roundabout**								
	a.	EB		-	-	-	-	A	3.7	A	4.6
	b.	NB		-	-	-	-	A	0.0	A	0.0
	c.	SB		-	-	-	-	A	4.3	A	4.2
	d.	INTERSECTION		**-**	**-**	**-**	**-**	**A**	**4.1**	**A**	**4.4**

APPENDIX “B”

INTERSECTION CAPACITY ANALYSIS WORKSHEETS

2019 EXISTING CONDITIONS



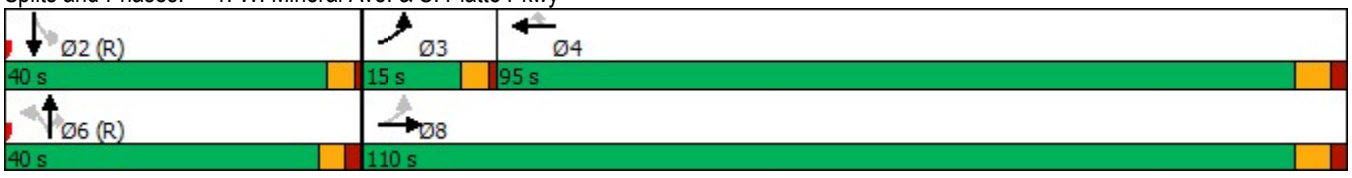
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	220		0	0		100	200		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	5085	0	0	3539	1583	1863	1863	1863	3433	1583	0
Flt Permitted	0.306									0.757		
Satd. Flow (perm)	1106	5085	0	0	3539	1583	1863	1863	1863	2736	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						190					330	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			674			603	
Travel Time (s)		6.8			4.5			15.3			13.7	

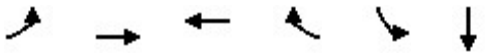
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	Ø6
Lane Configurations							
Traffic Volume (vph)	170	1950	640	175	95	0	
Future Volume (vph)	170	1950	640	175	95	0	
Turn Type	pm+pt	NA	NA	Perm	Perm	NA	
Protected Phases	3	8	4			2	6
Permitted Phases	8			4	2		
Detector Phase	3	8	4	4	2	2	
Switch Phase							
Minimum Initial (s)	3.0	25.0	25.0	25.0	3.0	3.0	5.0
Minimum Split (s)	8.0	32.0	31.0	31.0	35.0	35.0	40.0
Total Split (s)	15.0	110.0	95.0	95.0	40.0	40.0	40.0
Total Split (%)	10.0%	73.3%	63.3%	63.3%	26.7%	26.7%	27%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	6.0	4.0	4.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	92.6	90.6	76.5	76.5	49.4	49.4	
Actuated g/C Ratio	0.62	0.60	0.51	0.51	0.33	0.33	
v/c Ratio	0.22	0.69	0.39	0.21	0.11	0.09	
Control Delay	11.4	21.1	36.2	16.7	38.2	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.4	21.1	36.2	16.7	38.2	0.2	
LOS	B	C	D	B	D	A	
Approach Delay		20.4	32.0			23.5	
Approach LOS		C	C			C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 55 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy

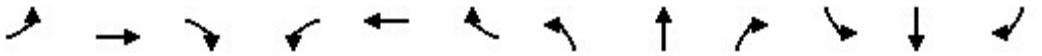




Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	185	2120	696	190	103	65
v/c Ratio	0.22	0.69	0.39	0.21	0.11	0.09
Control Delay	11.4	21.1	36.2	16.7	38.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	21.1	36.2	16.7	38.2	0.2
Queue Length 50th (ft)	35	489	354	90	36	0
Queue Length 95th (ft)	41	434	412	m174	67	0
Internal Link Dist (ft)		368	214			523
Turn Bay Length (ft)	165				200	
Base Capacity (vph)	853	3525	2099	1016	900	742
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.60	0.33	0.19	0.11	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1950	0	0	640	175	0	0	0	95	0	60
Future Volume (veh/h)	170	1950	0	0	640	175	0	0	0	95	0	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	2120	0	0	696	190	0	0	0	103	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	638	2688	0	0	1625	725	48	749	634	1479	0	634
Arrive On Green	0.04	0.53	0.00	0.00	0.46	0.46	0.00	0.00	0.00	0.40	0.00	0.40
Sat Flow, veh/h	3456	5274	0	0	3647	1585	1337	1870	1585	3456	0	1585
Grp Volume(v), veh/h	185	2120	0	0	696	190	0	0	0	103	0	65
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1777	1585	1337	1870	1585	1728	0	1585
Q Serve(g_s), s	4.1	50.4	0.0	0.0	19.8	11.1	0.0	0.0	0.0	2.8	0.0	3.8
Cycle Q Clear(g_c), s	4.1	50.4	0.0	0.0	19.8	11.1	0.0	0.0	0.0	2.8	0.0	3.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	638	2688	0	0	1625	725	48	749	634	1479	0	634
V/C Ratio(X)	0.29	0.79	0.00	0.00	0.43	0.26	0.00	0.00	0.00	0.07	0.00	0.10
Avail Cap(c_a), veh/h	745	3540	0	0	2109	940	48	749	634	1479	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	28.8	0.0	0.0	27.5	25.1	0.0	0.0	0.0	27.8	0.0	28.1
Incr Delay (d2), s/veh	0.2	0.9	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	27.1	0.0	0.0	13.0	7.5	0.0	0.0	0.0	2.1	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	29.7	0.0	0.0	27.6	25.3	0.0	0.0	0.0	27.9	0.0	28.5
LnGrp LOS	C	C	A	A	C	C	A	A	A	C	A	C
Approach Vol, veh/h		2305			886			0			168	
Approach Delay, s/veh		29.0			27.1			0.0			28.1	
Approach LOS		C			C						C	

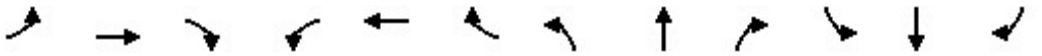
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		65.0	10.4	74.6		65.0		85.0				
Change Period (Y+Rc), s		* 5	4.0	6.0		5.0		6.0				
Max Green Setting (Gmax), s		* 36	11.0	89.0		35.0		104.0				
Max Q Clear Time (g_c+I1), s		5.8	6.1	21.8		0.0		52.4				
Green Ext Time (p_c), s		0.7	0.2	5.7		0.0		26.5				

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



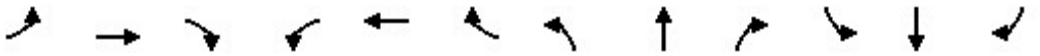
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	425		375	500		600	460		0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			335			224			217			160
Link Speed (mph)		45			40			50			45	
Link Distance (ft)		383			1343			980			2369	
Travel Time (s)		5.8			22.9			13.4			35.9	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1115	745	145	505	255	285	1595	200	360	1415	110
Future Volume (vph)	190	1115	745	145	505	255	285	1595	200	360	1415	110
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			4			6			Free
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	25.0	25.0	3.0	25.0	
Minimum Split (s)	7.0	31.0		7.0	31.0	31.0	7.0	32.0	32.0	7.0	32.0	
Total Split (s)	31.0	44.0		18.0	31.0	31.0	20.0	69.0	69.0	19.0	68.0	
Total Split (%)	20.7%	29.3%		12.0%	20.7%	20.7%	13.3%	46.0%	46.0%	12.7%	45.3%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	14.4	38.0	150.0	14.0	37.6	37.6	15.7	62.0	62.0	15.0	61.3	150.0
Actuated g/C Ratio	0.10	0.25	1.00	0.09	0.25	0.25	0.10	0.41	0.41	0.10	0.41	1.00
v/c Ratio	0.63	1.35	0.51	0.96	0.62	0.49	0.86	1.19	0.28	1.14	1.06	0.08
Control Delay	57.5	216.4	3.7	108.9	40.8	14.1	88.7	130.1	4.2	156.4	76.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	216.4	3.7	108.9	40.8	14.1	88.7	130.1	4.2	156.4	76.2	0.1
LOS	E	F	A	F	D	B	F	F	A	F	E	A
Approach Delay		124.3			44.2			112.4			87.0	
Approach LOS		F			D			F			F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 112 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 100.1	Intersection LOS: F
Intersection Capacity Utilization 110.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S. Santa Fe Dr. (US 85) & W. Mineral Ave.



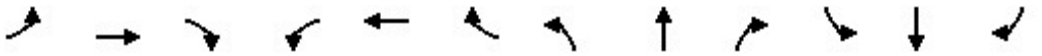
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1212	810	158	549	277	310	1734	217	391	1538	120
v/c Ratio	0.63	1.35	0.51	0.96	0.62	0.49	0.86	1.19	0.28	1.14	1.06	0.08
Control Delay	57.5	216.4	3.7	108.9	40.8	14.1	88.7	130.1	4.2	156.4	76.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	216.4	3.7	108.9	40.8	14.1	88.7	130.1	4.2	156.4	76.2	0.1
Queue Length 50th (ft)	103	~836	90	132	262	132	156	~1070	0	~236	~875	0
Queue Length 95th (ft)	144	#980	137	#297	337	167	#234	#1208	51	#347	#1007	m0
Internal Link Dist (ft)		303			1263			900			2289	
Turn Bay Length (ft)	150			425		375	500		600	460		
Base Capacity (vph)	617	896	1583	165	887	564	366	1462	781	343	1446	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	1.35	0.51	0.96	0.62	0.49	0.85	1.19	0.28	1.14	1.06	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



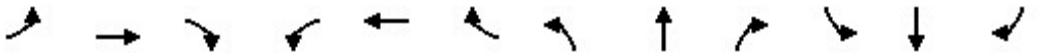
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1115	745	145	505	255	285	1595	200	360	1415	110
Future Volume (veh/h)	190	1115	745	145	505	255	285	1595	200	360	1415	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	1212	0	158	549	277	310	1734	217	391	1538	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	900		166	960	428	354	1469	655	346	1460	
Arrive On Green	0.03	0.08	0.00	0.03	0.09	0.09	0.10	0.41	0.41	0.20	0.82	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	207	1212	0	158	549	277	310	1734	217	391	1538	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.9	38.0	0.0	13.3	22.2	25.3	13.3	62.0	14.0	15.0	61.6	0.0
Cycle Q Clear(g_c), s	8.9	38.0	0.0	13.3	22.2	25.3	13.3	62.0	14.0	15.0	61.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	900		166	960	428	354	1469	655	346	1460	
V/C Ratio(X)	0.78	1.35		0.95	0.57	0.65	0.88	1.18	0.33	1.13	1.05	
Avail Cap(c_a), veh/h	622	900		166	960	428	369	1469	655	346	1460	
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	0.92	0.92	0.92	1.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	71.9	68.7	0.0	72.3	60.0	61.4	66.4	44.0	29.9	60.0	13.4	0.0
Incr Delay (d2), s/veh	5.0	163.2	0.0	52.5	0.8	3.1	19.9	88.6	1.4	81.3	35.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	57.1	0.0	13.5	15.9	16.4	10.9	61.5	9.3	14.5	17.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	232.0	0.0	124.8	60.8	64.5	86.3	132.6	31.3	141.3	48.5	0.0
LnGrp LOS	E	F		F	E	E	F	F	C	F	F	
Approach Vol, veh/h		1419	A		984			2261			1929	A
Approach Delay, s/veh		209.3			72.1			116.5			67.3	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	68.6	15.5	46.5	19.0	69.0	18.0	44.0
Change Period (Y+Rc), s	4.0	7.0	4.0	6.0	4.0	7.0	4.0	6.0
Max Green Setting (Gmax), s	16.0	61.0	27.0	25.0	15.0	62.0	14.0	38.0
Max Q Clear Time (g_c+I1), s	15.3	63.6	10.9	27.3	17.0	64.0	15.3	40.0
Green Ext Time (p_c), s	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	115.5
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



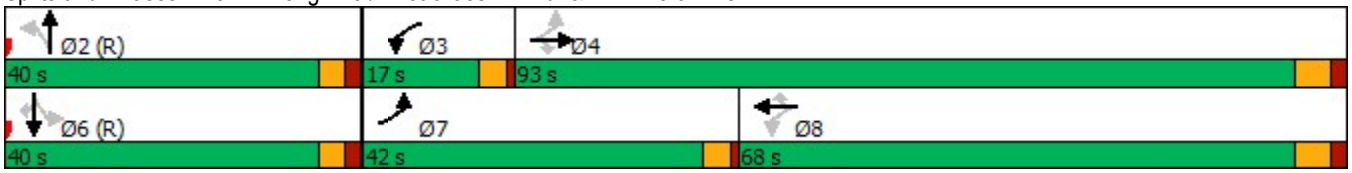
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.960				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1788	0	1770	1863	1583
Flt Permitted	0.292			0.089			0.750			0.704		
Satd. Flow (perm)	544	3539	1583	166	3539	1583	1397	1788	0	1311	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44			234		11				239
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1343			1230			1150			1120	
Travel Time (s)		22.9			21.0			26.1			25.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	295	1365	15	5	585	215	100	55	200	10	220
Future Volume (vph)	295	1365	15	5	585	215	100	55	200	10	220
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	3.0	25.0	25.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	8.0	31.0	31.0	8.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	42.0	93.0	93.0	17.0	68.0	68.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	28.0%	62.0%	62.0%	11.3%	45.3%	45.3%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?		Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	82.8	78.8	78.8	64.6	56.9	56.9	58.2	58.2	58.2	58.2	58.2
Actuated g/C Ratio	0.55	0.53	0.53	0.43	0.38	0.38	0.39	0.39	0.39	0.39	0.39
v/c Ratio	0.69	0.80	0.02	0.04	0.47	0.31	0.20	0.12	0.43	0.02	0.31
Control Delay	40.2	56.9	11.5	13.4	35.9	3.9	34.9	29.2	39.8	34.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	56.9	11.5	13.4	35.9	3.9	34.9	29.2	39.8	34.1	5.5
LOS	D	E	B	B	D	A	C	C	D	C	A
Approach Delay		53.5			27.2			32.5		22.1	
Approach LOS		D			C			C		C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 41.1	Intersection LOS: D
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

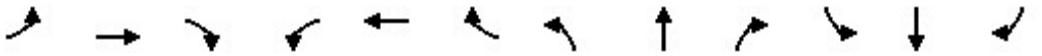
Splits and Phases: 3: W. Long Ave./W. Jackass Hill Rd. & W. Mineral Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	321	1484	16	5	636	234	109	82	217	11	239
v/c Ratio	0.69	0.80	0.02	0.04	0.47	0.31	0.20	0.12	0.43	0.02	0.31
Control Delay	40.2	56.9	11.5	13.4	35.9	3.9	34.9	29.2	39.8	34.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	56.9	11.5	13.4	35.9	3.9	34.9	29.2	39.8	34.1	5.5
Queue Length 50th (ft)	318	798	0	2	251	0	70	44	153	7	0
Queue Length 95th (ft)	m255	m641	m0	7	257	47	141	98	277	25	67
Internal Link Dist (ft)		1263			1150			1070		1040	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	610	2052	936	218	1503	807	542	700	508	722	760
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.72	0.02	0.02	0.42	0.29	0.20	0.12	0.43	0.02	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	1365	15	5	585	215	100	55	20	200	10	220
Future Volume (veh/h)	295	1365	15	5	585	215	100	55	20	200	10	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	321	1484	16	5	636	234	109	60	22	217	11	239
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	1735	774	89	1302	581	505	533	195	548	763	647
Arrive On Green	0.08	0.33	0.33	0.00	0.37	0.37	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1130	1306	479	1316	1870	1585
Grp Volume(v), veh/h	321	1484	16	5	636	234	109	0	82	217	11	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1130	0	1784	1316	1870	1585
Q Serve(g_s), s	15.9	58.5	1.0	0.3	20.7	16.5	9.5	0.0	4.3	18.4	0.5	15.8
Cycle Q Clear(g_c), s	15.9	58.5	1.0	0.3	20.7	16.5	10.1	0.0	4.3	22.6	0.5	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	417	1735	774	89	1302	581	505	0	728	548	763	647
V/C Ratio(X)	0.77	0.86	0.02	0.06	0.49	0.40	0.22	0.00	0.11	0.40	0.01	0.37
Avail Cap(c_a), veh/h	645	2061	919	237	1469	655	505	0	728	548	763	647
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	45.5	26.2	35.3	36.7	35.3	29.4	0.0	27.5	34.6	26.4	30.9
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.3	0.3	0.5	1.0	0.0	0.3	2.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	29.2	0.7	0.2	13.9	10.5	5.0	0.0	3.5	10.4	0.4	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	45.8	26.2	35.6	37.0	35.8	30.4	0.0	27.9	36.7	26.5	32.6
LnGrp LOS	C	D	C	D	D	D	C	A	C	D	C	C
Approach Vol, veh/h		1821			875			191			467	
Approach Delay, s/veh		42.4			36.6			29.3			34.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		66.2	4.6	79.2		66.2	22.8	61.0				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0	4.0	6.0				
Max Green Setting (Gmax), s		35.0	13.0	87.0		35.0	38.0	62.0				
Max Q Clear Time (g_c+I1), s		12.1	2.3	60.5		24.6	17.9	22.7				
Green Ext Time (p_c), s		0.8	0.0	12.7		1.2	0.9	5.5				

Intersection Summary												
HCM 6th Ctrl Delay			39.0									
HCM 6th LOS			D									

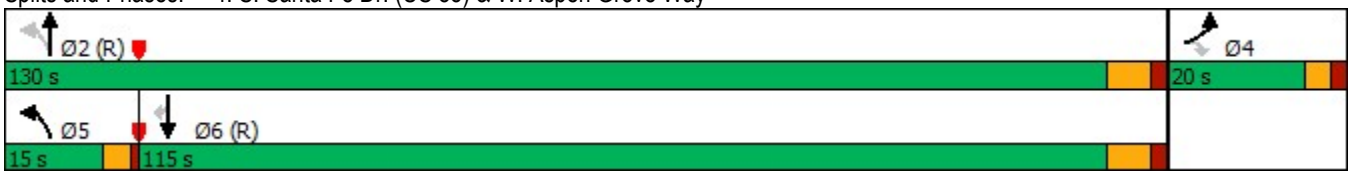
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.076			
Satd. Flow (perm)	3433	1583	142	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		98				76
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			2369	1740	
Travel Time (s)	42.0			35.9	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	95	90	30	2010	1795	70
Future Volume (vph)	95	90	30	2010	1795	70
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	20.0	20.0	15.0	130.0	115.0	115.0
Total Split (%)	13.3%	13.3%	10.0%	86.7%	76.7%	76.7%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.9	9.9	131.1	128.1	120.2	120.2
Actuated g/C Ratio	0.07	0.07	0.87	0.85	0.80	0.80
v/c Ratio	0.46	0.50	0.18	0.72	0.69	0.06
Control Delay	73.6	20.6	2.7	16.6	8.8	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	20.6	2.7	16.6	8.8	0.9
LOS	E	C	A	B	A	A
Approach Delay	47.7			16.4	8.5	
Approach LOS	D			B	A	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	103	98	33	2185	1951	76
v/c Ratio	0.46	0.50	0.18	0.72	0.69	0.06
Control Delay	73.6	20.6	2.7	16.6	8.8	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	20.6	2.7	16.6	8.8	0.9
Queue Length 50th (ft)	51	0	6	585	408	0
Queue Length 95th (ft)	82	59	m7	m409	531	11
Internal Link Dist (ft)	1460			2289	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	343	246	243	3022	2835	1283
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.40	0.14	0.72	0.69	0.06

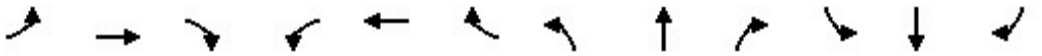
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	90	30	2010	1795	70
Future Volume (veh/h)	95	90	30	2010	1795	70
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	98	33	2185	1951	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	262	120	193	3000	2852	1272
Arrive On Green	0.08	0.08	0.03	1.00	0.80	0.80
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	103	98	33	2185	1951	76
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.3	9.1	0.5	0.0	36.0	1.5
Cycle Q Clear(g_c), s	4.3	9.1	0.5	0.0	36.0	1.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	262	120	193	3000	2852	1272
V/C Ratio(X)	0.39	0.82	0.17	0.73	0.68	0.06
Avail Cap(c_a), veh/h	346	159	297	3000	2852	1272
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	66.0	68.3	7.8	0.0	6.5	3.1
Incr Delay (d2), s/veh	1.0	21.3	0.0	0.1	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	13.4	0.5	0.1	15.3	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	67.0	89.6	7.8	0.1	7.8	3.2
LnGrp LOS	E	F	A	A	A	A
Approach Vol, veh/h	201			2218	2027	
Approach Delay, s/veh	78.0			0.3	7.7	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		133.6		16.4	6.2	127.4
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		123.0		15.0	11.0	108.0
Max Q Clear Time (g_c+I1), s		2.0		11.1	2.5	38.0
Green Ext Time (p_c), s		44.0		0.2	0.0	28.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A



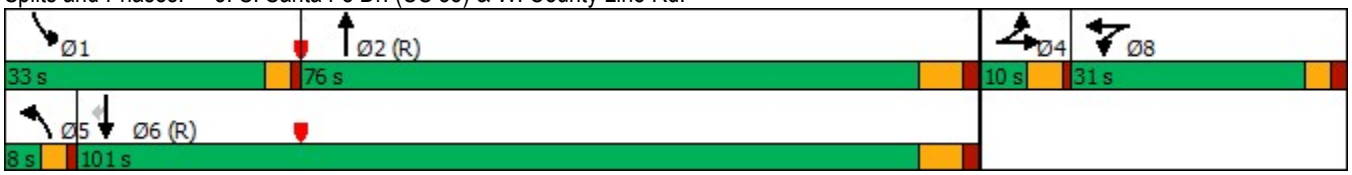
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						375			160			80
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	20	20	135	5	345	1715	350	375	785	25	
Future Volume (vph)	20	20	135	5	345	1715	350	375	785	25	
Turn Type	Split	NA	Split	NA	Free	NA	Free	Prot	NA	Perm	
Protected Phases	4	4	8	8		2		1	6		5
Permitted Phases					Free		Free			6	
Detector Phase	4	4	8	8		2		1	6	6	
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
Minimum Split (s)	10.0	10.0	31.0	31.0		12.0		8.0	33.0	33.0	8.0
Total Split (s)	10.0	10.0	31.0	31.0		76.0		33.0	101.0	101.0	8.0
Total Split (%)	6.7%	6.7%	20.7%	20.7%		50.7%		22.0%	67.3%	67.3%	5%
Yellow Time (s)	4.0	4.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0		2.0		1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0		7.0		4.0	7.0	7.0	
Lead/Lag						Lag		Lead	Lag	Lag	Lead
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None		C-Max		None	C-Max	C-Max	None
Act Effct Green (s)	5.0	5.0	11.8	11.8	150.0	69.0	150.0	45.2	118.2	118.2	
Actuated g/C Ratio	0.03	0.03	0.08	0.08	1.00	0.46	1.00	0.30	0.79	0.79	
v/c Ratio	0.37	0.35	0.55	0.03	0.24	1.15	0.24	0.77	0.31	0.02	
Control Delay	88.7	86.7	73.9	62.6	0.4	110.8	0.4	59.2	5.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	88.7	86.7	73.9	62.6	0.4	110.8	0.4	59.2	5.2	0.0	
LOS	F	F	E	E	A	F	A	E	A	A	
Approach Delay		87.7		21.4		92.1			22.2		
Approach LOS		F		C		F			C		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 61.0	Intersection LOS: E
Intersection Capacity Utilization 92.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

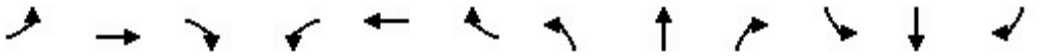


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	22	147	5	375	1864	380	408	853	27
v/c Ratio	0.37	0.35	0.55	0.03	0.24	1.15	0.24	0.77	0.31	0.02
Control Delay	88.7	86.7	73.9	62.6	0.4	110.8	0.4	59.2	5.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.7	86.7	73.9	62.6	0.4	110.8	0.4	59.2	5.2	0.0
Queue Length 50th (ft)	22	22	72	5	0	~1121	0	371	114	0
Queue Length 95th (ft)	54	54	108	19	0	#1256	0	#565	153	0
Internal Link Dist (ft)		1870		2780		2048			660	
Turn Bay Length (ft)	100		250		50		400	600		360
Base Capacity (vph)	59	62	595	322	1583	1627	1583	533	2789	1264
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.35	0.25	0.02	0.24	1.15	0.24	0.77	0.31	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



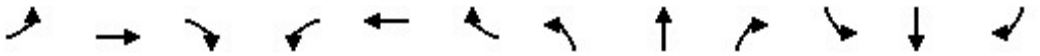
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	0	135	5	345	0	1715	350	375	785	25
Future Volume (veh/h)	20	20	0	135	5	345	0	1715	350	375	785	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	22	0	147	5	0	0	1864	0	408	853	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	40	0	200	108		1	2087		344	2869	1280
Arrive On Green	0.02	0.02	0.00	0.06	0.06	0.00	0.00	0.59	0.00	0.19	0.81	0.81
Sat Flow, veh/h	1781	1870	0	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	22	0	147	5	0	0	1864	0	408	853	27
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.8	1.7	0.0	6.3	0.4	0.0	0.0	68.3	0.0	29.0	9.1	0.5
Cycle Q Clear(g_c), s	1.8	1.7	0.0	6.3	0.4	0.0	0.0	68.3	0.0	29.0	9.1	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	40	0	200	108		1	2087		344	2869	1280
V/C Ratio(X)	0.57	0.55	0.00	0.74	0.05		0.00	0.89		1.18	0.30	0.02
Avail Cap(c_a), veh/h	59	62	0	599	324		48	2087		344	2869	1280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	72.7	0.0	69.5	66.8	0.0	0.0	26.9	0.0	60.5	3.7	2.8
Incr Delay (d2), s/veh	12.8	11.0	0.0	5.2	0.2	0.0	0.0	6.4	0.0	108.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	1.7	0.0	5.2	0.3	0.0	0.0	36.8	0.0	33.8	4.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.5	83.7	0.0	74.7	66.9	0.0	0.0	33.2	0.0	169.2	3.9	2.9
LnGrp LOS	F	F	A	E	E		A	C		F	A	A
Approach Vol, veh/h		44			152	A		1864	A		1288	
Approach Delay, s/veh		84.6			74.5			33.2			56.3	
Approach LOS		F			E			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.0	95.1		8.2	0.0	128.1		13.7				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	29.0	69.0		5.0	4.0	94.0		26.0				
Max Q Clear Time (g_c+I1), s	31.0	70.3		3.8	0.0	11.1		8.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.3		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		44.6	
HCM 6th LOS		D	

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.



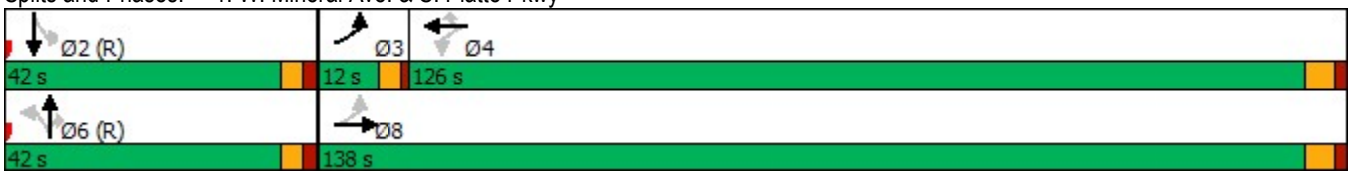
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	220		0	0		100	200		0
Storage Lanes	2		0	1		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	5085	0	1863	3539	1583	1863	1863	1863	3433	1583	0
Flt Permitted	0.032									0.757		
Satd. Flow (perm)	116	5085	0	1863	3539	1583	1863	1863	1863	2736	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						101					79	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			674			603	
Travel Time (s)		6.8			4.5			15.3			13.7	

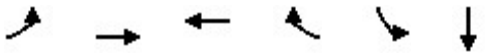
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	Ø6
Lane Configurations							
Traffic Volume (vph)	180	1105	2045	165	410	0	
Future Volume (vph)	180	1105	2045	165	410	0	
Turn Type	pm+pt	NA	NA	Perm	Perm	NA	
Protected Phases	3	8	4			2	6
Permitted Phases	8			4	2		
Detector Phase	3	8	4	4	2	2	
Switch Phase							
Minimum Initial (s)	3.0	25.0	25.0	25.0	3.0	3.0	5.0
Minimum Split (s)	8.0	32.0	31.0	31.0	35.0	35.0	40.0
Total Split (s)	12.0	138.0	126.0	126.0	42.0	42.0	42.0
Total Split (%)	6.7%	76.7%	70.0%	70.0%	23.3%	23.3%	23%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	6.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	134.0	132.0	120.0	120.0	37.0	37.0	
Actuated g/C Ratio	0.74	0.73	0.67	0.67	0.21	0.21	
v/c Ratio	0.84	0.32	0.94	0.16	0.79	0.84	
Control Delay	67.1	8.6	54.4	14.3	79.3	70.9	
Queue Delay	0.0	0.0	45.2	0.0	0.0	0.0	
Total Delay	67.1	8.6	99.6	14.3	79.3	70.9	
LOS	E	A	F	B	E	E	
Approach Delay		16.8	93.3			75.8	
Approach LOS		B	F			E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 55 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 67.0	Intersection LOS: E
Intersection Capacity Utilization 92.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy

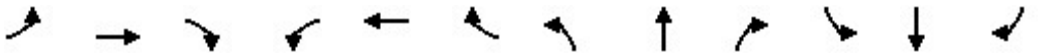




Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	196	1201	2223	179	446	326
v/c Ratio	0.84	0.32	0.94	0.16	0.79	0.84
Control Delay	67.1	8.6	54.4	14.3	79.3	70.9
Queue Delay	0.0	0.0	45.2	0.0	0.0	0.0
Total Delay	67.1	8.6	99.6	14.3	79.3	70.9
Queue Length 50th (ft)	68	168	1214	83	261	292
Queue Length 95th (ft)	#139	188	m1018	m87	330	#458
Internal Link Dist (ft)		368	214			523
Turn Bay Length (ft)	165				200	
Base Capacity (vph)	233	3729	2360	1089	562	388
Starvation Cap Reductn	0	0	786	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.32	1.41	0.16	0.79	0.84

Intersection Summary

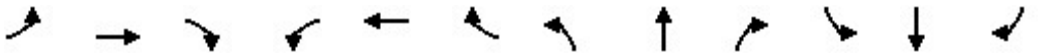
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1105	0	0	2045	165	0	0	0	410	0	300
Future Volume (veh/h)	180	1105	0	0	2045	165	0	0	0	410	0	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1201	0	0	2223	179	0	0	0	446	0	326
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	3653	0	40	2328	1039	40	418	354	852	0	354
Arrive On Green	0.04	0.72	0.00	0.00	0.66	0.66	0.00	0.00	0.00	0.22	0.00	0.22
Sat Flow, veh/h	3456	5274	0	466	3554	1585	1054	1870	1585	3456	0	1585
Grp Volume(v), veh/h	196	1201	0	0	2223	179	0	0	0	446	0	326
Grp Sat Flow(s),veh/h/ln	1728	1702	0	466	1777	1585	1054	1870	1585	1728	0	1585
Q Serve(g_s), s	4.8	15.8	0.0	0.0	103.7	7.9	0.0	0.0	0.0	20.7	0.0	36.2
Cycle Q Clear(g_c), s	4.8	15.8	0.0	0.0	103.7	7.9	0.0	0.0	0.0	20.7	0.0	36.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	3653	0	40	2328	1039	40	418	354	852	0	354
V/C Ratio(X)	0.84	0.33	0.00	0.00	0.95	0.17	0.00	0.00	0.00	0.52	0.00	0.92
Avail Cap(c_a), veh/h	256	3744	0	45	2369	1057	40	418	354	852	0	354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.8	9.5	0.0	0.0	28.6	12.1	0.0	0.0	0.0	62.3	0.0	68.3
Incr Delay (d2), s/veh	20.0	0.1	0.0	0.0	9.9	0.1	0.0	0.0	0.0	2.3	0.0	31.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	9.5	0.0	0.0	54.7	5.0	0.0	0.0	0.0	14.5	0.0	24.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.7	9.6	0.0	0.0	38.5	12.1	0.0	0.0	0.0	64.6	0.0	99.7
LnGrp LOS	E	A	A	A	D	B	A	A	A	E	A	F
Approach Vol, veh/h		1397			2402			0			772	
Approach Delay, s/veh		18.9			36.5			0.0			79.4	
Approach LOS		B			D						E	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		45.2	10.8	123.9		45.2		134.8				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0		6.0				
Max Green Setting (Gmax), s		37.0	8.0	120.0		37.0		132.0				
Max Q Clear Time (g_c+I1), s		38.2	6.8	105.7		0.0		17.8				
Green Ext Time (p_c), s		0.0	0.1	12.3		0.0		10.6				

Intersection Summary												
HCM 6th Ctrl Delay			38.4									
HCM 6th LOS			D									



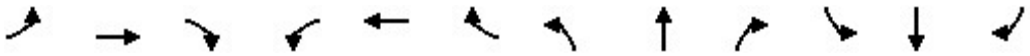
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	425		375	500		600	460		0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			476			114			181			158
Link Speed (mph)		45			40			50			45	
Link Distance (ft)		383			1343			980			2369	
Travel Time (s)		5.8			22.9			13.4			35.9	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	685	780	110	1195	160	535	1535	170	230	1775	410
Future Volume (vph)	115	685	780	110	1195	160	535	1535	170	230	1775	410
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			4			6			Free
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	25.0	25.0	3.0	25.0	
Minimum Split (s)	7.0	31.0		7.0	31.0	31.0	7.0	32.0	32.0	7.0	32.0	
Total Split (s)	14.0	53.0		19.0	58.0	58.0	30.0	85.0	85.0	23.0	78.0	
Total Split (%)	7.8%	29.4%		10.6%	32.2%	32.2%	16.7%	47.2%	47.2%	12.8%	43.3%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?		Yes			Yes	Yes		Yes	Yes		Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	9.7	47.5	180.0	14.5	52.3	52.3	26.0	79.7	79.7	17.3	71.0	180.0
Actuated g/C Ratio	0.05	0.26	1.00	0.08	0.29	0.29	0.14	0.44	0.44	0.10	0.39	1.00
v/c Ratio	0.68	0.80	0.54	0.85	1.26	0.32	1.18	1.06	0.23	0.76	1.38	0.28
Control Delay	102.7	78.4	2.2	101.1	178.5	27.8	161.5	89.2	4.7	94.9	212.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	13.8	0.0	0.0	0.0	0.0	0.2
Total Delay	102.7	78.4	2.2	101.1	178.6	27.8	175.2	89.2	4.7	94.9	212.7	0.3
LOS	F	E	A	F	F	C	F	F	A	F	F	A
Approach Delay		42.6			156.3			103.4			165.4	
Approach LOS		D			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 112 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 120.4	Intersection LOS: F
Intersection Capacity Utilization 118.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S. Santa Fe Dr. (US 85) & W. Mineral Ave.



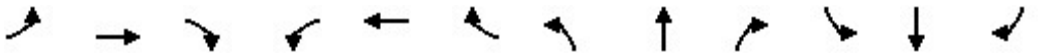
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	125	745	848	120	1299	174	582	1668	185	250	1929	446
v/c Ratio	0.68	0.80	0.54	0.85	1.26	0.32	1.18	1.06	0.23	0.76	1.38	0.28
Control Delay	102.7	78.4	2.2	101.1	178.5	27.8	161.5	89.2	4.7	94.9	212.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	13.8	0.0	0.0	0.0	0.0	0.2
Total Delay	102.7	78.4	2.2	101.1	178.6	27.8	175.2	89.2	4.7	94.9	212.7	0.3
Queue Length 50th (ft)	76	436	78	143	~995	79	~421	~1151	3	160	~1581	0
Queue Length 95th (ft)	m112	516	99	m#178	#1140	m123	#548	#1292	53	m173	#1709	m0
Internal Link Dist (ft)		303			1263			900			2289	
Turn Bay Length (ft)	150			425		375	500		600	460		
Base Capacity (vph)	190	935	1583	147	1027	540	495	1567	801	362	1395	1583
Starvation Cap Reductn	0	2	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	16	0	330	0	0	0	0	414
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.80	0.54	0.82	1.28	0.32	3.53	1.06	0.23	0.69	1.38	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



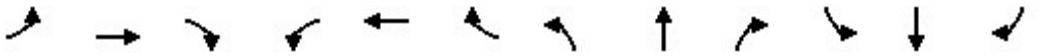
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	685	780	110	1195	160	535	1535	170	230	1775	410
Future Volume (veh/h)	115	685	780	110	1195	160	535	1535	170	230	1775	410
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	745	0	120	1299	174	582	1668	185	250	1929	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	921		137	1027	458	499	1646	734	290	1431	
Arrive On Green	0.02	0.09	0.00	0.15	0.58	0.58	0.14	0.46	0.46	0.11	0.54	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	125	745	0	120	1299	174	582	1668	185	250	1929	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.5	37.1	0.0	11.9	52.0	10.7	26.0	83.4	12.8	12.8	72.5	0.0
Cycle Q Clear(g_c), s	6.5	37.1	0.0	11.9	52.0	10.7	26.0	83.4	12.8	12.8	72.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	921		137	1027	458	499	1646	734	290	1431	
V/C Ratio(X)	0.76	0.81		0.88	1.27	0.38	1.17	1.01	0.25	0.86	1.35	
Avail Cap(c_a), veh/h	192	928		148	1027	458	499	1646	734	365	1431	
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	0.55	0.55	0.55	1.00	1.00	1.00	0.26	0.26	0.00
Uniform Delay (d), s/veh	87.6	77.9	0.0	75.3	38.0	29.3	77.0	48.3	29.4	78.9	41.8	0.0
Incr Delay (d2), s/veh	14.3	5.4	0.0	24.7	123.8	0.3	94.7	25.5	0.8	4.7	157.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	25.6	0.0	8.9	48.9	5.9	26.7	52.3	8.7	7.7	81.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.9	83.3	0.0	100.0	161.8	29.6	171.7	73.8	30.2	83.7	199.6	0.0
LnGrp LOS	F	F		F	F	C	F	F	C	F	F	
Approach Vol, veh/h		870	A		1593			2435			2179	A
Approach Delay, s/veh		86.0			142.7			93.9			186.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	79.5	12.5	58.0	19.1	90.4	17.9	52.7
Change Period (Y+Rc), s	4.0	7.0	4.0	6.0	4.0	7.0	4.0	6.0
Max Green Setting (Gmax), s	26.0	71.0	10.0	52.0	19.0	78.0	15.0	47.0
Max Q Clear Time (g_c+I1), s	28.0	74.5	8.5	54.0	14.8	85.4	13.9	39.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.3	0.0	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	132.4
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



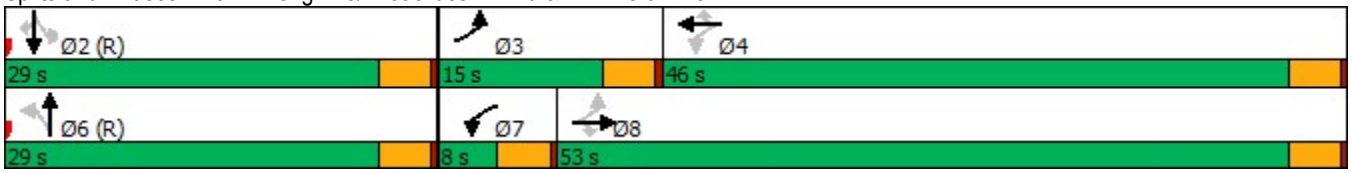
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1805	0	1770	1863	1583
Flt Permitted	0.106			0.337			0.725			0.722		
Satd. Flow (perm)	197	3539	1583	628	3539	1583	1350	1805	0	1345	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61			261		11				185
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		346			459			353			367	
Travel Time (s)		7.9			10.4			8.0			8.3	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	260	770	55	5	1105	240	90	40	205	45	270
Future Volume (vph)	260	770	55	5	1105	240	90	40	205	45	270
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4			6		2	
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	7	4	4	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	15.0	53.0	53.0	8.0	46.0	46.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	16.7%	58.9%	58.9%	8.9%	51.1%	51.1%	32.2%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	54.5	52.9	52.9	43.5	39.5	39.5	27.5	27.5	27.5	27.5	27.5
Actuated g/C Ratio	0.61	0.59	0.59	0.48	0.44	0.44	0.31	0.31	0.31	0.31	0.31
v/c Ratio	0.91	0.40	0.06	0.01	0.77	0.31	0.24	0.10	0.54	0.09	0.48
Control Delay	53.0	10.8	2.6	6.8	25.1	2.9	26.8	20.8	33.1	24.5	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	10.8	2.6	6.8	25.1	2.9	26.8	20.8	33.1	24.5	13.1
LOS	D	B	A	A	C	A	C	C	C	C	B
Approach Delay		20.5			21.1			24.6		22.0	
Approach LOS		C			C			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

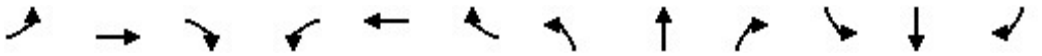
Splits and Phases: 3: W Long Ave/W Jackass Hill Rd & W Mineral Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	283	837	60	5	1201	261	98	54	223	49	293
v/c Ratio	0.91	0.40	0.06	0.01	0.77	0.31	0.24	0.10	0.54	0.09	0.48
Control Delay	53.0	10.8	2.6	6.8	25.1	2.9	26.8	20.8	33.1	24.5	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	10.8	2.6	6.8	25.1	2.9	26.8	20.8	33.1	24.5	13.1
Queue Length 50th (ft)	96	108	0	1	279	0	43	18	110	21	48
Queue Length 95th (ft)	#243	184	17	5	358	40	86	46	186	48	123
Internal Link Dist (ft)		266			379			273		287	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	311	2088	959	354	1651	877	412	558	410	568	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.40	0.06	0.01	0.73	0.30	0.24	0.10	0.54	0.09	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	770	55	5	1105	240	90	40	10	205	45	270
Future Volume (veh/h)	260	770	55	5	1105	240	90	40	10	205	45	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	283	837	60	5	1201	261	98	43	11	223	49	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1831	816	316	1452	648	421	498	127	520	648	549
Arrive On Green	0.11	0.52	0.52	0.01	0.41	0.41	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1039	1437	368	1350	1870	1585
Grp Volume(v), veh/h	283	837	60	5	1201	261	98	0	54	223	49	293
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1039	0	1804	1350	1870	1585
Q Serve(g_s), s	8.0	13.4	1.7	0.1	27.2	10.5	6.3	0.0	1.8	12.0	1.6	13.3
Cycle Q Clear(g_c), s	8.0	13.4	1.7	0.1	27.2	10.5	7.9	0.0	1.8	13.8	1.6	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	318	1831	816	316	1452	648	421	0	625	520	648	549
V/C Ratio(X)	0.89	0.46	0.07	0.02	0.83	0.40	0.23	0.00	0.09	0.43	0.08	0.53
Avail Cap(c_a), veh/h	336	1935	863	386	1658	740	421	0	625	520	648	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	13.8	11.0	15.6	23.8	18.8	22.4	0.0	19.8	24.5	19.7	23.6
Incr Delay (d2), s/veh	23.4	0.2	0.0	0.0	3.2	0.4	1.3	0.0	0.3	2.6	0.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.7	8.8	1.1	0.1	17.0	6.8	3.0	0.0	1.4	7.4	1.3	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	14.0	11.0	15.6	27.0	19.2	23.7	0.0	20.1	27.0	20.0	27.3
LnGrp LOS	D	B	B	B	C	B	C	A	C	C	B	C
Approach Vol, veh/h		1180			1467			152			565	
Approach Delay, s/veh		20.8			25.6			22.4			26.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.2	14.1	40.8		35.2	4.5	50.4				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		25.0	11.0	42.0		25.0	4.0	49.0				
Max Q Clear Time (g_c+I1), s		15.8	10.0	29.2		9.9	2.1	15.4				
Green Ext Time (p_c), s		1.5	0.1	7.6		0.5	0.0	7.2				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

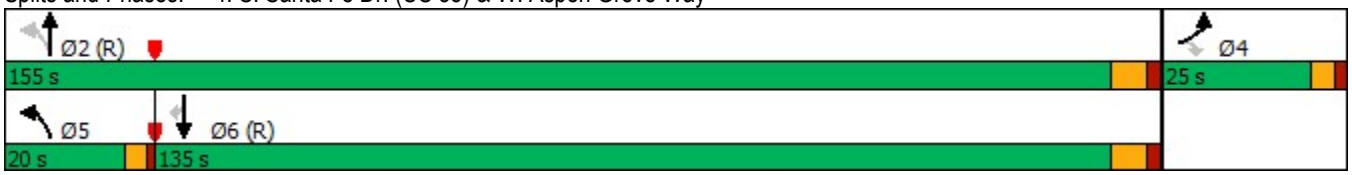
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.029			
Satd. Flow (perm)	3433	1583	54	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		129				271
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			2369	1740	
Travel Time (s)	42.0			35.9	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	125	140	155	1655	2275	260
Future Volume (vph)	125	140	155	1655	2275	260
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	25.0	25.0	20.0	155.0	135.0	135.0
Total Split (%)	13.9%	13.9%	11.1%	86.1%	75.0%	75.0%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	12.7	12.7	158.3	155.3	133.8	133.8
Actuated g/C Ratio	0.07	0.07	0.88	0.86	0.74	0.74
v/c Ratio	0.56	0.66	0.79	0.59	0.94	0.23
Control Delay	89.7	31.4	58.5	6.8	29.2	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.7	31.4	58.5	6.8	29.2	1.4
LOS	F	C	E	A	C	A
Approach Delay	58.9			11.2	26.3	
Approach LOS	E			B	C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 84 (47%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	152	168	1799	2473	283
v/c Ratio	0.56	0.66	0.79	0.59	0.94	0.23
Control Delay	89.7	31.4	58.5	6.8	29.2	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.7	31.4	58.5	6.8	29.2	1.4
Queue Length 50th (ft)	81	26	175	226	1253	4
Queue Length 95th (ft)	119	108	m177	m201	#1668	32
Internal Link Dist (ft)	1460			2289	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	381	290	223	3053	2630	1245
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.52	0.75	0.59	0.94	0.23

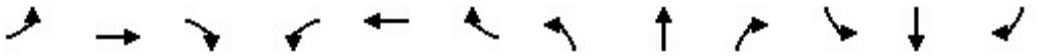
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	125	140	155	1655	2275	260
Future Volume (veh/h)	125	140	155	1655	2275	260
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	152	168	1799	2473	283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	368	169	185	2938	2593	1157
Arrive On Green	0.11	0.11	0.15	1.00	0.73	0.73
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	136	152	168	1799	2473	283
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.6	17.1	11.4	0.0	111.4	10.6
Cycle Q Clear(g_c), s	6.6	17.1	11.4	0.0	111.4	10.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	368	169	185	2938	2593	1157
V/C Ratio(X)	0.37	0.90	0.91	0.61	0.95	0.24
Avail Cap(c_a), veh/h	384	176	210	2938	2593	1157
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.15	0.15	1.00	1.00
Uniform Delay (d), s/veh	74.8	79.5	63.1	0.0	21.6	8.0
Incr Delay (d2), s/veh	0.6	40.1	8.3	0.1	9.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	22.9	9.1	0.1	53.9	6.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	75.4	119.6	71.4	0.1	31.4	8.5
LnGrp LOS	E	F	E	A	C	A
Approach Vol, veh/h	288			1967	2756	
Approach Delay, s/veh	98.7			6.2	29.0	
Approach LOS	F			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		155.8		24.2	17.5	138.3
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		148.0		20.0	16.0	128.0
Max Q Clear Time (g_c+I1), s		2.0		19.1	13.4	113.4
Green Ext Time (p_c), s		26.1		0.1	0.1	13.2

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C



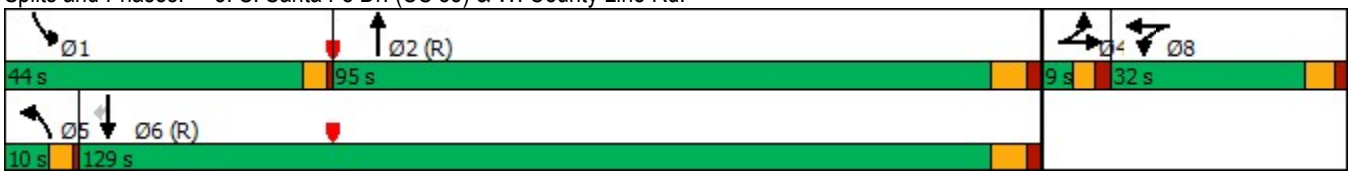
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				454			139			73
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	20	5	390	20	750	20	1470	135	315	990	35
Future Volume (vph)	20	5	390	20	750	20	1470	135	315	990	35
Turn Type	Split	NA	Split	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	4	4	8	8		5	2		1	6	
Permitted Phases					Free			Free			6
Detector Phase	4	4	8	8		5	2		1	6	6
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	8.0	8.0	31.0	31.0		8.0	12.0		8.0	34.0	34.0
Total Split (s)	9.0	9.0	32.0	32.0		10.0	95.0		44.0	129.0	129.0
Total Split (%)	5.0%	5.0%	17.8%	17.8%		5.6%	52.8%		24.4%	71.7%	71.7%
Yellow Time (s)	3.0	3.0	4.0	4.0		3.0	5.0		3.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	6.0	6.0		4.0	7.0		4.0	7.0	7.0
Lead/Lag						Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes
Recall Mode	None	None	None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	4.0	4.0	25.1	25.1	180.0	6.0	93.1	180.0	37.6	128.7	128.7
Actuated g/C Ratio	0.02	0.02	0.14	0.14	1.00	0.03	0.52	1.00	0.21	0.72	0.72
v/c Ratio	0.56	0.23	0.89	0.08	0.51	0.37	0.87	0.09	0.93	0.43	0.03
Control Delay	133.2	72.2	96.6	67.8	1.2	103.0	45.8	0.1	100.4	12.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	133.2	72.2	96.6	67.8	1.2	103.0	45.8	0.1	100.4	12.0	0.1
LOS	F	E	F	E	A	F	D	A	F	B	A
Approach Delay		114.1		34.4			42.7			32.4	
Approach LOS		F		C			D			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 37.6	Intersection LOS: D
Intersection Capacity Utilization 90.0%	ICU Level of Service E
Analysis Period (min) 15	

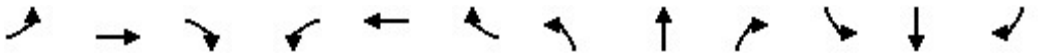
Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	10	424	22	815	22	1598	147	342	1076	38
v/c Ratio	0.56	0.23	0.89	0.08	0.51	0.37	0.87	0.09	0.93	0.43	0.03
Control Delay	133.2	72.2	96.6	67.8	1.2	103.0	45.8	0.1	100.4	12.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	133.2	72.2	96.6	67.8	1.2	103.0	45.8	0.1	100.4	12.0	0.1
Queue Length 50th (ft)	26	6	256	23	0	26	916	0	395	294	0
Queue Length 95th (ft)	#77	30	#340	54	0	61	1032	0	#571	338	1
Internal Link Dist (ft)		1870		2780			2048			660	
Turn Bay Length (ft)	100		250		50	160		400	600		360
Base Capacity (vph)	39	43	495	269	1583	60	1831	1583	393	2530	1152
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.23	0.86	0.08	0.51	0.37	0.87	0.09	0.87	0.43	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	5	390	20	750	20	1470	135	315	990	35
Future Volume (veh/h)	20	5	5	390	20	750	20	1470	135	315	990	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	5	5	424	22	0	22	1598	0	342	1076	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	16	16	464	251		28	1855		361	2520	1124
Arrive On Green	0.02	0.02	0.02	0.13	0.13	0.00	0.02	0.52	0.00	0.20	0.71	0.71
Sat Flow, veh/h	1781	858	858	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	0	10	424	22	0	22	1598	0	342	1076	38
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.2	0.0	1.0	21.8	1.9	0.0	2.2	70.3	0.0	34.1	22.7	1.3
Cycle Q Clear(g_c), s	2.2	0.0	1.0	21.8	1.9	0.0	2.2	70.3	0.0	34.1	22.7	1.3
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	0	32	464	251		28	1855		361	2520	1124
V/C Ratio(X)	0.66	0.00	0.31	0.91	0.09		0.79	0.86		0.95	0.43	0.03
Avail Cap(c_a), veh/h	40	0	38	499	270		59	1855		396	2520	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.8	0.0	87.2	76.9	68.2	0.0	88.3	37.4	0.0	70.8	10.9	7.8
Incr Delay (d2), s/veh	27.3	0.0	5.4	20.4	0.1	0.0	37.6	5.5	0.0	30.7	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	0.9	16.4	1.6	0.0	2.3	39.7	0.0	25.4	13.3	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.0	0.0	92.6	97.3	68.4	0.0	125.9	42.9	0.0	101.5	11.5	7.9
LnGrp LOS	F	A	F	F	E		F	D		F	B	A
Approach Vol, veh/h		32			446	A		1620	A		1456	
Approach Delay, s/veh		108.0			95.8			44.0			32.5	
Approach LOS		F			F			D			C	

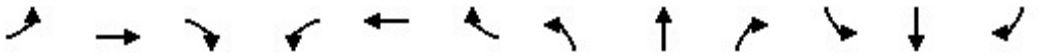
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.5	101.0		8.4	6.8	134.6		30.2				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		6.0				
Max Green Setting (Gmax), s	40.0	88.0		4.0	6.0	122.0		26.0				
Max Q Clear Time (g_c+I1), s	36.1	72.3		4.2	4.2	24.7		23.8				
Green Ext Time (p_c), s	0.4	9.5		0.0	0.0	9.0		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		46.4
HCM 6th LOS		D

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

2025 BACKGROUND TRAFFIC



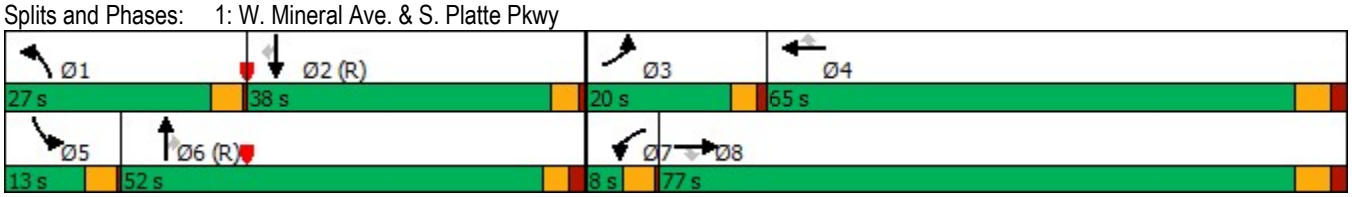
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		300	200		0	150		300	200		0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.986	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	3539	1583	3433	1745	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	1770	3539	1583	3433	1745	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			383			201		4	109			345
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Traffic Volume (vph)	180	1665	395	5	375	185	300	190	190	100	65
Future Volume (vph)	180	1665	395	5	375	185	300	190	190	100	65
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Perm
Protected Phases	3	8		7	4		1	6		5	
Permitted Phases			8			4			6		2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0
Total Split (s)	20.0	77.0	77.0	8.0	65.0	65.0	27.0	52.0	52.0	13.0	38.0
Total Split (%)	13.3%	51.3%	51.3%	5.3%	43.3%	43.3%	18.0%	34.7%	34.7%	8.7%	25.3%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	13.5	70.0	70.0	4.0	54.1	54.1	19.2	54.3	54.3	9.1	45.2
Actuated g/C Ratio	0.09	0.47	0.47	0.03	0.36	0.36	0.13	0.36	0.36	0.06	0.30
v/c Ratio	0.63	0.76	0.45	0.11	0.32	0.29	0.74	0.36	0.30	0.53	0.10
Control Delay	75.0	35.4	4.9	80.2	41.7	10.3	73.5	38.4	17.0	77.7	0.3
Queue Delay	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
Total Delay	75.0	83.2	4.9	80.2	41.7	10.3	73.5	38.4	17.0	80.0	0.3
LOS	E	F	A	F	D	B	E	D	B	F	A
Approach Delay		68.7			31.7			48.5			
Approach LOS		E			C			D			

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 58.3	Intersection LOS: E
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

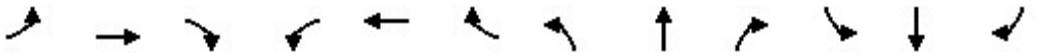
Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	196	1810	429	5	408	201	326	228	186	109	71
v/c Ratio	0.63	0.76	0.45	0.11	0.32	0.29	0.74	0.36	0.30	0.53	0.10
Control Delay	75.0	35.4	4.9	80.2	41.7	10.3	73.5	38.4	17.0	77.7	0.3
Queue Delay	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
Total Delay	75.0	83.2	4.9	80.2	41.7	10.3	73.5	38.4	17.0	80.0	0.3
Queue Length 50th (ft)	96	513	24	5	126	31	160	171	53	54	0
Queue Length 95th (ft)	138	581	93	m16	151	62	210	269	129	88	0
Internal Link Dist (ft)		368			214			369			
Turn Bay Length (ft)	250		300	200			150		300	200	
Base Capacity (vph)	366	2461	964	47	1392	744	526	633	614	215	717
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	837	0	0	0	0	0	0	21	39	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.11	0.45	0.11	0.29	0.27	0.62	0.36	0.31	0.62	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1665	395	5	375	185	300	190	190	100	0	65
Future Volume (veh/h)	180	1665	395	5	375	185	300	190	190	100	0	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1810	0	5	408	201	326	207	207	109	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	2139		9	1254	559	384	758	642	153	639	
Arrive On Green	0.07	0.42	0.00	0.01	0.71	0.71	0.11	0.41	0.41	0.04	0.00	0.00
Sat Flow, veh/h	3456	5106	1585	1781	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	196	1810	0	5	408	201	326	207	207	109	0	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	8.4	47.9	0.0	0.4	6.6	7.5	13.5	11.1	13.4	4.7	0.0	0.0
Cycle Q Clear(g_c), s	8.4	47.9	0.0	0.4	6.6	7.5	13.5	11.1	13.4	4.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	2139		9	1254	559	384	758	642	153	639	
V/C Ratio(X)	0.80	0.85		0.56	0.33	0.36	0.85	0.27	0.32	0.71	0.00	
Avail Cap(c_a), veh/h	369	2417		48	1398	623	546	758	642	207	639	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	68.6	39.2	0.0	74.1	15.3	15.4	65.7	29.8	30.5	70.7	0.0	0.0
Incr Delay (d2), s/veh	7.2	2.7	0.0	45.1	0.1	0.4	8.6	0.9	1.3	7.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	27.1	0.0	0.5	4.2	4.2	10.8	9.1	9.1	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	41.9	0.0	119.2	15.4	15.8	74.3	30.7	31.9	77.7	0.0	0.0
LnGrp LOS	E	D		F	B	B	E	C	C	E	A	
Approach Vol, veh/h		2006	A		614			740			109	A
Approach Delay, s/veh		45.2			16.4			50.2			77.7	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	56.2	14.7	58.9	10.7	65.8	4.8	68.8
Change Period (Y+Rc), s	4.0	* 5	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	23.0	* 34	16.0	59.0	9.0	47.0	4.0	71.0
Max Q Clear Time (g_c+I1), s	15.5	0.0	10.4	9.5	6.7	15.4	2.4	49.9
Green Ext Time (p_c), s	0.7	0.0	0.3	3.3	0.1	2.0	0.0	13.0

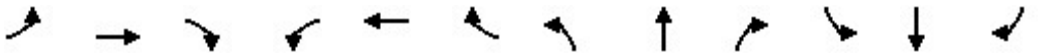
Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



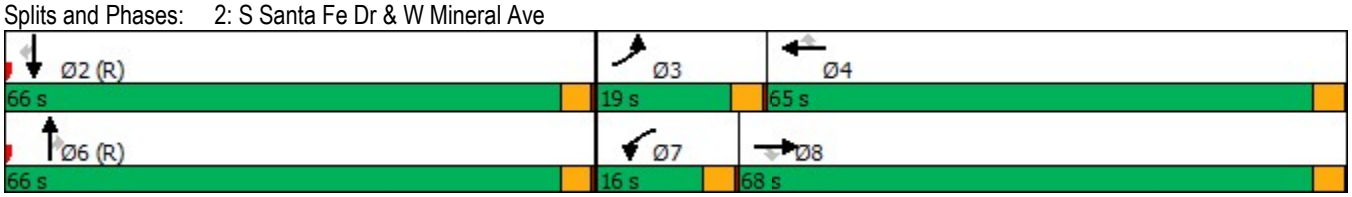
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	220		200	0		300	0		300
Storage Lanes	2		1	1		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950								
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			36			36			161			80
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			305			279			281	
Travel Time (s)		6.7			6.9			6.3			6.4	

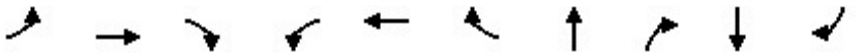
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	200	1555	395	155	535	270	1885	210	2100	115
Future Volume (vph)	200	1555	395	155	535	270	1885	210	2100	115
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4		6		2	
Permitted Phases			8			4		6		2
Detector Phase	3	8	8	7	4	4	6	6	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	19.0	68.0	68.0	16.0	65.0	65.0	66.0	66.0	66.0	66.0
Total Split (%)	12.7%	45.3%	45.3%	10.7%	43.3%	43.3%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.7	64.0	64.0	12.0	62.3	62.3	62.0	62.0	62.0	62.0
Actuated g/C Ratio	0.09	0.43	0.43	0.08	0.42	0.42	0.41	0.41	0.41	0.41
v/c Ratio	0.69	1.12	0.62	1.19	0.40	0.43	0.98	0.30	1.09	0.18
Control Delay	77.9	103.3	35.0	192.3	31.9	29.8	57.7	10.0	89.3	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.9	103.3	35.0	192.3	31.9	29.8	57.7	10.0	89.3	11.5
LOS	E	F	D	F	C	C	E	B	F	B
Approach Delay		88.4			57.2		52.9		85.2	
Approach LOS		F			E		D		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 73.4	Intersection LOS: E
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr & W Mineral Ave



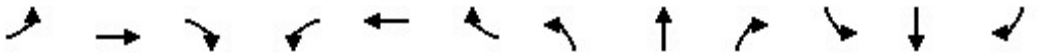


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	217	1690	429	168	582	293	2049	228	2283	125
v/c Ratio	0.69	1.12	0.62	1.19	0.40	0.43	0.98	0.30	1.09	0.18
Control Delay	77.9	103.3	35.0	192.3	31.9	29.8	57.7	10.0	89.3	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.9	103.3	35.0	192.3	31.9	29.8	57.7	10.0	89.3	11.5
Queue Length 50th (ft)	107	~998	297	~197	210	179	715	40	~915	26
Queue Length 95th (ft)	153	#1135	418	#353	263	267	#833	101	#1003	70
Internal Link Dist (ft)		215			225		199		201	
Turn Bay Length (ft)	150			220		200		300		300
Base Capacity (vph)	343	1509	696	141	1469	678	2101	748	2101	701
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	1.12	0.62	1.19	0.40	0.43	0.98	0.30	1.09	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

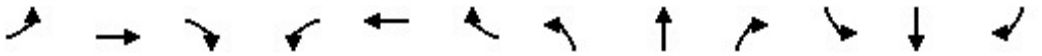
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1555	395	155	535	270	0	1885	210	0	2100	115
Future Volume (veh/h)	200	1555	395	155	535	270	0	1885	210	0	2100	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	217	1690	429	168	582	293	0	2049	228	0	2283	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	0	2	2
Cap, veh/h	265	1516	676	143	1528	681	0	2111	655	0	2111	655
Arrive On Green	0.08	0.43	0.43	0.08	0.43	0.43	0.00	0.41	0.41	0.00	0.41	0.41
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	217	1690	429	168	582	293	0	2049	228	0	2283	125
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	9.3	64.0	31.9	12.0	16.7	19.4	0.0	59.0	14.8	0.0	62.0	7.5
Cycle Q Clear(g_c), s	9.3	64.0	31.9	12.0	16.7	19.4	0.0	59.0	14.8	0.0	62.0	7.5
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	265	1516	676	143	1528	681	0	2111	655	0	2111	655
V/C Ratio(X)	0.82	1.11	0.63	1.18	0.38	0.43	0.00	0.97	0.35	0.00	1.08	0.19
Avail Cap(c_a), veh/h	346	1516	676	143	1528	681	0	2111	655	0	2111	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	43.0	33.8	69.0	29.2	29.9	0.0	43.1	30.2	0.0	44.0	28.0
Incr Delay (d2), s/veh	11.2	61.3	1.9	131.5	0.2	0.4	0.0	13.8	1.5	0.0	45.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	55.4	18.6	17.0	11.7	12.1	0.0	35.9	10.0	0.0	47.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.4	104.3	35.7	200.5	29.3	30.3	0.0	56.9	31.6	0.0	89.8	28.7
LnGrp LOS	E	F	D	F	C	C	A	E	C	A	F	C
Approach Vol, veh/h		2336			1043			2277			2408	
Approach Delay, s/veh		89.4			57.2			54.4			86.7	
Approach LOS		F			E			D			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		66.0	15.5	68.5		66.0	16.0	68.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		62.0	15.0	61.0		62.0	12.0	64.0				
Max Q Clear Time (g_c+I1), s		64.0	11.3	21.4		61.0	14.0	66.0				
Green Ext Time (p_c), s		0.0	0.2	5.7		1.0	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			74.5									
HCM 6th LOS			E									



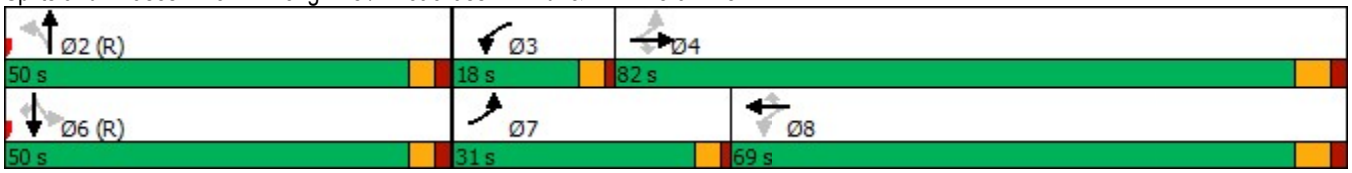
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1792	0	1770	1863	1583
Flt Permitted	0.257			0.072			0.750			0.701		
Satd. Flow (perm)	479	3539	1583	134	3539	1583	1397	1792	0	1306	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44			245		12				250
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1378			1230			1150			1120	
Travel Time (s)		23.5			21.0			26.1			25.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	310	1440	15	5	615	225	105	60	210	10	230
Future Volume (vph)	310	1440	15	5	615	225	105	60	210	10	230
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	3.0	25.0	25.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	8.0	31.0	31.0	8.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	31.0	82.0	82.0	18.0	69.0	69.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	20.7%	54.7%	54.7%	12.0%	46.0%	46.0%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?		Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	79.8	75.8	75.8	59.8	52.1	52.1	61.2	61.2	61.2	61.2	61.2
Actuated g/C Ratio	0.53	0.51	0.51	0.40	0.35	0.35	0.41	0.41	0.41	0.41	0.41
v/c Ratio	0.76	0.88	0.02	0.04	0.54	0.35	0.20	0.12	0.43	0.01	0.32
Control Delay	14.6	31.2	2.9	15.6	40.7	4.5	32.5	27.0	37.4	31.5	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	31.2	2.9	15.6	40.7	4.5	32.5	27.0	37.4	31.5	5.1
LOS	B	C	A	B	D	A	C	C	D	C	A
Approach Delay		28.0			30.9			30.1		20.7	
Approach LOS		C			C			C		C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

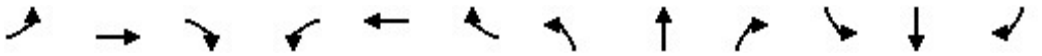
Splits and Phases: 3: W. Long Ave./W. Jackass Hill Rd. & W. Mineral Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	337	1565	16	5	668	245	114	87	228	11	250
v/c Ratio	0.76	0.88	0.02	0.04	0.54	0.35	0.20	0.12	0.43	0.01	0.32
Control Delay	14.6	31.2	2.9	15.6	40.7	4.5	32.5	27.0	37.4	31.5	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	31.2	2.9	15.6	40.7	4.5	32.5	27.0	37.4	31.5	5.1
Queue Length 50th (ft)	206	846	0	2	283	0	70	44	156	6	0
Queue Length 95th (ft)	m155	m712	m0	7	288	51	142	100	285	24	65
Internal Link Dist (ft)		1298			1150			1070		1040	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	486	1836	842	213	1500	811	569	738	532	759	793
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.85	0.02	0.02	0.45	0.30	0.20	0.12	0.43	0.01	0.32

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1440	15	5	615	225	105	60	20	210	10	230
Future Volume (veh/h)	310	1440	15	5	615	225	105	60	20	210	10	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	337	1565	16	5	668	245	114	65	22	228	11	250
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	1738	775	73	1299	580	500	544	184	542	762	645
Arrive On Green	0.04	0.16	0.16	0.00	0.37	0.37	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1118	1337	452	1310	1870	1585
Grp Volume(v), veh/h	337	1565	16	5	668	245	114	0	87	228	11	250
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1118	0	1789	1310	1870	1585
Q Serve(g_s), s	16.4	64.8	1.3	0.3	22.0	17.4	10.2	0.0	4.5	19.7	0.5	16.7
Cycle Q Clear(g_c), s	16.4	64.8	1.3	0.3	22.0	17.4	10.7	0.0	4.5	24.2	0.5	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	408	1738	775	73	1299	580	500	0	728	542	762	645
V/C Ratio(X)	0.83	0.90	0.02	0.07	0.51	0.42	0.23	0.00	0.12	0.42	0.01	0.39
Avail Cap(c_a), veh/h	502	1801	803	233	1493	666	500	0	728	542	762	645
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	59.3	32.7	37.2	37.2	35.7	29.7	0.0	27.7	35.3	26.5	31.3
Incr Delay (d2), s/veh	0.9	0.7	0.0	0.4	0.3	0.5	1.1	0.0	0.3	2.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	33.9	0.8	0.2	14.6	11.0	5.3	0.0	3.7	11.0	0.4	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	60.0	32.7	37.6	37.5	36.2	30.8	0.0	28.0	37.6	26.5	33.0
LnGrp LOS	C	E	C	D	D	D	C	A	C	D	C	C
Approach Vol, veh/h		1918			918			201			489	
Approach Delay, s/veh		54.6			37.1			29.6			35.0	
Approach LOS		D			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		66.1	4.6	79.4		66.1	23.1	60.8				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0	4.0	6.0				
Max Green Setting (Gmax), s		45.0	14.0	76.0		45.0	27.0	63.0				
Max Q Clear Time (g_c+I1), s		12.7	2.3	66.8		26.2	18.4	24.0				
Green Ext Time (p_c), s		1.0	0.0	6.5		1.6	0.7	5.8				

Intersection Summary												
HCM 6th Ctrl Delay			45.9									
HCM 6th LOS			D									

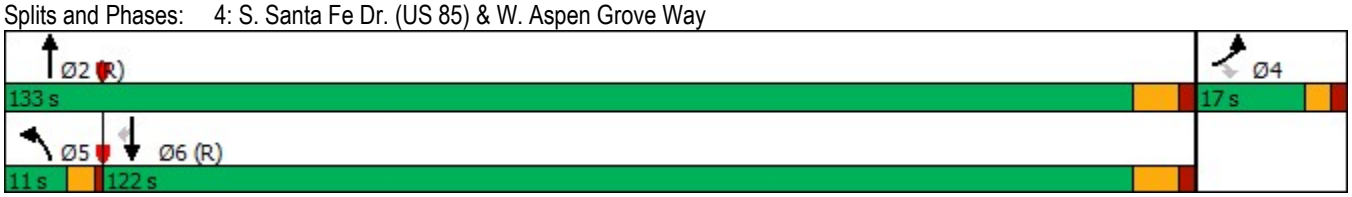
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	225	575			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		80				82
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1254	1740	
Travel Time (s)	42.0			19.0	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	100	95	30	2325	2120	75
Future Volume (vph)	100	95	30	2325	2120	75
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	17.0	17.0	11.0	133.0	122.0	122.0
Total Split (%)	11.3%	11.3%	7.3%	88.7%	81.3%	81.3%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.9	9.9	7.1	128.1	118.9	118.9
Actuated g/C Ratio	0.07	0.07	0.05	0.85	0.79	0.79
v/c Ratio	0.48	0.58	0.40	0.84	0.82	0.06
Control Delay	74.3	33.3	66.2	34.1	13.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	33.3	66.2	34.1	13.5	0.9
LOS	E	C	E	C	B	A
Approach Delay	54.4			34.5	13.1	
Approach LOS	D			C	B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 77.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	109	103	33	2527	2304	82
v/c Ratio	0.48	0.58	0.40	0.84	0.82	0.06
Control Delay	74.3	33.3	66.2	34.1	13.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	33.3	66.2	34.1	13.5	0.9
Queue Length 50th (ft)	54	22	29	1201	683	0
Queue Length 95th (ft)	86	85	m36	m1244	814	12
Internal Link Dist (ft)	1460			1174	1660	
Turn Bay Length (ft)		225	575			425
Base Capacity (vph)	274	200	86	3021	2805	1271
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.52	0.38	0.84	0.82	0.06

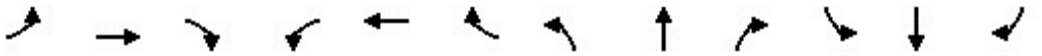
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	95	30	2325	2120	75
Future Volume (veh/h)	100	95	30	2325	2120	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	103	33	2527	2304	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	268	123	42	2994	2814	1255
Arrive On Green	0.08	0.08	0.02	0.84	0.79	0.79
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	109	103	33	2527	2304	82
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.5	9.6	2.8	58.2	57.5	1.7
Cycle Q Clear(g_c), s	4.5	9.6	2.8	58.2	57.5	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	268	123	42	2994	2814	1255
V/C Ratio(X)	0.41	0.84	0.78	0.84	0.82	0.07
Avail Cap(c_a), veh/h	276	127	83	2994	2814	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	68.2	72.8	6.4	9.2	3.4
Incr Delay (d2), s/veh	1.0	35.7	25.8	3.1	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	14.5	2.8	20.8	24.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.9	104.0	98.6	9.6	12.0	3.5
LnGrp LOS	E	F	F	A	B	A
Approach Vol, veh/h	212			2560	2386	
Approach Delay, s/veh	84.9			10.7	11.7	
Approach LOS	F			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		133.4		16.6	7.6	125.8
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		126.0		12.0	7.0	115.0
Max Q Clear Time (g_c+I1), s		60.2		11.6	4.8	59.5
Green Ext Time (p_c), s		45.8		0.0	0.0	34.8

Intersection Summary		
HCM 6th Ctrl Delay		14.2
HCM 6th LOS		B



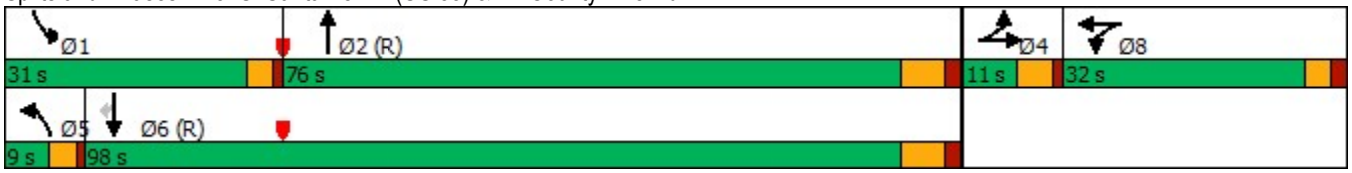
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						397			160			80
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	20	20	140	5	365	2015	370	395	1055	25	
Future Volume (vph)	20	20	140	5	365	2015	370	395	1055	25	
Turn Type	Split	NA	Split	NA	Free	NA	Free	Prot	NA	Perm	
Protected Phases	4	4	8	8		2		1	6		5
Permitted Phases					Free		Free			6	
Detector Phase	4	4	8	8		2		1	6	6	
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
Minimum Split (s)	10.0	10.0	31.0	31.0		12.0		8.0	33.0	33.0	8.0
Total Split (s)	11.0	11.0	32.0	32.0		76.0		31.0	98.0	98.0	9.0
Total Split (%)	7.3%	7.3%	21.3%	21.3%		50.7%		20.7%	65.3%	65.3%	6%
Yellow Time (s)	4.0	4.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0		2.0		1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0		7.0		4.0	7.0	7.0	
Lead/Lag						Lag		Lead	Lag	Lag	Lead
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None		C-Max		None	C-Max	C-Max	None
Act Effct Green (s)	5.9	5.9	12.0	12.0	150.0	69.0	150.0	44.2	117.2	117.2	
Actuated g/C Ratio	0.04	0.04	0.08	0.08	1.00	0.46	1.00	0.29	0.78	0.78	
v/c Ratio	0.32	0.30	0.55	0.03	0.25	1.35	0.25	0.82	0.41	0.02	
Control Delay	82.5	80.9	73.9	62.4	0.4	193.7	0.4	64.3	6.3	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	82.5	80.9	73.9	62.4	0.4	193.7	0.4	64.3	6.3	0.0	
LOS	F	F	E	E	A	F	A	E	A	A	
Approach Delay		81.7		21.1		163.7			21.7		
Approach LOS		F		C		F			C		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 99.0	Intersection LOS: F
Intersection Capacity Utilization 101.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	22	152	5	397	2190	402	429	1147	27
v/c Ratio	0.32	0.30	0.55	0.03	0.25	1.35	0.25	0.82	0.41	0.02
Control Delay	82.5	80.9	73.9	62.4	0.4	193.7	0.4	64.3	6.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.5	80.9	73.9	62.4	0.4	193.7	0.4	64.3	6.3	0.0
Queue Length 50th (ft)	21	21	75	5	0	~1468	0	401	180	0
Queue Length 95th (ft)	53	53	111	19	0	#1597	0	#624	236	0
Internal Link Dist (ft)		1870		2780		2048			660	
Turn Bay Length (ft)	100		250		50		400	600		360
Base Capacity (vph)	70	74	617	335	1583	1627	1583	521	2765	1254
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.30	0.25	0.01	0.25	1.35	0.25	0.82	0.41	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	0	140	5	365	0	2015	370	395	1055	25
Future Volume (veh/h)	20	20	0	140	5	365	0	2015	370	395	1055	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	22	0	152	5	0	0	2190	0	429	1147	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	40	0	205	111		1	2129		321	2863	1277
Arrive On Green	0.02	0.02	0.00	0.06	0.06	0.00	0.00	0.60	0.00	0.18	0.81	0.81
Sat Flow, veh/h	1781	1870	0	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	22	0	152	5	0	0	2190	0	429	1147	27
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.8	1.7	0.0	6.5	0.4	0.0	0.0	89.9	0.0	27.0	13.9	0.5
Cycle Q Clear(g_c), s	1.8	1.7	0.0	6.5	0.4	0.0	0.0	89.9	0.0	27.0	13.9	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	40	0	205	111		1	2129		321	2863	1277
V/C Ratio(X)	0.57	0.55	0.00	0.74	0.04		0.00	1.03		1.34	0.40	0.02
Avail Cap(c_a), veh/h	71	75	0	622	337		59	2129		321	2863	1277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	72.7	0.0	69.4	66.5	0.0	0.0	30.1	0.0	61.5	4.2	2.9
Incr Delay (d2), s/veh	12.7	11.0	0.0	5.2	0.2	0.0	0.0	27.3	0.0	171.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	1.7	0.0	5.4	0.3	0.0	0.0	54.4	0.0	40.8	6.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	83.6	0.0	74.6	66.7	0.0	0.0	57.4	0.0	233.3	4.6	2.9
LnGrp LOS	F	F	A	E	E		A	F		F	A	A
Approach Vol, veh/h		44			157	A		2190	A		1603	
Approach Delay, s/veh		84.5			74.3			57.4			65.8	
Approach LOS		F			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.0	96.9		8.2	0.0	127.9		13.9				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	27.0	69.0		6.0	5.0	91.0		27.0				
Max Q Clear Time (g_c+I1), s	29.0	91.9		3.8	0.0	15.9		8.5				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.8		0.4				

Intersection Summary		
HCM 6th Ctrl Delay	61.7	
HCM 6th LOS	E	

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

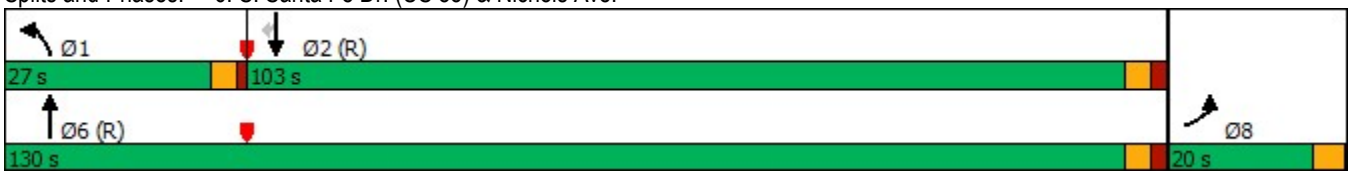
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	3614	1583	3433	3539	5085	1583
Flt Permitted			0.950			
Satd. Flow (perm)	3614	1583	3433	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		315				285
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			827	866	
Travel Time (s)	7.0			11.3	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	395	300	2095	2265	380	
Future Volume (vph)	395	300	2095	2265	380	
Turn Type	Free	Prot	NA	NA	Perm	
Protected Phases		1	6	2		8
Permitted Phases	Free				2	
Detector Phase		1	6	2	2	
Switch Phase						
Minimum Initial (s)		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		8.0	35.0	30.0	30.0	20.0
Total Split (s)		27.0	130.0	103.0	103.0	20.0
Total Split (%)		18.0%	86.7%	68.7%	68.7%	13%
Yellow Time (s)		3.0	3.0	3.0	3.0	3.5
All-Red Time (s)		1.0	2.0	2.0	2.0	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0	5.0	5.0	5.0	
Lead/Lag		Lead		Lag	Lag	
Lead-Lag Optimize?						
Recall Mode		None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	150.0	19.4	150.0	121.6	121.6	
Actuated g/C Ratio	1.00	0.13	1.00	0.81	0.81	
v/c Ratio	0.27	0.73	0.64	0.60	0.31	
Control Delay	0.4	72.7	0.9	3.4	0.4	
Queue Delay	0.0	0.0	0.0	0.2	0.0	
Total Delay	0.4	72.7	0.9	3.6	0.4	
LOS	A	E	A	A	A	
Approach Delay			9.9	3.1		
Approach LOS			A	A		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	429	326	2277	2462	413
v/c Ratio	0.27	0.73	0.64	0.60	0.31
Control Delay	0.4	72.7	0.9	3.4	0.4
Queue Delay	0.0	0.0	0.0	0.2	0.0
Total Delay	0.4	72.7	0.9	3.6	0.4
Queue Length 50th (ft)	0	160	0	105	1
Queue Length 95th (ft)	0	208	0	m83	m0
Internal Link Dist (ft)			747	786	
Turn Bay Length (ft)		200			200
Base Capacity (vph)	1583	531	3539	4120	1336
Starvation Cap Reductn	0	0	0	599	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.61	0.64	0.70	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

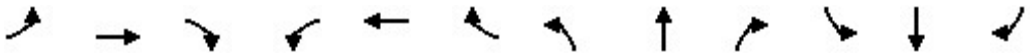
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	395	300	2095	2265	380
Future Volume (veh/h)	0	395	300	2095	2265	380
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	326	2277	2462	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2		381	3435	4237	
Arrive On Green	0.00	0.00	0.11	0.97	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	3647	5274	1585
Grp Volume(v), veh/h	0	0	326	2277	2462	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1777	1702	1585
Q Serve(g_s), s	0.0	0.0	13.9	8.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	13.9	8.9	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	2		381	3435	4237	
V/C Ratio(X)	0.00		0.86	0.66	0.58	
Avail Cap(c_a), veh/h	369		530	3435	4237	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	65.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.7	1.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	10.7	0.9	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.0	75.2	1.3	0.1	0.0
LnGrp LOS	A		E	A	A	
Approach Vol, veh/h	0	A		2603	2462	A
Approach Delay, s/veh	0.0			10.5	0.1	
Approach LOS				B	A	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.5	129.5			150.0	0.0
Change Period (Y+Rc), s	4.0	5.0			5.0	4.0
Max Green Setting (Gmax), s	23.0	98.0			125.0	16.0
Max Q Clear Time (g_c+I1), s	15.9	2.0			10.9	0.0
Green Ext Time (p_c), s	0.6	44.8			46.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



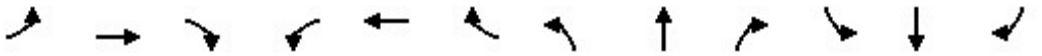
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected										0.950		
Satd. Flow (prot)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	2.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	739	0	429
Demand Flow Rate, veh/h	0	754	0	438
Vehicles Circulating, veh/h	438	0	438	0
Vehicles Exiting, veh/h	0	438	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	5.6
Approach LOS	-	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	T	R	LT	R	T	R	L	TR	R
Assumed Moves	T	R	LT	R	T	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		1.000	0.000	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	0	4.328	754	4.328	0	4.645	4.328	0
Entry Flow, veh/h	0	1380	0	1938	0	1938	438	0	1380
Cap Entry Lane, veh/h	979	0.980	1420	0.980	979	0.980	1350	1420	0.980
Entry HV Adj Factor	1.000	0	1.000	739	1.000	0	0.979	1.000	0
Flow Entry, veh/h	0	1353	0	1900	0	1900	429	0	1353
Cap Entry, veh/h	979	0.000	1420	0.389	979	0.000	1322	1420	0.000
V/C Ratio	0.000	2.7	0.000	0.0	0.000	0.0	0.324	0.000	2.7
Control Delay, s/veh	3.7	A	2.5	A	3.7	A	5.6	2.5	A
LOS	A	0	A	2	A	0	A	A	0
95th %tile Queue, veh	0		0		0		1	0	



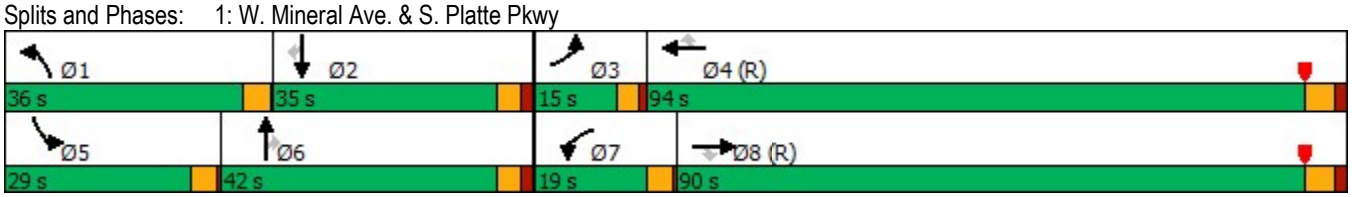
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	200		0	150		300	400		325
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.985	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	3539	1583	3433	1743	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	1770	3539	1583	3433	1743	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			446			90		3	122			105
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Traffic Volume (vph)	190	755	410	70	1595	175	565	120	125	435	315
Future Volume (vph)	190	755	410	70	1595	175	565	120	125	435	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	Perm
Protected Phases	3	8		7	4		1	6		5	
Permitted Phases			8			4			6		2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0
Total Split (s)	15.0	90.0	90.0	19.0	94.0	94.0	36.0	42.0	42.0	29.0	35.0
Total Split (%)	8.3%	50.0%	50.0%	10.6%	52.2%	52.2%	20.0%	23.3%	23.3%	16.1%	19.4%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max
Act Effct Green (s)	11.0	86.5	86.5	12.5	88.0	88.0	32.0	37.0	37.0	25.0	30.0
Actuated g/C Ratio	0.06	0.48	0.48	0.07	0.49	0.49	0.18	0.21	0.21	0.14	0.17
v/c Ratio	0.99	0.34	0.45	0.62	1.00	0.23	1.01	0.40	0.30	0.99	0.97
Control Delay	141.2	29.7	3.6	108.2	57.4	10.5	109.8	64.4	10.5	115.2	91.9
Queue Delay	0.0	0.1	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.2	29.8	3.6	108.2	93.8	10.5	109.8	64.4	10.6	115.2	91.9
LOS	F	C	A	F	F	B	F	E	B	F	F
Approach Delay		37.5			86.4			88.6			
Approach LOS		D			F			F			

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 4:WBT and 8:EBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 75.8	Intersection LOS: E
Intersection Capacity Utilization 92.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy



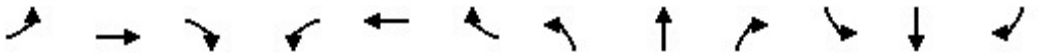
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group Flow (vph)	207	821	446	76	1734	190	614	144	122	473	342
v/c Ratio	0.99	0.34	0.45	0.62	1.00	0.23	1.01	0.40	0.30	0.99	0.97
Control Delay	141.2	29.7	3.6	108.2	57.4	10.5	109.8	64.4	10.5	115.2	91.9
Queue Delay	0.0	0.1	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.2	29.8	3.6	108.2	93.8	10.5	109.8	64.4	10.6	115.2	91.9
Queue Length 50th (ft)	128	219	0	90	~993	41	~382	153	0	292	297
Queue Length 95th (ft)	#223	260	63	m134	m#1183	m70	#518	234	64	#418	#515
Internal Link Dist (ft)		368			214			369			
Turn Bay Length (ft)	250			200			150		300	400	325
Base Capacity (vph)	209	2444	992	147	1730	819	610	360	406	476	351
Starvation Cap Reductn	0	0	0	0	276	0	0	0	0	0	0
Spillback Cap Reductn	0	553	0	0	0	0	0	0	12	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.43	0.45	0.52	1.19	0.23	1.01	0.40	0.31	0.99	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	755	410	70	1595	175	565	120	125	435	0	315
Future Volume (veh/h)	190	755	410	70	1595	175	565	120	125	435	0	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	821	0	76	1734	190	614	134	133	473	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	2543		93	1737	775	633	384	326	480	312	
Arrive On Green	0.06	0.50	0.00	0.10	0.98	0.98	0.18	0.21	0.21	0.14	0.00	0.00
Sat Flow, veh/h	3456	5106	1585	1781	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	207	821	0	76	1734	190	614	134	133	473	0	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	10.8	17.3	0.0	7.5	80.9	0.6	30.8	11.0	13.1	24.6	0.0	0.0
Cycle Q Clear(g_c), s	10.8	17.3	0.0	7.5	80.9	0.6	30.8	11.0	13.1	24.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	2543		93	1737	775	633	384	326	480	312	
V/C Ratio(X)	0.98	0.32		0.82	1.00	0.25	0.97	0.35	0.41	0.99	0.00	
Avail Cap(c_a), veh/h	211	2543		148	1737	775	633	384	326	480	312	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.4	27.0	0.0	79.8	1.9	1.0	73.5	61.2	62.0	77.3	0.0	0.0
Incr Delay (d2), s/veh	56.1	0.3	0.0	17.2	21.1	0.8	28.2	2.5	3.8	37.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.6	11.5	0.0	6.7	9.9	0.6	23.3	9.5	9.5	19.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.5	27.4	0.0	97.0	23.1	1.8	101.7	63.7	65.8	114.5	0.0	0.0
LnGrp LOS	F	C		F	C	A	F	E	E	F	A	
Approach Vol, veh/h		1028	A		2000			881			473	A
Approach Delay, s/veh		50.1			23.8			90.5			114.5	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.0	35.0	15.0	94.0	29.0	42.0	13.4	95.6
Change Period (Y+Rc), s	4.0	5.0	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	32.0	30.0	11.0	88.0	25.0	37.0	15.0	84.0
Max Q Clear Time (g_c+I1), s	32.8	0.0	12.8	82.9	26.6	15.1	9.5	19.3
Green Ext Time (p_c), s	0.0	0.0	0.0	4.2	0.0	1.1	0.1	6.1

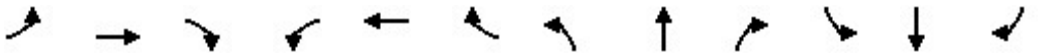
Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



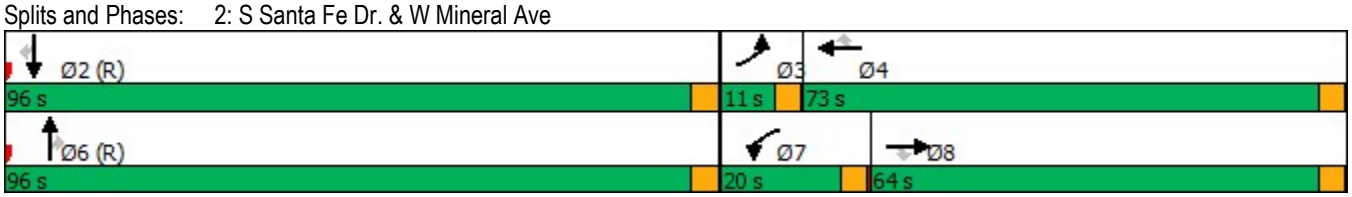
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	200		200	0		300	0		300
Storage Lanes	2		1	1		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950								
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55			30			142			113
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		204			242			239			260	
Travel Time (s)		4.6			5.5			5.4			5.9	

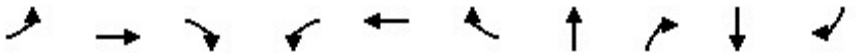
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	120	965	410	115	1260	170	1840	180	2375	435
Future Volume (vph)	120	965	410	115	1260	170	1840	180	2375	435
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4		6		2	
Permitted Phases			8			4		6		2
Detector Phase	3	8	8	7	4	4	6	6	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	64.0	64.0	20.0	73.0	73.0	96.0	96.0	96.0	96.0
Total Split (%)	6.1%	35.6%	35.6%	11.1%	40.6%	40.6%	53.3%	53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.0	60.7	60.7	15.3	69.0	69.0	92.0	92.0	92.0	92.0
Actuated g/C Ratio	0.04	0.34	0.34	0.08	0.38	0.38	0.51	0.51	0.51	0.51
v/c Ratio	0.98	0.88	0.78	0.83	1.01	0.30	0.77	0.22	0.99	0.55
Control Delay	154.9	65.8	58.0	119.4	81.0	33.5	38.0	7.6	59.3	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	154.9	65.8	58.0	119.4	81.0	33.5	38.0	7.6	59.3	24.7
LOS	F	E	E	F	F	C	D	A	E	C
Approach Delay		70.8			78.6		35.3		53.9	
Approach LOS		E			E		D		D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 57.2	Intersection LOS: E
Intersection Capacity Utilization 94.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr. & W Mineral Ave



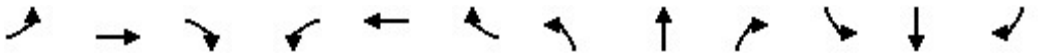


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	130	1049	446	125	1370	185	2000	196	2582	473
v/c Ratio	0.98	0.88	0.78	0.83	1.01	0.30	0.77	0.22	0.99	0.55
Control Delay	154.9	65.8	58.0	119.4	81.0	33.5	38.0	7.6	59.3	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	154.9	65.8	58.0	119.4	81.0	33.5	38.0	7.6	59.3	24.7
Queue Length 50th (ft)	80	621	428	148	~872	127	687	32	1094	286
Queue Length 95th (ft)	#159	717	581	#262	#1028	196	743	80	#1218	399
Internal Link Dist (ft)		124			162		159		180	
Turn Bay Length (ft)	100			200		200		300		300
Base Capacity (vph)	133	1193	570	157	1356	625	2599	878	2599	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.88	0.78	0.80	1.01	0.30	0.77	0.22	0.99	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	965	410	115	1260	170	0	1840	180	0	2375	435
Future Volume (veh/h)	120	965	410	115	1260	170	0	1840	180	0	2375	435
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	130	1049	446	125	1370	185	0	2000	196	0	2582	473
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	0	2	2
Cap, veh/h	134	1214	542	144	1362	608	0	2610	810	0	2610	810
Arrive On Green	0.04	0.34	0.34	0.08	0.38	0.38	0.00	0.51	0.51	0.00	0.51	0.51
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	130	1049	446	125	1370	185	0	2000	196	0	2582	473
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	6.8	49.6	46.4	12.5	69.0	14.7	0.0	56.7	12.4	0.0	90.0	37.4
Cycle Q Clear(g_c), s	6.8	49.6	46.4	12.5	69.0	14.7	0.0	56.7	12.4	0.0	90.0	37.4
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	134	1214	542	144	1362	608	0	2610	810	0	2610	810
V/C Ratio(X)	0.97	0.86	0.82	0.87	1.01	0.30	0.00	0.77	0.24	0.00	0.99	0.58
Avail Cap(c_a), veh/h	134	1214	542	158	1362	608	0	2610	810	0	2610	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	86.4	55.3	54.3	81.8	55.5	38.7	0.0	35.4	24.5	0.0	43.5	30.7
Incr Delay (d2), s/veh	67.4	6.7	10.0	35.3	25.8	0.3	0.0	2.2	0.7	0.0	15.3	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	31.4	27.5	11.6	45.7	9.9	0.0	32.2	8.6	0.0	51.7	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.8	62.0	64.3	117.1	81.3	39.0	0.0	37.6	25.3	0.0	58.8	33.7
LnGrp LOS	F	E	E	F	F	D	A	D	C	A	E	C
Approach Vol, veh/h		1625			1680			2196			3055	
Approach Delay, s/veh		70.0			79.3			36.5			54.9	
Approach LOS		E			E			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		96.0	11.0	73.0		96.0	18.5	65.5				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		92.0	7.0	69.0		92.0	16.0	60.0				
Max Q Clear Time (g_c+I1), s		92.0	8.8	71.0		58.7	14.5	51.6				
Green Ext Time (p_c), s		0.0	0.0	0.0		22.3	0.0	5.4				

Intersection Summary	
HCM 6th Ctrl Delay	57.8
HCM 6th LOS	E

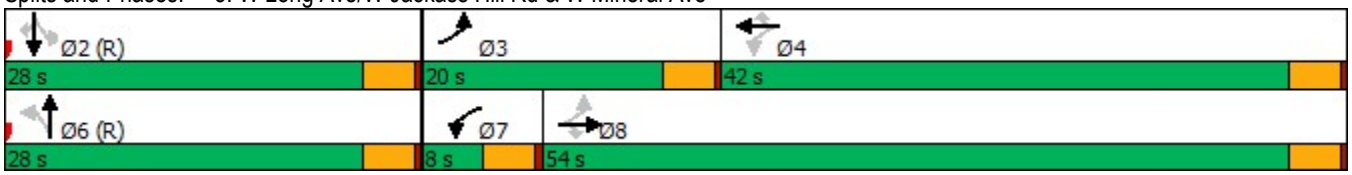
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		250	100		0	0		0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1805	0	1770	1863	1583
Flt Permitted	0.089			0.321			0.725			0.722		
Satd. Flow (perm)	166	3539	1583	598	3539	1583	1350	1805	0	1345	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			65			277		11				276
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		295			419			318			292	
Travel Time (s)		6.7			9.5			7.2			6.6	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	275	815	60	5	1165	255	95	40	215	45	285
Future Volume (vph)	275	815	60	5	1165	255	95	40	215	45	285
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4			6		2	
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	7	4	4	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	54.0	54.0	8.0	42.0	42.0	28.0	28.0	28.0	28.0	28.0
Total Split (%)	22.2%	60.0%	60.0%	8.9%	46.7%	46.7%	31.1%	31.1%	31.1%	31.1%	31.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	56.2	54.6	54.6	41.9	37.9	37.9	25.8	25.8	25.8	25.8	25.8
Actuated g/C Ratio	0.62	0.61	0.61	0.47	0.42	0.42	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.83	0.41	0.07	0.02	0.85	0.34	0.27	0.10	0.61	0.09	0.48
Control Delay	41.3	10.1	2.5	7.2	30.2	3.3	28.3	21.6	36.6	25.6	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	10.1	2.5	7.2	30.2	3.3	28.3	21.6	36.6	25.6	7.8
LOS	D	B	A	A	C	A	C	C	D	C	A
Approach Delay		17.2			25.4			26.0		20.6	
Approach LOS		B			C			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 76.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: W Long Ave/W Jackass Hill Rd & W Mineral Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	299	886	65	5	1266	277	103	54	234	49	310
v/c Ratio	0.83	0.41	0.07	0.02	0.85	0.34	0.27	0.10	0.61	0.09	0.48
Control Delay	41.3	10.1	2.5	7.2	30.2	3.3	28.3	21.6	36.6	25.6	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	10.1	2.5	7.2	30.2	3.3	28.3	21.6	36.6	25.6	7.8
Queue Length 50th (ft)	112	112	0	1	331	0	46	18	118	21	15
Queue Length 95th (ft)	#233	192	17	5	424	45	91	47	200	49	81
Internal Link Dist (ft)		215			339			238		212	
Turn Bay Length (ft)	180		220	100		250	100				
Base Capacity (vph)	388	2154	989	330	1515	836	387	524	385	533	650
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.41	0.07	0.02	0.84	0.33	0.27	0.10	0.61	0.09	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	815	60	5	1165	255	95	40	10	215	45	285
Future Volume (veh/h)	275	815	60	5	1165	255	95	40	10	215	45	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	299	886	65	5	1266	277	103	43	11	234	49	310
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1880	839	309	1432	639	402	478	122	501	622	527
Arrive On Green	0.13	0.53	0.53	0.01	0.40	0.40	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1022	1437	368	1350	1870	1585
Grp Volume(v), veh/h	299	886	65	5	1266	277	103	0	54	234	49	310
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1022	0	1804	1350	1870	1585
Q Serve(g_s), s	9.4	14.1	1.8	0.1	29.7	11.4	6.9	0.0	1.9	13.0	1.6	14.6
Cycle Q Clear(g_c), s	9.4	14.1	1.8	0.1	29.7	11.4	8.5	0.0	1.9	14.8	1.6	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	338	1880	839	309	1432	639	402	0	600	501	622	527
V/C Ratio(X)	0.88	0.47	0.08	0.02	0.88	0.43	0.26	0.00	0.09	0.47	0.08	0.59
Avail Cap(c_a), veh/h	421	1974	881	379	1500	669	402	0	600	501	622	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	13.3	10.4	15.8	24.9	19.4	23.5	0.0	20.7	25.8	20.6	24.9
Incr Delay (d2), s/veh	16.8	0.2	0.0	0.0	6.4	0.5	1.5	0.0	0.3	3.1	0.2	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	9.1	1.1	0.1	19.1	7.4	3.2	0.0	1.5	8.0	1.3	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	13.5	10.4	15.9	31.4	19.9	25.1	0.0	21.0	28.9	20.8	29.7
LnGrp LOS	D	B	B	B	C	B	C	A	C	C	C	C
Approach Vol, veh/h		1250			1548			157			593	
Approach Delay, s/veh		19.4			29.3			23.7			28.6	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		33.9	15.8	40.3		33.9	4.5	51.6				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		24.0	16.0	38.0		24.0	4.0	50.0				
Max Q Clear Time (g_c+I1), s		16.8	11.4	31.7		10.5	2.1	16.1				
Green Ext Time (p_c), s		1.4	0.4	4.5		0.5	0.0	7.7				

Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									

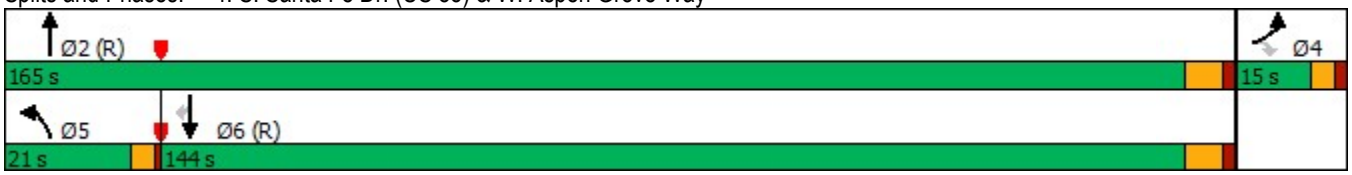
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		125				296
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1364	1740	
Travel Time (s)	42.0			20.7	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	150	165	1965	2660	275
Future Volume (vph)	130	150	165	1965	2660	275
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	15.0	21.0	165.0	144.0	144.0
Total Split (%)	8.3%	8.3%	11.7%	91.7%	80.0%	80.0%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.9	9.9	17.1	158.1	137.0	137.0
Actuated g/C Ratio	0.06	0.06	0.10	0.88	0.76	0.76
v/c Ratio	0.75	0.80	1.07	0.69	1.07	0.23
Control Delay	107.0	48.8	150.8	11.8	63.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.0	48.8	150.8	11.8	63.3	1.0
LOS	F	D	F	B	E	A
Approach Delay	75.8			22.6	57.5	
Approach LOS	E			C	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 44.5	Intersection LOS: D
Intersection Capacity Utilization 99.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	141	163	179	2136	2891	299
v/c Ratio	0.75	0.80	1.07	0.69	1.07	0.23
Control Delay	107.0	48.8	150.8	11.8	63.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.0	48.8	150.8	11.8	63.3	1.0
Queue Length 50th (ft)	86	44	~239	465	~1987	1
Queue Length 95th (ft)	#138	#166	m#350	m337	#2073	24
Internal Link Dist (ft)	1460			1284	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	190	206	168	3108	2693	1275
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.79	1.07	0.69	1.07	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

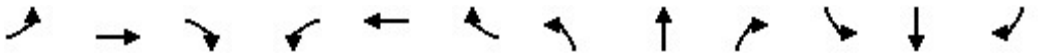
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	150	165	1965	2660	275
Future Volume (veh/h)	130	150	165	1965	2660	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	163	179	2136	2891	299
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	192	88	168	3119	2705	1206
Arrive On Green	0.06	0.06	0.09	0.88	0.76	0.76
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	141	163	179	2136	2891	299
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	7.2	10.0	17.0	33.1	137.0	10.0
Cycle Q Clear(g_c), s	7.2	10.0	17.0	33.1	137.0	10.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	192	88	168	3119	2705	1206
V/C Ratio(X)	0.73	1.85	1.06	0.68	1.07	0.25
Avail Cap(c_a), veh/h	192	88	168	3119	2705	1206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.7	85.0	81.5	3.4	21.5	6.3
Incr Delay (d2), s/veh	13.6	423.2	87.4	1.2	39.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	30.1	17.9	11.8	78.6	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	97.3	508.2	168.9	4.6	60.7	6.8
LnGrp LOS	F	F	F	A	F	A
Approach Vol, veh/h	304			2315	3190	
Approach Delay, s/veh	317.6			17.3	55.6	
Approach LOS	F			B	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		165.0		15.0	21.0	144.0
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		158.0		10.0	17.0	137.0
Max Q Clear Time (g_c+I1), s		35.1		12.0	19.0	139.0
Green Ext Time (p_c), s		41.4		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D



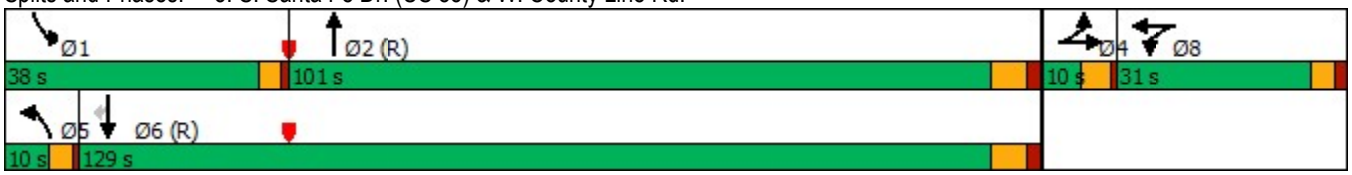
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				411			133			67
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	20	5	410	20	790	20	1770	140	330	1305	35
Future Volume (vph)	20	5	410	20	790	20	1770	140	330	1305	35
Turn Type	Split	NA	Split	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	4	4	8	8		5	2		1	6	
Permitted Phases					Free			Free			6
Detector Phase	4	4	8	8		5	2		1	6	6
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	10.0	10.0	31.0	31.0		8.0	12.0		8.0	33.0	33.0
Total Split (s)	10.0	10.0	31.0	31.0		10.0	101.0		38.0	129.0	129.0
Total Split (%)	5.6%	5.6%	17.2%	17.2%		5.6%	56.1%		21.1%	71.7%	71.7%
Yellow Time (s)	4.0	4.0	3.0	3.0		3.0	5.0		3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		4.0	7.0		4.0	7.0	7.0
Lead/Lag						Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes
Recall Mode	None	None	None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.0	5.0	25.7	25.7	180.0	6.0	94.0	180.0	38.3	130.3	130.3
Actuated g/C Ratio	0.03	0.03	0.14	0.14	1.00	0.03	0.52	1.00	0.21	0.72	0.72
v/c Ratio	0.45	0.19	0.91	0.08	0.54	0.37	1.04	0.10	0.95	0.55	0.03
Control Delay	113.8	67.3	98.8	67.7	1.3	102.8	74.0	0.1	103.8	13.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.8	67.3	98.8	67.7	1.3	102.8	74.0	0.1	103.8	13.6	0.3
LOS	F	E	F	E	A	F	E	A	F	B	A
Approach Delay		99.3		35.2			69.0			31.2	
Approach LOS		F		D			E			C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 47.6	Intersection LOS: D
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

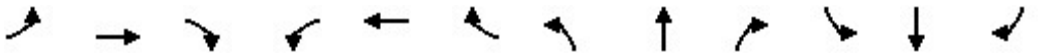


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	10	446	22	859	22	1924	152	359	1418	38
v/c Ratio	0.45	0.19	0.91	0.08	0.54	0.37	1.04	0.10	0.95	0.55	0.03
Control Delay	113.8	67.3	98.8	67.7	1.3	102.8	74.0	0.1	103.8	13.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.8	67.3	98.8	67.7	1.3	102.8	74.0	0.1	103.8	13.6	0.3
Queue Length 50th (ft)	26	6	271	23	0	26	~1286	0	~469	449	0
Queue Length 95th (ft)	#65	30	#369	54	0	61	#1413	0	#687	510	3
Internal Link Dist (ft)		1870		2780			2048			660	
Turn Bay Length (ft)	100		250		50	160		400	600		360
Base Capacity (vph)	49	52	499	271	1583	60	1848	1583	376	2561	1164
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.19	0.89	0.08	0.54	0.37	1.04	0.10	0.95	0.55	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	5	410	20	790	20	1770	140	330	1305	35
Future Volume (veh/h)	20	5	5	410	20	790	20	1770	140	330	1305	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	5	5	446	22	0	22	1924	0	359	1418	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	16	16	483	261		28	1905		336	2520	1124
Arrive On Green	0.02	0.02	0.02	0.14	0.14	0.00	0.02	0.54	0.00	0.19	0.71	0.71
Sat Flow, veh/h	1781	858	858	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	0	10	446	22	0	22	1924	0	359	1418	38
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.2	0.0	1.0	22.9	1.8	0.0	2.2	96.5	0.0	34.0	34.8	1.3
Cycle Q Clear(g_c), s	2.2	0.0	1.0	22.9	1.8	0.0	2.2	96.5	0.0	34.0	34.8	1.3
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	0	32	483	261		28	1905		336	2520	1124
V/C Ratio(X)	0.66	0.00	0.31	0.92	0.08		0.79	1.01		1.07	0.56	0.03
Avail Cap(c_a), veh/h	49	0	48	499	270		59	1905		336	2520	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.8	0.0	87.2	76.5	67.4	0.0	88.3	41.8	0.0	73.0	12.7	7.8
Incr Delay (d2), s/veh	20.2	0.0	5.4	22.6	0.1	0.0	37.6	23.1	0.0	67.9	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	0.9	17.3	1.6	0.0	2.3	57.6	0.0	30.3	18.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.9	0.0	92.6	99.0	67.5	0.0	125.9	64.9	0.0	140.9	13.6	7.9
LnGrp LOS	F	A	F	F	E		F	F		F	B	A
Approach Vol, veh/h		32			468	A		1946	A		1815	
Approach Delay, s/veh		103.1			97.6			65.6			38.6	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.0	103.5		8.4	6.8	134.7		30.2				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	34.0	94.0		5.0	6.0	122.0		26.0				
Max Q Clear Time (g_c+I1), s	36.0	98.5		4.2	4.2	36.8		24.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.5		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		57.9
HCM 6th LOS		E

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

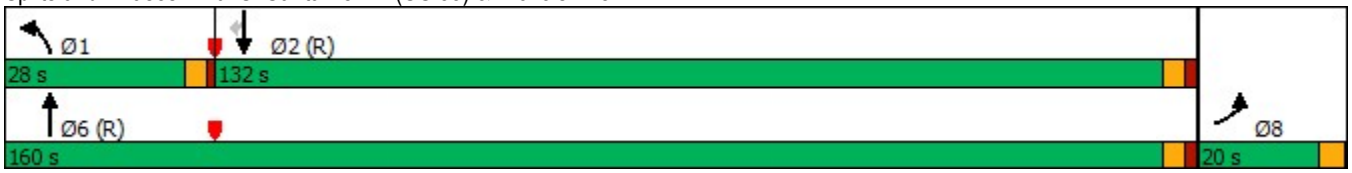
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	3614	1583	3433	3539	5085	1583
Flt Permitted			0.950			
Satd. Flow (perm)	3614	1583	3433	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		264				154
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			817	866	
Travel Time (s)	7.0			11.1	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	410	265	2015	2660	245	
Future Volume (vph)	410	265	2015	2660	245	
Turn Type	Free	Prot	NA	NA	Perm	
Protected Phases		1	6	2		8
Permitted Phases	Free				2	
Detector Phase		1	6	2	2	
Switch Phase						
Minimum Initial (s)		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		8.0	35.0	30.0	30.0	20.0
Total Split (s)		28.0	160.0	132.0	132.0	20.0
Total Split (%)		15.6%	88.9%	73.3%	73.3%	11%
Yellow Time (s)		3.0	3.0	3.0	3.0	3.5
All-Red Time (s)		1.0	2.0	2.0	2.0	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0	5.0	5.0	5.0	
Lead/Lag		Lead		Lag	Lag	
Lead-Lag Optimize?						
Recall Mode		None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	180.0	20.3	180.0	150.7	150.7	
Actuated g/C Ratio	1.00	0.11	1.00	0.84	0.84	
v/c Ratio	0.28	0.74	0.62	0.68	0.20	
Control Delay	0.4	89.1	0.8	2.6	0.2	
Queue Delay	0.0	0.0	0.0	0.3	0.0	
Total Delay	0.4	89.1	0.8	2.9	0.2	
LOS	A	F	A	A	A	
Approach Delay			11.1	2.7		
Approach LOS			B	A		

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	446	288	2190	2891	266
v/c Ratio	0.28	0.74	0.62	0.68	0.20
Control Delay	0.4	89.1	0.8	2.6	0.2
Queue Delay	0.0	0.0	0.0	0.3	0.0
Total Delay	0.4	89.1	0.8	2.9	0.2
Queue Length 50th (ft)	0	173	0	89	0
Queue Length 95th (ft)	0	222	0	m103	m0
Internal Link Dist (ft)			737	786	
Turn Bay Length (ft)		200			200
Base Capacity (vph)	1583	462	3539	4256	1350
Starvation Cap Reductn	0	0	0	574	0
Spillback Cap Reductn	0	0	54	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.62	0.63	0.79	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

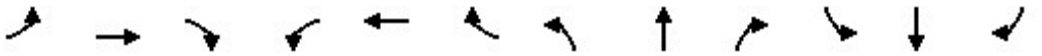
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	410	265	2015	2660	245
Future Volume (veh/h)	0	410	265	2015	2660	245
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	288	2190	2891	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2		333	3455	4359	
Arrive On Green	0.00	0.00	0.10	0.97	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	3647	5274	1585
Grp Volume(v), veh/h	0	0	288	2190	2891	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1777	1702	1585
Q Serve(g_s), s	0.0	0.0	14.8	8.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	14.8	8.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	2		333	3455	4359	
V/C Ratio(X)	0.00		0.87	0.63	0.66	
Avail Cap(c_a), veh/h	307		461	3455	4359	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.12	0.00
Uniform Delay (d), s/veh	0.0	0.0	80.2	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	12.0	0.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	11.4	0.8	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.0	92.1	1.1	0.1	0.0
LnGrp LOS	A		F	A	A	
Approach Vol, veh/h	0	A		2478	2891	A
Approach Delay, s/veh	0.0			11.7	0.1	
Approach LOS				B	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.3	158.7				180.0	0.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	24.0	127.0				155.0	16.0
Max Q Clear Time (g_c+I1), s	16.8	2.0				10.0	0.0
Green Ext Time (p_c), s	0.5	74.5				43.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected											0.950	
Satd. Flow (prot)	0	1987	0	0	1987	1689	0	1987	0	0	1888	1987
Flt Permitted											0.950	
Satd. Flow (perm)	0	1987	0	0	1987	1689	0	1987	0	0	1888	1987
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

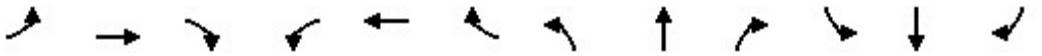
Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	1.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	880	0	446
Demand Flow Rate, veh/h	0	898	0	455
Vehicles Circulating, veh/h	455	0	455	0
Vehicles Exiting, veh/h	0	455	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	5.4
Approach LOS	-	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized		Yield		Free		Free		Yield
Lane Util	1.000		1.000		1.000		1.000	
Follow-Up Headway, s	2.535		2.535		2.535		2.535	
Critical Headway, s	4.328	0	4.328	898	4.328	0	4.328	0
Entry Flow, veh/h	0	1380	0	1938	0	1938	455	1380
Cap Entry Lane, veh/h	965	0.980	1420	0.980	965	0.980	1420	0.980
Entry HV Adj Factor	1.000	0	1.000	880	1.000	0	0.980	0
Flow Entry, veh/h	0	1353	0	1900	0	1900	446	1353
Cap Entry, veh/h	965	0.000	1420	0.463	965	0.000	1392	0.000
V/C Ratio	0.000	2.7	0.000	0.0	0.000	0.0	0.320	2.7
Control Delay, s/veh	3.7	A	2.5	A	3.7	A	5.4	A
LOS	A	0	A	3	A	0	A	0
95th %tile Queue, veh	0		0		0		1	

2040 BACKGROUND TRAFFIC



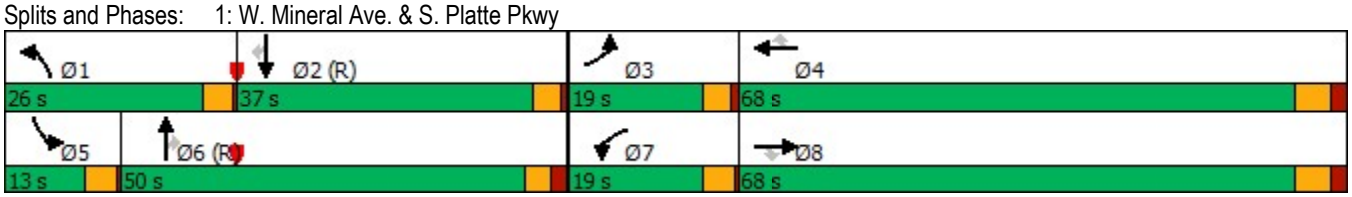
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	200		0	150		300	200		0
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.986	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	1745	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	1745	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467			228		4	201			109
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

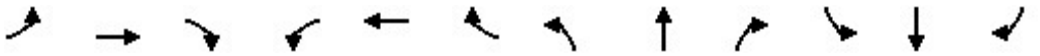
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	1750	665	245	430	210	370	215	220	105	10	70
Future Volume (vph)	205	1750	665	245	430	210	370	215	220	105	10	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	19.0	68.0	68.0	19.0	68.0	68.0	26.0	50.0	50.0	13.0	37.0	37.0
Total Split (%)	12.7%	45.3%	45.3%	12.7%	45.3%	45.3%	17.3%	33.3%	33.3%	8.7%	24.7%	24.7%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.9	62.4	62.4	14.6	63.1	63.1	20.9	45.3	45.3	8.7	34.1	34.1
Actuated g/C Ratio	0.09	0.42	0.42	0.10	0.42	0.42	0.14	0.30	0.30	0.06	0.23	0.23
v/c Ratio	0.70	0.90	0.78	0.80	0.31	0.29	0.84	0.49	0.36	0.58	0.03	0.17
Control Delay	78.3	47.8	19.1	93.4	19.7	2.9	79.3	46.0	8.0	80.6	46.3	3.5
Queue Delay	0.0	46.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
Total Delay	78.3	94.6	19.1	93.4	19.7	2.9	79.3	46.0	8.1	80.8	46.3	3.5
LOS	E	F	B	F	B	A	E	D	A	F	D	A
Approach Delay		74.2			36.1			52.0			49.7	
Approach LOS		E			D			D			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 61.7	Intersection LOS: E
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy

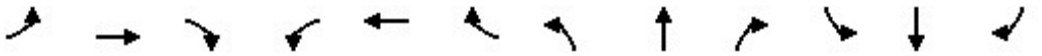




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	223	1902	723	266	467	228	402	258	215	114	11	76
v/c Ratio	0.70	0.90	0.78	0.80	0.31	0.29	0.84	0.49	0.36	0.58	0.03	0.17
Control Delay	78.3	47.8	19.1	93.4	19.7	2.9	79.3	46.0	8.0	80.6	46.3	3.5
Queue Delay	0.0	46.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
Total Delay	78.3	94.6	19.1	93.4	19.7	2.9	79.3	46.0	8.1	80.8	46.3	3.5
Queue Length 50th (ft)	110	634	233	139	80	0	198	215	10	57	9	0
Queue Length 95th (ft)	156	704	422	#196	133	36	#263	310	78	91	27	17
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	225			200			150		300	200		
Base Capacity (vph)	343	2116	931	343	1489	798	503	529	594	205	423	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	752	0	0	0	0	0	0	31	3	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	1.39	0.78	0.78	0.31	0.29	0.80	0.49	0.38	0.56	0.03	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1750	665	245	430	210	370	215	220	105	10	70
Future Volume (veh/h)	205	1750	665	245	430	210	370	215	220	105	10	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1902	0	266	467	228	402	238	236	114	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	2065		309	1477	659	455	624	529	158	471	
Arrive On Green	0.08	0.40	0.00	0.15	0.69	0.69	0.13	0.33	0.33	0.05	0.25	0.00
Sat Flow, veh/h	3456	5106	1585	3456	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	223	1902	0	266	467	228	402	238	236	114	11	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	9.5	53.0	0.0	11.3	7.7	8.7	16.6	14.6	17.5	4.9	0.7	0.0
Cycle Q Clear(g_c), s	9.5	53.0	0.0	11.3	7.7	8.7	16.6	14.6	17.5	4.9	0.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	2065		309	1477	659	455	624	529	158	471	
V/C Ratio(X)	0.82	0.92		0.86	0.32	0.35	0.88	0.38	0.45	0.72	0.02	
Avail Cap(c_a), veh/h	346	2111		346	1477	659	523	624	529	207	471	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	68.1	42.4	0.0	62.9	14.6	14.8	64.3	38.2	39.1	70.6	42.2	0.0
Incr Delay (d2), s/veh	11.9	7.2	0.0	17.8	0.1	0.3	14.9	1.8	2.7	8.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	30.7	0.0	9.2	5.0	4.9	13.3	11.5	11.5	4.2	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.0	49.6	0.0	80.7	14.7	15.1	79.3	39.9	41.9	78.7	42.3	0.0
LnGrp LOS	F	D		F	B	B	E	D	D	E	D	
Approach Vol, veh/h		2125	A		961			876			125	A
Approach Delay, s/veh		52.8			33.1			58.5			75.5	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	42.8	15.8	68.3	10.9	55.0	17.4	66.7
Change Period (Y+Rc), s	4.0	* 5	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	22.0	* 33	15.0	62.0	9.0	45.0	15.0	62.0
Max Q Clear Time (g_c+I1), s	18.6	2.7	11.5	10.7	6.9	19.5	13.3	55.0
Green Ext Time (p_c), s	0.5	0.0	0.2	3.9	0.1	2.2	0.2	5.6

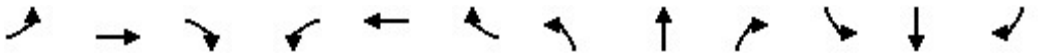
Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		300	0		300	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Flt Permitted												
Satd. Flow (perm)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			7			7			7			57
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		279			388			261			278	
Travel Time (s)		6.3			8.8			5.9			6.3	

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1780	515	850	310	3085	265	3195	135
Future Volume (vph)	1780	515	850	310	3085	265	3195	135
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	8		4		6		2	
Permitted Phases		8		4		6		2
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	67.0	67.0	67.0	67.0	83.0	83.0	83.0	83.0
Total Split (%)	44.7%	44.7%	44.7%	44.7%	55.3%	55.3%	55.3%	55.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	63.0	63.0	63.0	63.0	79.0	79.0	79.0	79.0
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.53	0.53	0.53	0.53
v/c Ratio	1.30	0.84	0.43	0.50	1.25	0.34	1.30	0.17
Control Delay	177.3	51.2	31.6	34.5	148.9	21.4	168.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	177.3	51.2	31.6	34.5	148.9	21.4	168.1	11.6
LOS	F	D	C	C	F	C	F	B
Approach Delay	149.0		32.4		138.9		161.8	
Approach LOS	F		C		F		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 136.5	Intersection LOS: F
Intersection Capacity Utilization 117.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr & W Mineral Ave

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1935	560	924	337	3353	288	3473	147
v/c Ratio	1.30	0.84	0.43	0.50	1.25	0.34	1.30	0.17
Control Delay	177.3	51.2	31.6	34.5	148.9	21.4	168.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	177.3	51.2	31.6	34.5	148.9	21.4	168.1	11.6
Queue Length 50th (ft)	~1272	481	232	236	~1496	155	~1585	43
Queue Length 95th (ft)	#1405	#670	273	334	#1559	224	#1645	83
Internal Link Dist (ft)	199		308		181		198	
Turn Bay Length (ft)				300		300		400
Base Capacity (vph)	1486	668	2135	668	2678	837	2678	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.84	0.43	0.50	1.25	0.34	1.30	0.17

Intersection Summary

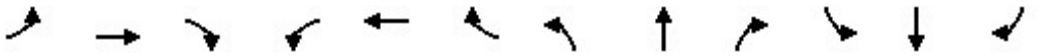
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑	↱		↑↑↑	↱		↑↑↑	↱
Traffic Volume (veh/h)	0	1780	515	0	850	310	0	3085	265	0	3195	135
Future Volume (veh/h)	0	1780	515	0	850	310	0	3085	265	0	3195	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1935	560	0	924	337	0	3353	288	0	3473	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
Arrive On Green	0.00	0.42	0.42	0.00	0.42	0.42	0.00	0.53	0.53	0.00	0.53	0.53
Sat Flow, veh/h	0	3647	1585	0	5274	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	0	1935	560	0	924	337	0	3353	288	0	3473	147
Grp Sat Flow(s),veh/h/ln	0	1777	1585	0	1702	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	0.0	63.0	47.5	0.0	19.2	23.5	0.0	79.0	15.8	0.0	79.0	7.3
Cycle Q Clear(g_c), s	0.0	63.0	47.5	0.0	19.2	23.5	0.0	79.0	15.8	0.0	79.0	7.3
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
V/C Ratio(X)	0.00	1.30	0.84	0.00	0.43	0.51	0.00	1.25	0.34	0.00	1.29	0.18
Avail Cap(c_a), veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	43.5	39.0	0.0	30.8	32.0	0.0	35.5	20.5	0.0	35.5	18.5
Incr Delay (d2), s/veh	0.0	138.5	9.5	0.0	0.1	0.6	0.0	114.4	1.1	0.0	134.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	81.1	27.5	0.0	12.7	14.2	0.0	85.9	10.3	0.0	94.3	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	182.0	48.5	0.0	30.9	32.7	0.0	149.9	21.7	0.0	169.6	19.0
LnGrp LOS	A	F	D	A	C	C	A	F	C	A	F	B
Approach Vol, veh/h		2495			1261			3641			3620	
Approach Delay, s/veh		152.0			31.4			139.7			163.4	
Approach LOS		F			C			F			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.0		67.0		83.0		67.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		79.0		63.0		79.0		63.0				
Max Q Clear Time (g_c+I1), s		81.0		25.5		81.0		65.0				
Green Ext Time (p_c), s		0.0		9.7		0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		137.9
HCM 6th LOS		F



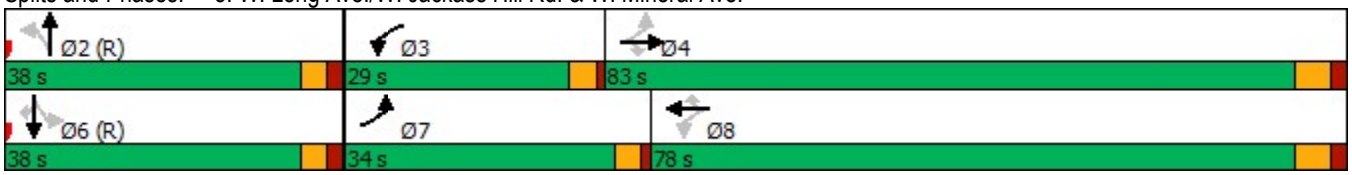
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1786	0	1770	1863	1583
Flt Permitted	0.225			0.058			0.750			0.676		
Satd. Flow (perm)	419	3539	1583	108	3539	1583	1397	1786	0	1259	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44			283		12				288
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1378			1230			1150			1120	
Travel Time (s)		23.5			21.0			26.1			25.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	355	1675	20	5	770	260	120	65	240	10	265
Future Volume (vph)	355	1675	20	5	770	260	120	65	240	10	265
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	3.0	25.0	25.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	8.0	31.0	31.0	8.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	34.0	83.0	83.0	29.0	78.0	78.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.7%	55.3%	55.3%	19.3%	52.0%	52.0%	25.3%	25.3%	25.3%	25.3%	25.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?		Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	93.6	89.6	89.6	73.4	65.8	65.8	47.4	47.4	47.4	47.4	47.4
Actuated g/C Ratio	0.62	0.60	0.60	0.49	0.44	0.44	0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.84	0.86	0.02	0.04	0.54	0.33	0.29	0.17	0.66	0.02	0.41
Control Delay	11.7	23.4	1.4	11.0	32.2	3.4	43.6	36.0	54.5	40.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	23.4	1.4	11.0	32.2	3.4	43.6	36.0	54.5	40.6	6.6
LOS	B	C	A	B	C	A	D	D	D	D	A
Approach Delay		21.2			24.8			40.3		29.6	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 82.1%	ICU Level of Service E
Analysis Period (min) 15	

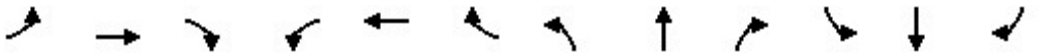
Splits and Phases: 3: W. Long Ave./W. Jackass Hill Rd. & W. Mineral Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	386	1821	22	5	837	283	130	98	261	11	288
v/c Ratio	0.84	0.86	0.02	0.04	0.54	0.33	0.29	0.17	0.66	0.02	0.41
Control Delay	11.7	23.4	1.4	11.0	32.2	3.4	43.6	36.0	54.5	40.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	23.4	1.4	11.0	32.2	3.4	43.6	36.0	54.5	40.6	6.6
Queue Length 50th (ft)	116	976	0	2	322	0	94	59	216	7	0
Queue Length 95th (ft)	m69	m703	m0	5	334	48	180	125	#433	27	81
Internal Link Dist (ft)		1298			1150			1070		1040	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	531	2115	963	343	1711	912	441	572	397	588	697
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.86	0.02	0.01	0.49	0.31	0.29	0.17	0.66	0.02	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	1675	20	5	770	260	120	65	25	240	10	265
Future Volume (veh/h)	355	1675	20	5	770	260	120	65	25	240	10	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	386	1821	22	5	837	283	130	71	27	261	11	288
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1824	814	55	1261	563	458	494	188	498	716	607
Arrive On Green	0.05	0.17	0.17	0.00	0.35	0.35	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1080	1291	491	1297	1870	1585
Grp Volume(v), veh/h	386	1821	22	5	837	283	130	0	98	261	11	288
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1080	0	1782	1297	1870	1585
Q Serve(g_s), s	21.7	76.8	1.7	0.3	29.8	21.0	12.7	0.0	5.4	24.7	0.5	20.6
Cycle Q Clear(g_c), s	21.7	76.8	1.7	0.3	29.8	21.0	13.3	0.0	5.4	30.1	0.5	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	415	1824	814	55	1261	563	458	0	682	498	716	607
V/C Ratio(X)	0.93	1.00	0.03	0.09	0.66	0.50	0.28	0.00	0.14	0.52	0.02	0.47
Avail Cap(c_a), veh/h	483	1824	814	345	1706	761	458	0	682	498	716	607
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	62.2	31.0	40.4	40.8	38.0	32.9	0.0	30.2	40.0	28.7	34.9
Incr Delay (d2), s/veh	3.2	5.9	0.0	0.7	0.6	0.7	1.6	0.0	0.4	3.9	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	41.3	1.0	0.2	18.9	12.9	6.5	0.0	4.4	13.3	0.5	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	68.1	31.0	41.1	41.4	38.7	34.4	0.0	30.7	43.9	28.8	37.6
LnGrp LOS	D	E	C	D	D	D	C	A	C	D	C	D
Approach Vol, veh/h		2229			1125			228			560	
Approach Delay, s/veh		63.6			40.7			32.8			40.4	
Approach LOS		E			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		62.4	4.6	83.0		62.4	28.3	59.2				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0	4.0	6.0				
Max Green Setting (Gmax), s		33.0	25.0	77.0		33.0	30.0	72.0				
Max Q Clear Time (g_c+I1), s		15.3	2.3	78.8		32.1	23.7	31.8				
Green Ext Time (p_c), s		1.0	0.0	0.0		0.2	0.7	7.8				

Intersection Summary												
HCM 6th Ctrl Delay			52.5									
HCM 6th LOS			D									

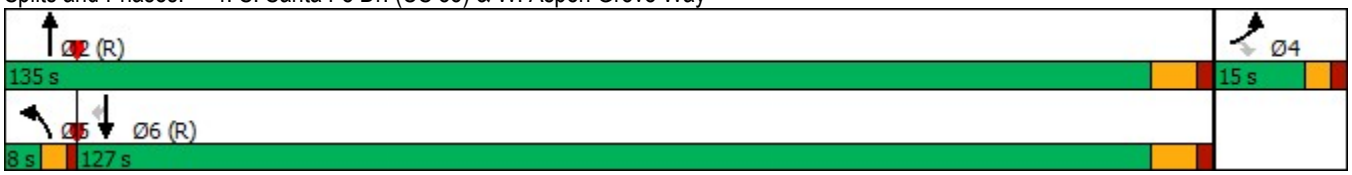
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		37				92
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1754	1740	
Travel Time (s)	42.0			26.6	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	110	35	3355	3220	85
Future Volume (vph)	115	110	35	3355	3220	85
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	15.0	8.0	135.0	127.0	127.0
Total Split (%)	10.0%	10.0%	5.3%	90.0%	84.7%	84.7%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.7	9.7	4.3	128.3	121.9	121.9
Actuated g/C Ratio	0.06	0.06	0.03	0.86	0.81	0.81
v/c Ratio	0.56	0.88	0.76	1.21	1.22	0.07
Control Delay	78.3	96.3	77.7	127.6	119.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	96.3	77.7	127.6	119.4	0.7
LOS	E	F	E	F	F	A
Approach Delay	87.1			127.1	116.4	
Approach LOS	F			F	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 120.7	Intersection LOS: F
Intersection Capacity Utilization 106.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	125	120	38	3647	3500	92
v/c Ratio	0.56	0.88	0.76	1.21	1.22	0.07
Control Delay	78.3	96.3	77.7	127.6	119.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	96.3	77.7	127.6	119.4	0.7
Queue Length 50th (ft)	62	82	36	~2251	~2225	0
Queue Length 95th (ft)	98	#203	m32	m1379	#2309	10
Internal Link Dist (ft)	1460			1674	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	228	140	50	3026	2875	1303
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.86	0.76	1.21	1.22	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

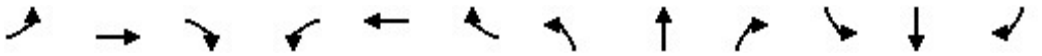
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	110	35	3355	3220	85
Future Volume (veh/h)	115	110	35	3355	3220	85
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	120	38	3647	3500	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	230	106	48	3032	2843	1268
Arrive On Green	0.07	0.07	0.03	0.85	0.80	0.80
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	125	120	38	3647	3500	92
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	5.3	10.0	3.2	128.0	120.0	1.8
Cycle Q Clear(g_c), s	5.3	10.0	3.2	128.0	120.0	1.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	230	106	48	3032	2843	1268
V/C Ratio(X)	0.54	1.14	0.80	1.20	1.23	0.07
Avail Cap(c_a), veh/h	230	106	48	3032	2843	1268
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	70.0	72.6	11.0	15.0	3.2
Incr Delay (d2), s/veh	2.6	128.7	61.7	94.6	107.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	18.8	4.1	93.7	106.3	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.4	198.7	134.3	105.6	122.3	3.3
LnGrp LOS	E	F	F	F	F	A
Approach Vol, veh/h	245			3685	3592	
Approach Delay, s/veh	133.2			105.9	119.2	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		135.0		15.0	8.0	127.0
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		128.0		10.0	4.0	120.0
Max Q Clear Time (g_c+I1), s		130.0		12.0	5.2	122.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		113.1
HCM 6th LOS		F



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	300		400
Storage Lanes	1		0	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950	0.955					0.950		
Satd. Flow (prot)	1770	1863	0	1681	1690	1583	1863	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950	0.955					0.950		
Satd. Flow (perm)	1770	1863	0	1681	1690	1583	1863	5085	1583	3433	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						163			160			80
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

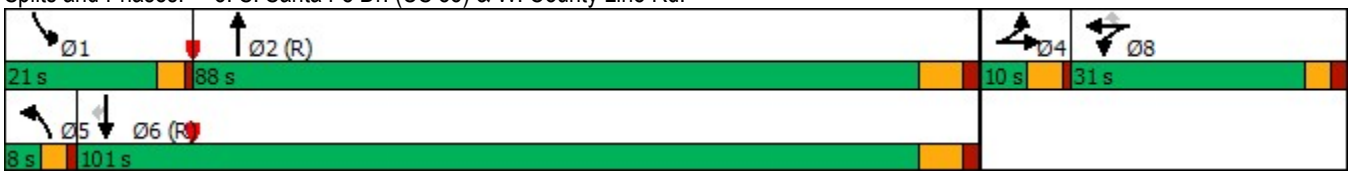
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	25	25	165	5	425	3015	420	455	1965	30	
Future Volume (vph)	25	25	165	5	425	3015	420	455	1965	30	
Turn Type	Split	NA	Split	NA	Perm	NA	Free	Prot	NA	Perm	
Protected Phases	4	4	8	8		2		1	6		5
Permitted Phases					8		Free			6	
Detector Phase	4	4	8	8	8	2		1	6	6	
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0	3.0
Minimum Split (s)	10.0	10.0	31.0	31.0	31.0	12.0		8.0	33.0	33.0	8.0
Total Split (s)	10.0	10.0	31.0	31.0	31.0	88.0		21.0	101.0	101.0	8.0
Total Split (%)	6.7%	6.7%	20.7%	20.7%	20.7%	58.7%		14.0%	67.3%	67.3%	5%
Yellow Time (s)	4.0	4.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	7.0		4.0	7.0	7.0	
Lead/Lag						Lag		Lead	Lag	Lag	Lead
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max		None	C-Max	C-Max	None
Act Effct Green (s)	5.0	5.0	28.0	28.0	28.0	81.0	150.0	17.0	102.0	102.0	
Actuated g/C Ratio	0.03	0.03	0.19	0.19	0.19	0.54	1.00	0.11	0.68	0.68	
v/c Ratio	0.46	0.44	0.29	0.30	1.08	1.19	0.29	1.27	0.62	0.03	
Control Delay	95.2	92.4	56.6	56.7	102.6	123.4	0.5	192.4	14.2	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.2	92.4	56.6	56.7	102.6	123.4	0.5	192.4	14.2	0.1	
LOS	F	F	E	E	F	F	A	F	B	A	
Approach Delay		93.8		89.5		108.4			47.1		
Approach LOS		F		F		F			D		

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 83.6 — Intersection LOS: F
Intersection Capacity Utilization 102.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

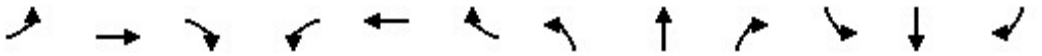


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	27	91	93	462	3277	457	495	2136	33
v/c Ratio	0.46	0.44	0.29	0.30	1.08	1.19	0.29	1.27	0.62	0.03
Control Delay	95.2	92.4	56.6	56.7	102.6	123.4	0.5	192.4	14.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	92.4	56.6	56.7	102.6	123.4	0.5	192.4	14.2	0.1
Queue Length 50th (ft)	26	26	83	85	~383	~1414	0	~314	393	0
Queue Length 95th (ft)	#66	62	143	146	#610	#1479	0	#431	433	0
Internal Link Dist (ft)		1870		2780		2048			660	
Turn Bay Length (ft)	100		250		50		400	300		400
Base Capacity (vph)	59	62	313	315	428	2745	1583	389	3457	1102
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.44	0.29	0.30	1.08	1.19	0.29	1.27	0.62	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	25	0	165	5	425	0	3015	420	455	1965	30
Future Volume (veh/h)	25	25	0	165	5	425	0	3015	420	455	1965	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	27	0	183	0	0	0	3277	0	495	2136	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	47	0	239	0		1	3340		392	4055	1259
Arrive On Green	0.03	0.03	0.00	0.07	0.00	0.00	0.00	0.65	0.00	0.11	0.79	0.79
Sat Flow, veh/h	1781	1870	0	3563	0	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	27	27	0	183	0	0	0	3277	0	495	2136	33
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	2.3	2.1	0.0	7.6	0.0	0.0	0.0	92.9	0.0	17.0	22.2	0.7
Cycle Q Clear(g_c), s	2.3	2.1	0.0	7.6	0.0	0.0	0.0	92.9	0.0	17.0	22.2	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	47	0	239	0		1	3340		392	4055	1259
V/C Ratio(X)	0.60	0.57	0.00	0.77	0.00		0.00	0.98		1.26	0.53	0.03
Avail Cap(c_a), veh/h	59	62	0	618	0		48	3340		392	4055	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	72.3	0.0	68.8	0.0	0.0	0.0	25.0	0.0	66.5	5.5	3.2
Incr Delay (d2), s/veh	11.9	10.2	0.0	5.1	0.0	0.0	0.0	11.7	0.0	137.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	2.1	0.0	6.5	0.0	0.0	0.0	45.9	0.0	23.1	10.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.3	82.5	0.0	73.9	0.0	0.0	0.0	36.8	0.0	204.2	6.0	3.3
LnGrp LOS	F	F	A	E	A		A	D		F	A	A
Approach Vol, veh/h		54			183	A		3277	A		2664	
Approach Delay, s/veh		83.4			73.9			36.8			42.8	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.0	105.1		8.8	0.0	126.1		15.1				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	17.0	81.0		5.0	4.0	94.0		26.0				
Max Q Clear Time (g_c+I1), s	19.0	94.9		4.3	0.0	24.2		9.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	29.6		0.5				

Intersection Summary		
HCM 6th Ctrl Delay	40.9	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

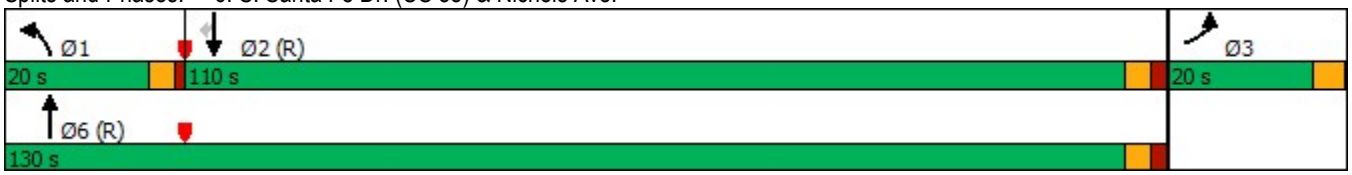
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	3433	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	3433	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		255				261
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			807	866	
Travel Time (s)	7.0			11.0	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	230	690	370	3120	3275	435
Future Volume (vph)	230	690	370	3120	3275	435
Turn Type	Prot	Free	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		Free				2
Detector Phase	3		1	6	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	8.0		8.0	35.0	30.0	30.0
Total Split (s)	20.0		20.0	130.0	110.0	110.0
Total Split (%)	13.3%		13.3%	86.7%	73.3%	73.3%
Yellow Time (s)	3.5		3.0	3.0	3.0	3.0
All-Red Time (s)	0.5		1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		4.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None		None	C-Min	C-Min	C-Min
Act Effct Green (s)	14.9	150.0	17.1	126.1	105.0	105.0
Actuated g/C Ratio	0.10	1.00	0.11	0.84	0.70	0.70
v/c Ratio	0.74	0.47	1.03	0.79	1.00	0.40
Control Delay	78.9	1.0	107.7	4.9	14.1	0.1
Queue Delay	0.0	0.0	0.0	46.4	38.6	0.0
Total Delay	78.9	1.0	107.7	51.2	52.6	0.1
LOS	E	A	F	D	D	A
Approach Delay	20.5			57.2	46.5	
Approach LOS	C			E	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 91.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	250	750	402	3391	3560	473
v/c Ratio	0.74	0.47	1.03	0.79	1.00	0.40
Control Delay	78.9	1.0	107.7	4.9	14.1	0.1
Queue Delay	0.0	0.0	0.0	46.4	38.6	0.0
Total Delay	78.9	1.0	107.7	51.2	52.6	0.1
Queue Length 50th (ft)	123	0	~234	287	~1331	0
Queue Length 95th (ft)	172	0	m#325	294	m119	m0
Internal Link Dist (ft)	230			727	786	
Turn Bay Length (ft)	125		200			200
Base Capacity (vph)	366	1583	392	4276	3559	1186
Starvation Cap Reductn	0	0	0	67	532	0
Spillback Cap Reductn	0	0	0	1200	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.47	1.03	1.10	1.18	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

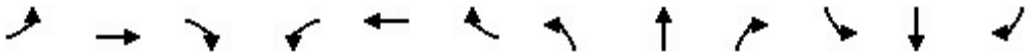
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	230	690	370	3120	3275	435
Future Volume (veh/h)	230	690	370	3120	3275	435
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	250	0	402	3391	3560	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	298		369	4359	3678	
Arrive On Green	0.09	0.00	0.11	0.85	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	5274	5274	1585
Grp Volume(v), veh/h	250	0	402	3391	3560	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1702	1702	1585
Q Serve(g_s), s	10.7	0.0	16.0	43.4	0.0	0.0
Cycle Q Clear(g_c), s	10.7	0.0	16.0	43.4	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	298		369	4359	3678	
V/C Ratio(X)	0.84		1.09	0.78	0.97	
Avail Cap(c_a), veh/h	369		369	4359	3678	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	67.5	0.0	67.0	4.8	0.0	0.0
Incr Delay (d2), s/veh	13.1	0.0	73.4	1.4	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	0.0	16.6	13.2	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	80.6	0.0	140.4	6.2	1.2	0.0
LnGrp LOS	F		F	A	A	
Approach Vol, veh/h	250	A		3793	3560	A
Approach Delay, s/veh	80.6			20.4	1.2	
Approach LOS	F			C	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	20.0	113.0				133.0	17.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	16.0	105.0				125.0	16.0
Max Q Clear Time (g_c+I1), s	18.0	2.0				45.4	12.7
Green Ext Time (p_c), s	0.0	91.5				69.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected										0.950		
Satd. Flow (prot)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	875	0	995
Demand Flow Rate, veh/h	0	892	0	1015
Vehicles Circulating, veh/h	1015	0	1015	0
Vehicles Exiting, veh/h	0	1015	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	14.2
Approach LOS	-	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	T	R	LT	R	T	R	L	TR	R
Assumed Moves	T	R	LT	R	T	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		1.000	0.000	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	0	4.328	892	4.328	0	4.645	4.328	0
Entry Flow, veh/h	0	1380	0	1938	0	1938	1015	0	1380
Cap Entry Lane, veh/h	599	0.980	1420	0.980	599	0.980	1350	1420	0.980
Entry HV Adj Factor	1.000	0	1.000	875	1.000	0	0.980	1.000	0
Flow Entry, veh/h	0	1353	0	1900	0	1900	995	0	1353
Cap Entry, veh/h	599	0.000	1420	0.461	599	0.000	1323	1420	0.000
V/C Ratio	0.000	2.7	0.000	0.0	0.000	0.0	0.752	0.000	2.7
Control Delay, s/veh	6.0	A	2.5	A	6.0	A	14.2	2.5	A
LOS	A	0	A	3	A	0	B	A	0
95th %tile Queue, veh	0		0		0		8	0	

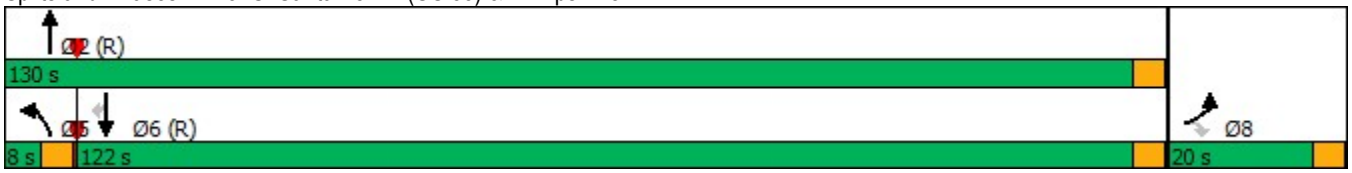
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	0	300			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		16				124
Link Speed (mph)	30			50	50	
Link Distance (ft)	657			1094	526	
Travel Time (s)	14.9			14.9	7.2	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	15	45	3425	3795	170
Future Volume (vph)	65	15	45	3425	3795	170
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	8.0	130.0	122.0	122.0
Total Split (%)	13.3%	13.3%	5.3%	86.7%	81.3%	81.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	8.5	8.5	10.5	133.5	119.0	119.0
Actuated g/C Ratio	0.06	0.06	0.07	0.89	0.79	0.79
v/c Ratio	0.37	0.15	0.40	0.82	1.02	0.14
Control Delay	73.0	29.0	77.0	5.6	24.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	29.0	77.0	5.6	24.7	0.3
LOS	E	C	E	A	C	A
Approach Delay	64.9			6.5	23.7	
Approach LOS	E			A	C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	71	16	49	3723	4125	185
v/c Ratio	0.37	0.15	0.40	0.82	1.02	0.14
Control Delay	73.0	29.0	77.0	5.6	24.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	29.0	77.0	5.6	24.7	0.3
Queue Length 50th (ft)	35	0	46	373	~322	0
Queue Length 95th (ft)	61	25	94	489	m#330	m0
Internal Link Dist (ft)	577			1014	446	
Turn Bay Length (ft)	150		300			200
Base Capacity (vph)	366	183	123	4525	4034	1281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.09	0.40	0.82	1.02	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

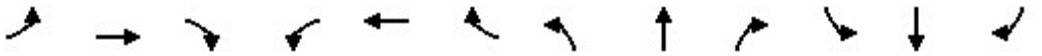
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	15	45	3425	3795	170
Future Volume (veh/h)	65	15	45	3425	3795	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	16	49	3723	4125	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	116	53	48	4662	4390	
Arrive On Green	0.03	0.03	0.03	0.91	0.86	0.00
Sat Flow, veh/h	3456	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	71	16	49	3723	4125	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1702	1702	1585
Q Serve(g_s), s	3.0	1.5	4.0	35.1	88.5	0.0
Cycle Q Clear(g_c), s	3.0	1.5	4.0	35.1	88.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	116	53	48	4662	4390	
V/C Ratio(X)	0.61	0.30	1.03	0.80	0.94	
Avail Cap(c_a), veh/h	369	169	48	4662	4390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	71.5	70.7	73.0	2.1	7.7	0.0
Incr Delay (d2), s/veh	5.1	3.1	139.9	1.5	5.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	1.2	6.6	1.2	23.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	76.6	73.8	212.9	3.6	13.0	0.0
LnGrp LOS	E	E	F	A	B	
Approach Vol, veh/h	87			3772	4125	A
Approach Delay, s/veh	76.1			6.3	13.0	
Approach LOS	E			A	B	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		140.9			8.0	132.9	9.1
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		126.0			4.0	118.0	16.0
Max Q Clear Time (g_c+I1), s		37.1			6.0	90.5	5.0
Green Ext Time (p_c), s		82.9			0.0	27.3	0.1

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



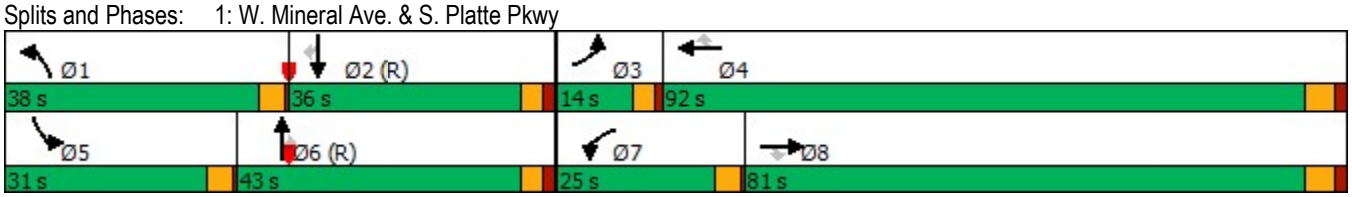
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	200		0	150		300	200		0
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.987	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			620			88		3	137			115
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

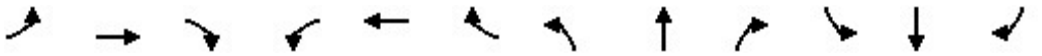
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	800	570	250	1820	200	715	140	140	455	40	360
Future Volume (vph)	215	800	570	250	1820	200	715	140	140	455	40	360
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	14.0	81.0	81.0	25.0	92.0	92.0	38.0	43.0	43.0	31.0	36.0	36.0
Total Split (%)	7.8%	45.0%	45.0%	13.9%	51.1%	51.1%	21.1%	23.9%	23.9%	17.2%	20.0%	20.0%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.0	77.3	77.3	18.7	86.0	86.0	34.0	38.0	38.0	27.0	31.0	31.0
Actuated g/C Ratio	0.06	0.43	0.43	0.10	0.48	0.48	0.19	0.21	0.21	0.15	0.17	0.17
v/c Ratio	1.23	0.40	0.60	0.76	1.17	0.27	1.20	0.45	0.32	0.96	0.13	1.07
Control Delay	205.6	36.3	4.8	89.5	132.7	25.7	162.9	65.3	10.0	106.1	64.5	112.6
Queue Delay	0.0	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.1	44.0	0.0	0.0
Total Delay	205.6	36.4	4.8	89.5	133.6	25.7	162.9	65.3	10.1	150.1	64.5	112.6
LOS	F	D	A	F	F	C	F	E	B	F	E	F
Approach Delay		48.0			119.2			128.4			130.3	
Approach LOS		D			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 102.7	Intersection LOS: F
Intersection Capacity Utilization 105.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy





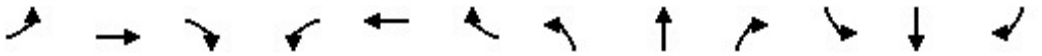
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	870	620	272	1978	217	777	167	137	495	43	391
v/c Ratio	1.23	0.40	0.60	0.76	1.17	0.27	1.20	0.45	0.32	0.96	0.13	1.07
Control Delay	205.6	36.3	4.8	89.5	132.7	25.7	162.9	65.3	10.0	106.1	64.5	112.6
Queue Delay	0.0	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.1	44.0	0.0	0.0
Total Delay	205.6	36.4	4.8	89.5	133.6	25.7	162.9	65.3	10.1	150.1	64.5	112.6
Queue Length 50th (ft)	~174	260	0	165	~1448	111	~570	180	0	304	44	~388
Queue Length 95th (ft)	#273	305	83	m200	m#1464	m158	#705	267	66	#422	85	#613
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	165			200			150		300	200		
Base Capacity (vph)	190	2183	1033	400	1690	802	648	371	425	514	320	367
Starvation Cap Reductn	0	0	0	0	376	0	0	0	0	0	0	0
Spillback Cap Reductn	0	223	0	0	0	0	0	0	15	178	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.44	0.60	0.68	1.51	0.27	1.20	0.45	0.33	1.47	0.13	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	800	570	250	1820	200	715	140	140	455	40	360
Future Volume (veh/h)	215	800	570	250	1820	200	715	140	140	455	40	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	870	0	272	1978	217	777	152	152	495	43	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	2257		316	1698	757	673	395	335	518	322	
Arrive On Green	0.06	0.44	0.00	0.06	0.32	0.32	0.19	0.21	0.21	0.15	0.17	0.00
Sat Flow, veh/h	3456	5106	1585	3456	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	234	870	0	272	1978	217	777	152	152	495	43	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	10.0	20.6	0.0	14.0	86.0	18.4	34.0	12.6	15.1	25.6	3.5	0.0
Cycle Q Clear(g_c), s	10.0	20.6	0.0	14.0	86.0	18.4	34.0	12.6	15.1	25.6	3.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	2257		316	1698	757	673	395	335	518	322	
V/C Ratio(X)	1.22	0.39		0.86	1.16	0.29	1.15	0.38	0.45	0.95	0.13	
Avail Cap(c_a), veh/h	192	2257		403	1698	757	673	395	335	518	322	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.0	33.8	0.0	83.4	61.2	38.2	73.0	61.0	62.0	75.9	63.1	0.0
Incr Delay (d2), s/veh	136.2	0.1	0.0	14.2	81.1	0.2	85.8	2.8	4.4	28.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.5	13.3	0.0	11.4	79.9	12.1	34.1	10.5	10.6	19.5	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	221.2	33.9	0.0	97.6	142.3	38.4	158.8	63.8	66.4	104.4	64.0	0.0
LnGrp LOS	F	C		F	F	D	F	E	E	F	E	
Approach Vol, veh/h		1104	A		2467			1081			538	A
Approach Delay, s/veh		73.6			128.2			132.4			101.1	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.0	36.0	14.0	92.0	31.0	43.0	20.4	85.6
Change Period (Y+Rc), s	4.0	5.0	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	34.0	31.0	10.0	86.0	27.0	38.0	21.0	75.0
Max Q Clear Time (g_c+I1), s	36.0	5.5	12.0	88.0	27.6	17.1	16.0	22.6
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	1.3	0.4	6.6

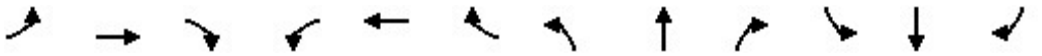
Intersection Summary	
HCM 6th Ctrl Delay	114.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



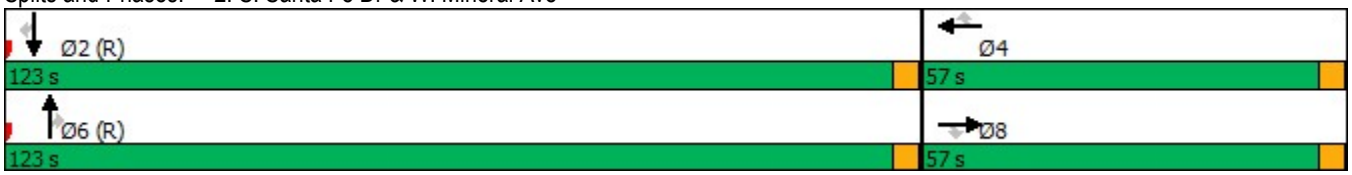
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		300	0		300	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Flt Permitted												
Satd. Flow (perm)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			6			6			6			6
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			279			229			215	
Travel Time (s)		5.8			6.3			5.2			4.9	

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1105	510	1615	195	3020	270	3615	495
Future Volume (vph)	1105	510	1615	195	3020	270	3615	495
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	8		4		6		2	
Permitted Phases		8		4		6		2
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	57.0	57.0	57.0	57.0	123.0	123.0	123.0	123.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	68.3%	68.3%	68.3%	68.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	53.0	53.0	53.0	53.0	119.0	119.0	119.0	119.0
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.66	0.66	0.66	0.66
v/c Ratio	1.15	1.18	1.17	0.45	0.98	0.28	1.17	0.51
Control Delay	134.4	153.0	138.7	53.8	40.1	13.2	109.3	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	134.4	153.0	138.7	53.8	40.1	13.2	109.3	17.6
LOS	F	F	F	D	D	B	F	B
Approach Delay	140.3		129.6		37.9		98.3	
Approach LOS	F		F		D		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 91.4	Intersection LOS: F
Intersection Capacity Utilization 108.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: S. Santa Fe Dr & W. Mineral Ave

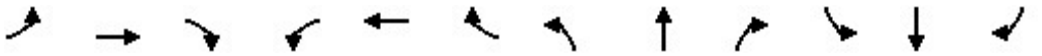


Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1201	554	1755	212	3283	293	3929	538
v/c Ratio	1.15	1.18	1.17	0.45	0.98	0.28	1.17	0.51
Control Delay	134.4	153.0	138.7	53.8	40.1	13.2	109.3	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	134.4	153.0	138.7	53.8	40.1	13.2	109.3	17.6
Queue Length 50th (ft)	~875	~777	~901	200	1297	134	~2013	307
Queue Length 95th (ft)	#1015	#1024	#992	288	1357	186	#2033	404
Internal Link Dist (ft)	175		199		149		135	
Turn Bay Length (ft)				300		300		400
Base Capacity (vph)	1042	470	1497	470	3361	1048	3361	1048
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	1.18	1.17	0.45	0.98	0.28	1.17	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

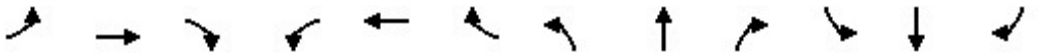
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑	↱		↑↑↑	↱		↑↑↑	↱
Traffic Volume (veh/h)	0	1105	510	0	1615	195	0	3020	270	0	3615	495
Future Volume (veh/h)	0	1105	510	0	1615	195	0	3020	270	0	3615	495
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1201	554	0	1755	212	0	3283	293	0	3929	538
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	1046	467	0	1503	467	0	3376	1048	0	3376	1048
Arrive On Green	0.00	0.29	0.29	0.00	0.29	0.29	0.00	0.66	0.66	0.00	0.66	0.66
Sat Flow, veh/h	0	3647	1585	0	5274	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	0	1201	554	0	1755	212	0	3283	293	0	3929	538
Grp Sat Flow(s),veh/h/ln	0	1777	1585	0	1702	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	0.0	53.0	53.0	0.0	53.0	19.6	0.0	109.8	13.8	0.0	119.0	31.3
Cycle Q Clear(g_c), s	0.0	53.0	53.0	0.0	53.0	19.6	0.0	109.8	13.8	0.0	119.0	31.3
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	1046	467	0	1503	467	0	3376	1048	0	3376	1048
V/C Ratio(X)	0.00	1.15	1.19	0.00	1.17	0.45	0.00	0.97	0.28	0.00	1.16	0.51
Avail Cap(c_a), veh/h	0	1046	467	0	1503	467	0	3376	1048	0	3376	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	63.5	63.5	0.0	63.5	51.7	0.0	28.9	12.7	0.0	30.5	15.6
Incr Delay (d2), s/veh	0.0	77.9	104.0	0.0	82.9	0.7	0.0	10.3	0.7	0.0	77.4	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	49.2	49.5	0.0	48.6	12.7	0.0	57.5	9.0	0.0	96.3	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	141.4	167.5	0.0	146.4	52.4	0.0	39.2	13.3	0.0	107.9	17.4
LnGrp LOS	A	F	F	A	F	D	A	D	B	A	F	B
Approach Vol, veh/h		1755			1967			3576			4467	
Approach Delay, s/veh		149.6			136.2			37.1			97.0	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	123.0	57.0	123.0	57.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	119.0	53.0	119.0	53.0
Max Q Clear Time (g_c+I1), s	121.0	55.0	111.8	55.0
Green Ext Time (p_c), s	0.0	0.0	7.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	93.2
HCM 6th LOS	F



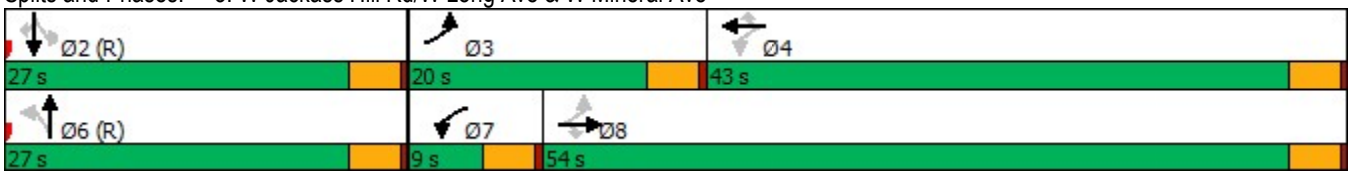
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		200	100		300	100		0	100		75
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1816	0	1770	1863	1583
Flt Permitted	0.085			0.264			0.718			0.715		
Satd. Flow (perm)	158	3539	1583	492	3539	1583	1337	1816	0	1332	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			71			315		11				264
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			350			251			218	
Travel Time (s)		5.8			8.0			5.7			5.0	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	315	995	65	5	1375	290	110	50	245	55	325
Future Volume (vph)	315	995	65	5	1375	290	110	50	245	55	325
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4			6		2	
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	7	4	4	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	54.0	54.0	9.0	43.0	43.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	22.2%	60.0%	60.0%	10.0%	47.8%	47.8%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	59.0	57.2	57.2	44.9	39.9	39.9	23.0	23.0	23.0	23.0	23.0
Actuated g/C Ratio	0.66	0.64	0.64	0.50	0.44	0.44	0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.91	0.48	0.07	0.02	0.95	0.36	0.35	0.14	0.78	0.13	0.59
Control Delay	53.5	10.0	2.3	6.8	39.7	3.2	31.0	23.2	49.1	26.7	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	10.0	2.3	6.8	39.7	3.2	31.0	23.2	49.1	26.7	12.5
LOS	D	A	A	A	D	A	C	C	D	C	B
Approach Delay		19.6			33.3			28.3		28.1	
Approach LOS		B			C			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

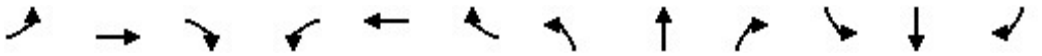
Splits and Phases: 3: W Jackass Hill Rd/W Long Ave & W Mineral Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	342	1082	71	5	1495	315	120	65	266	60	353
v/c Ratio	0.91	0.48	0.07	0.02	0.95	0.36	0.35	0.14	0.78	0.13	0.59
Control Delay	53.5	10.0	2.3	6.8	39.7	3.2	31.0	23.2	49.1	26.7	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	10.0	2.3	6.8	39.7	3.2	31.0	23.2	49.1	26.7	12.5
Queue Length 50th (ft)	142	142	0	1	425	0	56	24	141	26	40
Queue Length 95th (ft)	#297	250	18	4	#591	46	106	56	#265	58	125
Internal Link Dist (ft)		174			270			171		138	
Turn Bay Length (ft)	150		200	100		300	100		100		75
Base Capacity (vph)	390	2249	1032	316	1567	876	341	472	340	476	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.48	0.07	0.02	0.95	0.36	0.35	0.14	0.78	0.13	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	995	65	5	1375	290	110	50	10	245	55	325
Future Volume (veh/h)	315	995	65	5	1375	290	110	50	10	245	55	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	1082	71	5	1495	315	120	54	11	266	60	353
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	2102	938	291	1540	687	319	407	83	404	505	428
Arrive On Green	0.16	0.59	0.59	0.01	0.43	0.43	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	973	1508	307	1337	1870	1585
Grp Volume(v), veh/h	342	1082	71	5	1495	315	120	0	65	266	60	353
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	973	0	1815	1337	1870	1585
Q Serve(g_s), s	12.5	16.1	1.7	0.1	37.0	12.6	9.6	0.0	2.4	16.9	2.2	18.8
Cycle Q Clear(g_c), s	12.5	16.1	1.7	0.1	37.0	12.6	11.7	0.0	2.4	19.4	2.2	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	377	2102	938	291	1540	687	319	0	490	404	505	428
V/C Ratio(X)	0.91	0.51	0.08	0.02	0.97	0.46	0.38	0.00	0.13	0.66	0.12	0.83
Avail Cap(c_a), veh/h	402	2102	938	380	1540	687	319	0	490	404	505	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	10.8	7.9	14.2	24.9	18.0	29.2	0.0	24.9	32.2	24.8	30.9
Incr Delay (d2), s/veh	23.1	0.2	0.0	0.0	16.5	0.5	3.4	0.0	0.6	8.1	0.5	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	9.7	1.0	0.1	25.0	8.0	4.5	0.0	2.0	10.3	1.8	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	11.0	7.9	14.3	41.4	18.5	32.6	0.0	25.4	40.3	25.3	47.3
LnGrp LOS	D	B	A	B	D	B	C	A	C	D	C	D
Approach Vol, veh/h		1495			1815			185			679	
Approach Delay, s/veh		19.7			37.4			30.1			42.6	
Approach LOS		B			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	18.7	43.0		28.3	4.5	57.2				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		23.0	16.0	39.0		23.0	5.0	50.0				
Max Q Clear Time (g_c+I1), s		21.4	14.5	39.0		13.7	2.1	18.1				
Green Ext Time (p_c), s		0.5	0.2	0.0		0.6	0.0	10.0				

Intersection Summary												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									

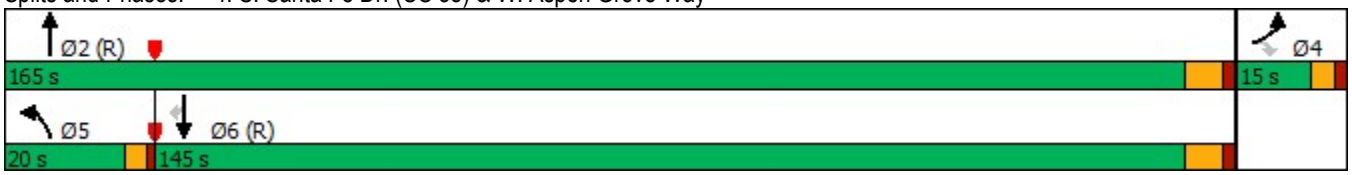
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		114				234
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1473	1740	
Travel Time (s)	42.0			22.3	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	170	185	3025	3940	315
Future Volume (vph)	150	170	185	3025	3940	315
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	15.0	20.0	165.0	145.0	145.0
Total Split (%)	8.3%	8.3%	11.1%	91.7%	80.6%	80.6%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	10.0	10.0	16.0	158.0	138.0	138.0
Actuated g/C Ratio	0.06	0.06	0.09	0.88	0.77	0.77
v/c Ratio	0.86	0.95	1.28	1.06	1.58	0.27
Control Delay	119.2	83.0	193.6	55.0	284.6	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.2	83.0	193.6	55.0	284.6	2.3
LOS	F	F	F	D	F	A
Approach Delay	99.9			63.0	263.7	
Approach LOS	F			E	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay: 174.2	Intersection LOS: F
Intersection Capacity Utilization 136.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	163	185	201	3288	4283	342
v/c Ratio	0.86	0.95	1.28	1.06	1.58	0.27
Control Delay	119.2	83.0	193.6	55.0	284.6	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.2	83.0	193.6	55.0	284.6	2.3
Queue Length 50th (ft)	100	86	~303	~957	~3765	29
Queue Length 95th (ft)	#171	#256	m#307	m#886	#3772	56
Internal Link Dist (ft)	1460			1393	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	190	195	157	3106	2713	1268
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.95	1.28	1.06	1.58	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	170	185	3025	3940	315
Future Volume (veh/h)	150	170	185	3025	3940	315
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	185	201	3288	4283	342
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	192	88	158	3119	2724	1215
Arrive On Green	0.06	0.06	0.09	0.88	0.77	0.77
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	163	185	201	3288	4283	342
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	8.4	10.0	16.0	158.0	138.0	11.6
Cycle Q Clear(g_c), s	8.4	10.0	16.0	158.0	138.0	11.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	192	88	158	3119	2724	1215
V/C Ratio(X)	0.85	2.10	1.27	1.05	1.57	0.28
Avail Cap(c_a), veh/h	192	88	158	3119	2724	1215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.3	85.0	82.0	11.0	21.0	6.2
Incr Delay (d2), s/veh	28.4	531.7	161.5	32.7	259.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	34.2	22.4	61.1	224.6	6.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	112.6	616.7	243.5	43.7	280.2	6.8
LnGrp LOS	F	F	F	F	F	A
Approach Vol, veh/h	348			3489	4625	
Approach Delay, s/veh	380.6			55.2	260.0	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		165.0		15.0	20.0	145.0
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		158.0		10.0	16.0	138.0
Max Q Clear Time (g_c+I1), s		160.0		12.0	18.0	140.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	180.5
HCM 6th LOS	F

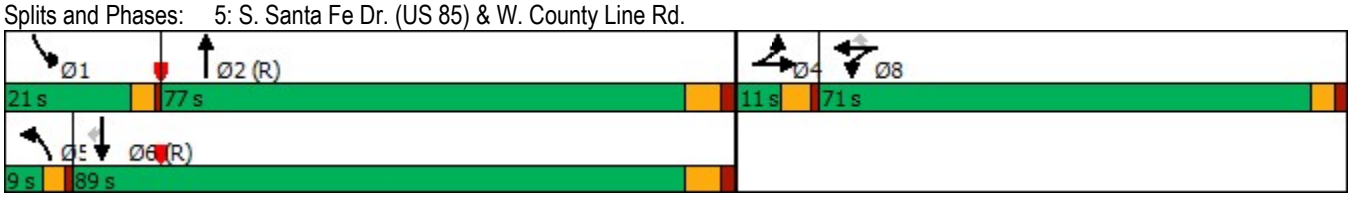
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	300		400
Storage Lanes	1		0	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor												
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950	0.957		0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1681	1694	1583	1770	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950	0.957		0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1681	1694	1583	1770	5085	1583	3433	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				185			133			67
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	25	5	470	25	910	25	2775	165	390	2385	40
Future Volume (vph)	25	5	470	25	910	25	2775	165	390	2385	40
Turn Type	Split	NA	Split	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	4	4	8	8		5	2		1	6	
Permitted Phases					8			Free			6
Detector Phase	4	4	8	8	8	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	10.0	10.0	31.0	31.0	31.0	8.0	12.0		8.0	33.0	33.0
Total Split (s)	11.0	11.0	71.0	71.0	71.0	9.0	77.0		21.0	89.0	89.0
Total Split (%)	6.1%	6.1%	39.4%	39.4%	39.4%	5.0%	42.8%		11.7%	49.4%	49.4%
Yellow Time (s)	4.0	4.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	7.0		4.0	7.0	7.0
Lead/Lag						Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.9	5.9	68.2	68.2	68.2	5.0	70.0	180.0	17.0	83.8	83.8
Actuated g/C Ratio	0.03	0.03	0.38	0.38	0.38	0.03	0.39	1.00	0.09	0.47	0.47
v/c Ratio	0.47	0.16	0.43	0.42	1.39	0.55	1.53	0.11	1.31	1.10	0.06
Control Delay	110.6	64.3	44.7	44.4	215.3	123.3	276.3	0.1	217.6	94.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.6	64.3	44.7	44.4	215.3	123.3	276.3	0.1	217.6	94.6	1.9
LOS	F	E	D	D	F	F	F	A	F	F	A
Approach Delay		98.1		155.2			259.7			110.4	
Approach LOS		F		F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 180.4	Intersection LOS: F
Intersection Capacity Utilization 127.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

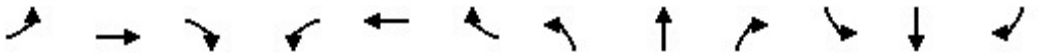


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	10	271	267	989	27	3016	179	424	2592	43
v/c Ratio	0.47	0.16	0.43	0.42	1.39	0.55	1.53	0.11	1.31	1.10	0.06
Control Delay	110.6	64.3	44.7	44.4	215.3	123.3	276.3	0.1	217.6	94.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.6	64.3	44.7	44.4	215.3	123.3	276.3	0.1	217.6	94.6	1.9
Queue Length 50th (ft)	32	6	254	250	~1427	32	~1815	0	~329	~1284	0
Queue Length 95th (ft)	71	30	352	346	#1696	#84	#1871	0	#448	#1353	10
Internal Link Dist (ft)		1870		2780			2048			660	
Turn Bay Length (ft)	100		250		50	160		400	300		400
Base Capacity (vph)	59	62	637	642	714	49	1977	1583	324	2367	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.16	0.43	0.42	1.39	0.55	1.53	0.11	1.31	1.10	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	5	5	470	25	910	25	2775	165	390	2385	40
Future Volume (veh/h)	25	5	5	470	25	910	25	2775	165	390	2385	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	5	5	530	0	0	27	3016	0	424	2592	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	19	19	597	0		35	3060		326	3443	1069
Arrive On Green	0.02	0.02	0.02	0.17	0.00	0.00	0.02	0.60	0.00	0.09	0.67	0.67
Sat Flow, veh/h	1781	858	858	3563	0	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	27	0	10	530	0	0	27	3016	0	424	2592	43
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1781	0	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	2.7	0.0	1.0	26.2	0.0	0.0	2.7	104.1	0.0	17.0	60.4	1.6
Cycle Q Clear(g_c), s	2.7	0.0	1.0	26.2	0.0	0.0	2.7	104.1	0.0	17.0	60.4	1.6
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	0	38	597	0		35	3060		326	3443	1069
V/C Ratio(X)	0.69	0.00	0.26	0.89	0.00		0.78	0.99		1.30	0.75	0.04
Avail Cap(c_a), veh/h	59	0	57	1306	0		49	3060		326	3443	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.4	0.0	86.6	73.3	0.0	0.0	87.9	35.3	0.0	81.5	19.4	9.8
Incr Delay (d2), s/veh	19.1	0.0	3.6	4.7	0.0	0.0	38.4	13.2	0.0	155.4	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	0.9	18.1	0.0	0.0	2.9	54.5	0.0	22.8	30.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.5	0.0	90.2	78.0	0.0	0.0	126.3	48.5	0.0	236.9	21.0	9.9
LnGrp LOS	F	A	F	E	A		F	D		F	C	A
Approach Vol, veh/h		37			530	A		3043	A		3059	
Approach Delay, s/veh		102.1			78.0			49.2			50.7	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.0	114.9		9.0	7.5	128.4		35.1				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	17.0	70.0		6.0	5.0	82.0		66.0				
Max Q Clear Time (g_c+I1), s	19.0	106.1		4.7	4.7	62.4		28.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	16.6		2.0				

Intersection Summary		
HCM 6th Ctrl Delay	52.5	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	400			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	3433	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	3433	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		314				36
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			837	866	
Travel Time (s)	7.0			11.4	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	140	640	715	3150	3850	280
Future Volume (vph)	140	640	715	3150	3850	280
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		8.0	35.0	30.0	
Total Split (s)	20.0		36.0	160.0	124.0	
Total Split (%)	11.1%		20.0%	88.9%	68.9%	
Yellow Time (s)	3.5		3.0	3.0	3.0	
All-Red Time (s)	0.5		1.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		None	C-Min	C-Min	
Act Effct Green (s)	13.1	180.0	34.9	157.9	119.0	180.0
Actuated g/C Ratio	0.07	1.00	0.19	0.88	0.66	1.00
v/c Ratio	0.61	0.44	1.17	0.77	1.25	0.19
Control Delay	91.2	0.9	151.0	5.8	127.1	0.0
Queue Delay	0.0	0.0	0.0	4.6	0.0	0.0
Total Delay	91.2	0.9	151.0	10.4	127.2	0.0
LOS	F	A	F	B	F	A
Approach Delay	17.1			36.5	118.6	
Approach LOS	B			D	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 73.4	Intersection LOS: E
Intersection Capacity Utilization 109.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	152	696	777	3424	4185	304
v/c Ratio	0.61	0.44	1.17	0.77	1.25	0.19
Control Delay	91.2	0.9	151.0	5.8	127.1	0.0
Queue Delay	0.0	0.0	0.0	4.6	0.0	0.0
Total Delay	91.2	0.9	151.0	10.4	127.2	0.0
Queue Length 50th (ft)	91	0	~562	435	~2236	0
Queue Length 95th (ft)	132	0	#729	528	m#1579	m0
Internal Link Dist (ft)	230			757	786	
Turn Bay Length (ft)	125		400			200
Base Capacity (vph)	305	1583	665	4460	3361	1583
Starvation Cap Reductn	0	0	0	436	94	0
Spillback Cap Reductn	0	0	0	970	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.44	1.17	0.98	1.28	0.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	640	715	3150	3850	280
Future Volume (veh/h)	140	640	715	3150	3850	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	0	777	3424	4185	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	193		614	4566	3545	
Arrive On Green	0.06	0.00	0.18	0.89	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	5274	5274	1585
Grp Volume(v), veh/h	152	0	777	3424	4185	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1702	1702	1585
Q Serve(g_s), s	7.8	0.0	32.0	38.7	125.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	32.0	38.7	125.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	193		614	4566	3545	
V/C Ratio(X)	0.79		1.26	0.75	1.18	
Avail Cap(c_a), veh/h	307		614	4566	3545	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	83.9	0.0	74.0	3.1	0.0	0.0
Incr Delay (d2), s/veh	7.0	0.0	131.8	1.2	81.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	37.4	9.7	34.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	91.0	0.0	205.8	4.2	81.5	0.0
LnGrp LOS	F		F	A	F	
Approach Vol, veh/h	152	A		4201	4185	A
Approach Delay, s/veh	91.0			41.5	81.5	
Approach LOS	F			D	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	36.0	130.0				166.0	14.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	32.0	119.0				155.0	16.0
Max Q Clear Time (g_c+I1), s	34.0	127.0				40.7	9.8
Green Ext Time (p_c), s	0.0	0.0				95.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	62.0
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected										0.950		
Satd. Flow (prot)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	1987	0	0	1987	1689	0	1987	0	1888	1987	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	1076	0	848
Demand Flow Rate, veh/h	0	1098	0	865
Vehicles Circulating, veh/h	865	0	865	0
Vehicles Exiting, veh/h	0	865	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	10.6
Approach LOS	-	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	R	L	TR	R
Assumed Moves	LT	R	LT	R	LT	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		1.000	0.000	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	0	4.328	1098	4.328	0	4.645	4.328	0
Entry Flow, veh/h	0	1380	0	1938	0	1938	865	0	1380
Cap Entry Lane, veh/h	681	0.980	1420	0.980	681	0.980	1350	1420	0.980
Entry HV Adj Factor	1.000	0	1.000	1076	1.000	0	0.980	1.000	0
Flow Entry, veh/h	0	1353	0	1900	0	1900	848	0	1353
Cap Entry, veh/h	681	0.000	1420	0.566	681	0.000	1323	1420	0.000
V/C Ratio	0.000	2.7	0.000	0.0	0.000	0.0	0.641	0.000	2.7
Control Delay, s/veh	5.3	A	2.5	A	5.3	A	10.6	2.5	A
LOS	A	0	A	4	A	0	B	A	0
95th %tile Queue, veh	0		0		0		5	0	

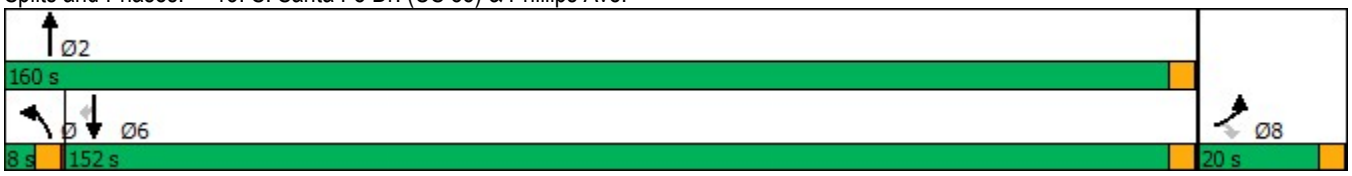
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	200	0	150			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		29				66
Link Speed (mph)	30			50	50	
Link Distance (ft)	657			1094	496	
Travel Time (s)	14.9			14.9	6.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	180	45	25	3685	4385	105
Future Volume (vph)	180	45	25	3685	4385	105
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	8.0	160.0	152.0	152.0
Total Split (%)	11.1%	11.1%	4.4%	88.9%	84.4%	84.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	14.5	14.5	4.0	156.0	149.6	149.6
Actuated g/C Ratio	0.08	0.08	0.02	0.87	0.84	0.84
v/c Ratio	0.71	0.32	0.69	0.90	1.12	0.09
Control Delay	94.0	43.0	152.2	10.9	74.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.0	43.0	152.2	10.9	74.0	1.4
LOS	F	D	F	B	E	A
Approach Delay	83.8			11.8	72.3	
Approach LOS	F			B	E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 178.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 46.0	Intersection LOS: D
Intersection Capacity Utilization 96.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	196	49	27	4005	4766	114
v/c Ratio	0.71	0.32	0.69	0.90	1.12	0.09
Control Delay	94.0	43.0	152.2	10.9	74.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.0	43.0	152.2	10.9	74.0	1.4
Queue Length 50th (ft)	117	22	32	843	~2384	9
Queue Length 95th (ft)	164	70	#96	886	#2379	21
Internal Link Dist (ft)	577			1014	416	
Turn Bay Length (ft)	200		150			200
Base Capacity (vph)	308	168	39	4444	4263	1337
Starvation Cap Reductn	0	0	0	0	50	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.29	0.69	0.90	1.13	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	180	45	25	3685	4385	105
Future Volume (veh/h)	180	45	25	3685	4385	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	49	27	4005	4766	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	239	110	35	4520	4305	
Arrive On Green	0.07	0.07	0.02	0.89	0.84	0.00
Sat Flow, veh/h	3456	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	196	49	27	4005	4766	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1702	1702	1585
Q Serve(g_s), s	9.8	5.2	2.6	73.2	148.0	0.0
Cycle Q Clear(g_c), s	9.8	5.2	2.6	73.2	148.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	110	35	4520	4305	
V/C Ratio(X)	0.82	0.45	0.78	0.89	1.11	
Avail Cap(c_a), veh/h	315	144	41	4538	4305	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	80.6	78.5	85.7	5.4	13.8	0.0
Incr Delay (d2), s/veh	12.2	2.8	56.4	2.4	52.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	4.0	3.1	18.1	75.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	92.8	81.3	142.1	7.8	65.9	0.0
LnGrp LOS	F	F	F	A	F	
Approach Vol, veh/h	245			4032	4766	A
Approach Delay, s/veh	90.5			8.7	65.9	
Approach LOS	F			A	E	

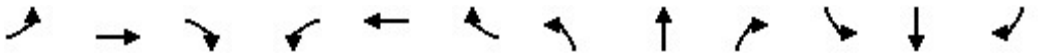
Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		159.4			7.4	152.0	16.1
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		156.0			4.0	148.0	16.0
Max Q Clear Time (g_c+I1), s		75.2			4.6	150.0	11.8
Green Ext Time (p_c), s		78.5			0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

2025 TOTAL TRAFFIC



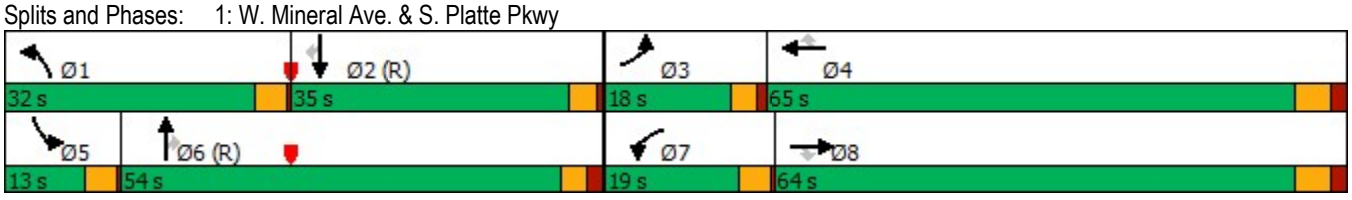
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	100		0	200		300	400		0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.987	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	3539	1583	3433	1747	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	1770	3539	1583	3433	1747	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387			201		3	200			109
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

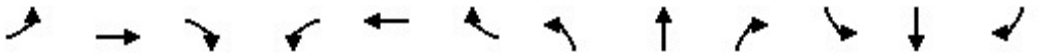
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1670	550	130	350	185	515	380	365	100	20	65
Future Volume (vph)	180	1670	550	130	350	185	515	380	365	100	20	65
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	18.0	64.0	64.0	19.0	65.0	65.0	32.0	54.0	54.0	13.0	35.0	35.0
Total Split (%)	12.0%	42.7%	42.7%	12.7%	43.3%	43.3%	21.3%	36.0%	36.0%	8.7%	23.3%	23.3%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.8	58.6	58.6	14.4	60.2	60.2	27.1	49.3	49.3	8.7	31.9	31.9
Actuated g/C Ratio	0.09	0.39	0.39	0.10	0.40	0.40	0.18	0.33	0.33	0.06	0.21	0.21
v/c Ratio	0.67	0.91	0.70	0.83	0.27	0.27	0.90	0.79	0.57	0.55	0.06	0.17
Control Delay	77.9	51.5	17.6	105.4	42.0	17.4	79.0	56.5	21.4	79.6	48.4	2.9
Queue Delay	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	33.4	0.0	0.0
Total Delay	77.9	97.9	17.6	105.4	42.0	17.4	79.0	56.5	21.6	113.0	48.4	2.9
LOS	E	F	B	F	D	B	E	E	C	F	D	A
Approach Delay		78.0			47.5			56.6			67.3	
Approach LOS		E			D			E			E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 67.1	Intersection LOS: E
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy

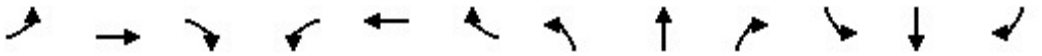




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1815	598	141	380	201	560	453	357	109	22	71
v/c Ratio	0.67	0.91	0.70	0.83	0.27	0.27	0.90	0.79	0.57	0.55	0.06	0.17
Control Delay	77.9	51.5	17.6	105.4	42.0	17.4	79.0	56.5	21.4	79.6	48.4	2.9
Queue Delay	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	33.4	0.0	0.0
Total Delay	77.9	97.9	17.6	105.4	42.0	17.4	79.0	56.5	21.6	113.0	48.4	2.9
Queue Length 50th (ft)	96	617	177	144	123	54	277	422	131	54	17	0
Queue Length 95th (ft)	140	687	330	#258	187	118	#371	573	245	88	44	13
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	225			100			200		300	400		
Base Capacity (vph)	320	1987	854	177	1419	755	640	576	628	205	396	422
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	650	0	0	0	0	0	0	35	91	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.36	0.70	0.80	0.27	0.27	0.88	0.79	0.60	0.96	0.06	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1670	550	130	350	185	515	380	365	100	20	65
Future Volume (veh/h)	180	1670	550	130	350	185	515	380	365	100	20	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1815	0	141	380	201	560	413	397	109	22	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	1945		161	1424	635	613	669	567	153	430	
Arrive On Green	0.07	0.38	0.00	0.18	0.80	0.80	0.17	0.36	0.36	0.04	0.23	0.00
Sat Flow, veh/h	3456	5106	1585	1781	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	196	1815	0	141	380	201	560	413	397	109	22	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	8.4	51.2	0.0	11.6	4.0	5.1	23.2	27.3	32.2	4.7	1.4	0.0
Cycle Q Clear(g_c), s	8.4	51.2	0.0	11.6	4.0	5.1	23.2	27.3	32.2	4.7	1.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1945		161	1424	635	613	669	567	153	430	
V/C Ratio(X)	0.80	0.93		0.88	0.27	0.32	0.91	0.62	0.70	0.71	0.05	
Avail Cap(c_a), veh/h	323	1974		178	1424	635	665	669	567	207	430	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	68.7	44.6	0.0	60.6	9.3	9.4	61.0	39.7	41.3	70.7	45.0	0.0
Incr Delay (d2), s/veh	10.5	8.8	0.0	33.2	0.1	0.3	16.3	4.2	7.0	7.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	30.2	0.0	10.3	2.5	2.8	17.5	19.5	19.4	4.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.2	53.4	0.0	93.8	9.4	9.7	77.3	43.9	48.3	77.7	45.2	0.0
LnGrp LOS	E	D		F	A	A	E	D	D	E	D	
Approach Vol, veh/h		2011	A		722			1370			131	A
Approach Delay, s/veh		55.9			26.0			58.9			72.3	
Approach LOS		E			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.8	39.5	14.6	66.1	10.7	58.7	17.6	63.1
Change Period (Y+Rc), s	4.0	* 5	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	28.0	* 31	14.0	59.0	9.0	49.0	15.0	58.0
Max Q Clear Time (g_c+I1), s	25.2	3.4	10.4	7.1	6.7	34.2	13.6	53.2
Green Ext Time (p_c), s	0.7	0.1	0.2	3.1	0.1	3.6	0.0	3.9

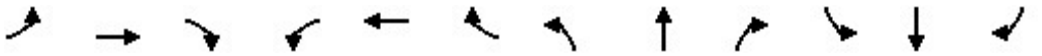
Intersection Summary	
HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



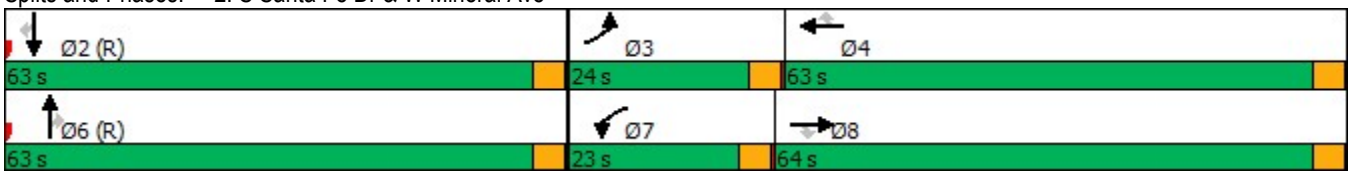
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	220		200	0		300	0		250
Storage Lanes	2		1	1		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950								
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			36			36			189			81
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		237			299			256			219	
Travel Time (s)		5.4			6.8			5.8			5.0	

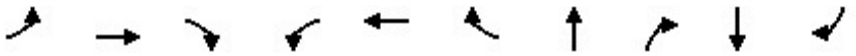
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	310	1680	440	250	605	270	1965	265	2205	150
Future Volume (vph)	310	1680	440	250	605	270	1965	265	2205	150
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4		6		2	
Permitted Phases			8			4		6		2
Detector Phase	3	8	8	7	4	4	6	6	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	24.0	64.0	64.0	23.0	63.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	16.0%	42.7%	42.7%	15.3%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	18.6	60.0	60.0	19.0	60.4	60.4	59.0	59.0	59.0	59.0
Actuated g/C Ratio	0.12	0.40	0.40	0.13	0.40	0.40	0.39	0.39	0.39	0.39
v/c Ratio	0.79	1.29	0.73	1.21	0.46	0.44	1.07	0.39	1.20	0.24
Control Delay	78.1	173.6	42.9	182.9	34.4	31.2	84.4	12.4	134.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.1	173.6	42.9	182.9	34.4	31.2	84.4	12.4	134.4	15.9
LOS	E	F	D	F	C	C	F	B	F	B
Approach Delay		137.8			66.7		75.9		126.9	
Approach LOS		F			E		E		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 107.8	Intersection LOS: F
Intersection Capacity Utilization 112.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr & W Mineral Ave



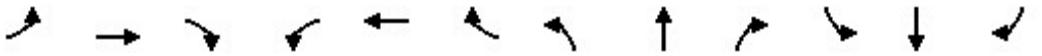


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	337	1826	478	272	658	293	2136	288	2397	163
v/c Ratio	0.79	1.29	0.73	1.21	0.46	0.44	1.07	0.39	1.20	0.24
Control Delay	78.1	173.6	42.9	182.9	34.4	31.2	84.4	12.4	134.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.1	173.6	42.9	182.9	34.4	31.2	84.4	12.4	134.4	15.9
Queue Length 50th (ft)	165	~1193	367	~324	250	184	~843	62	~1038	51
Queue Length 95th (ft)	222	#1329	512	#513	310	274	#934	141	#1124	106
Internal Link Dist (ft)		157			219		176		139	
Turn Bay Length (ft)	150			220		200		300		250
Base Capacity (vph)	457	1415	654	224	1426	659	2000	737	2000	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.29	0.73	1.21	0.46	0.44	1.07	0.39	1.20	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

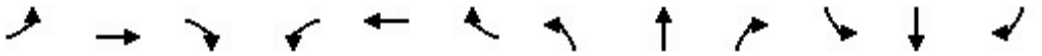
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1680	440	250	605	270	0	1965	265	0	2205	150
Future Volume (veh/h)	310	1680	440	250	605	270	0	1965	265	0	2205	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	337	1826	478	272	658	293	0	2136	288	0	2397	163
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	0	2	2
Cap, veh/h	388	1421	634	226	1473	657	0	2008	623	0	2008	623
Arrive On Green	0.11	0.40	0.40	0.13	0.41	0.41	0.00	0.39	0.39	0.00	0.39	0.39
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	337	1826	478	272	658	293	0	2136	288	0	2397	163
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	14.4	60.0	38.9	19.0	20.0	19.9	0.0	59.0	20.2	0.0	59.0	10.4
Cycle Q Clear(g_c), s	14.4	60.0	38.9	19.0	20.0	19.9	0.0	59.0	20.2	0.0	59.0	10.4
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	388	1421	634	226	1473	657	0	2008	623	0	2008	623
V/C Ratio(X)	0.87	1.28	0.75	1.21	0.45	0.45	0.00	1.06	0.46	0.00	1.19	0.26
Avail Cap(c_a), veh/h	461	1421	634	226	1473	657	0	2008	623	0	2008	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	45.0	38.7	65.5	31.5	31.5	0.0	45.5	33.7	0.0	45.5	30.8
Incr Delay (d2), s/veh	14.4	133.5	5.1	126.6	0.2	0.5	0.0	39.5	2.5	0.0	92.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	75.8	22.6	25.2	13.6	12.4	0.0	43.2	13.0	0.0	59.1	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	178.5	43.8	192.1	31.8	32.0	0.0	85.0	36.2	0.0	137.8	31.8
LnGrp LOS	E	F	D	F	C	C	A	F	D	A	F	C
Approach Vol, veh/h		2641			1223			2424			2560	
Approach Delay, s/veh		141.6			67.5			79.2			131.0	
Approach LOS		F			E			E			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		63.0	20.8	66.2		63.0	23.0	64.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		59.0	20.0	59.0		59.0	19.0	60.0				
Max Q Clear Time (g_c+I1), s		61.0	16.4	22.0		61.0	21.0	62.0				
Green Ext Time (p_c), s		0.0	0.4	6.5		0.0	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			111.2									
HCM 6th LOS			F									



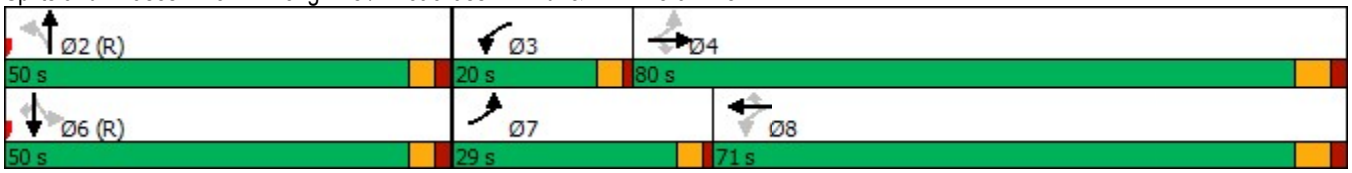
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1792	0	1770	1863	1583
Flt Permitted	0.218			0.059			0.750			0.697		
Satd. Flow (perm)	406	3539	1583	110	3539	1583	1397	1792	0	1298	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44			245		12				250
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1378			1230			1150			1120	
Travel Time (s)		23.5			21.0			26.1			25.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	310	1620	15	5	780	225	105	60	210	10	230
Future Volume (vph)	310	1620	15	5	780	225	105	60	210	10	230
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	3.0	25.0	25.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	8.0	31.0	31.0	8.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	29.0	80.0	80.0	20.0	71.0	71.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	19.3%	53.3%	53.3%	13.3%	47.3%	47.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?		Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	90.5	86.5	86.5	72.6	64.9	64.9	50.5	50.5	50.5	50.5	50.5
Actuated g/C Ratio	0.60	0.58	0.58	0.48	0.43	0.43	0.34	0.34	0.34	0.34	0.34
v/c Ratio	0.80	0.86	0.02	0.04	0.55	0.30	0.24	0.14	0.52	0.02	0.36
Control Delay	14.7	32.5	2.3	12.6	33.4	3.7	39.1	32.0	46.5	36.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	32.5	2.3	12.6	33.4	3.7	39.1	32.0	46.5	36.2	5.8
LOS	B	C	A	B	C	A	D	C	D	D	A
Approach Delay		29.4			26.7			36.0		25.5	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization 78.9%	ICU Level of Service D
Analysis Period (min) 15	

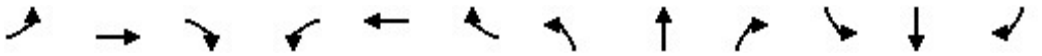
Splits and Phases: 3: W. Long Ave./W. Jackass Hill Rd. & W. Mineral Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	337	1761	15	5	848	245	114	87	228	11	250
v/c Ratio	0.80	0.86	0.02	0.04	0.55	0.30	0.24	0.14	0.52	0.02	0.36
Control Delay	14.7	32.5	2.3	12.6	33.4	3.7	39.1	32.0	46.5	36.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	32.5	2.3	12.6	33.4	3.7	39.1	32.0	46.5	36.2	5.8
Queue Length 50th (ft)	188	945	0	2	325	0	80	50	178	7	0
Queue Length 95th (ft)	m125	m730	m0	7	388	52	142	100	286	24	65
Internal Link Dist (ft)		1298			1150			1070		1040	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	472	2039	930	237	1550	830	470	611	437	627	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.86	0.02	0.02	0.55	0.30	0.24	0.14	0.52	0.02	0.36

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1620	15	5	780	225	105	60	20	210	10	230
Future Volume (veh/h)	310	1620	15	5	780	225	105	60	20	210	10	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	337	1761	15	5	848	245	114	65	22	228	11	250
Peak Hour Factor	0.92	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	1753	782	55	1309	584	495	539	182	536	754	639
Arrive On Green	0.04	0.16	0.16	0.00	0.37	0.37	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1118	1337	452	1310	1870	1585
Grp Volume(v), veh/h	337	1761	15	5	848	245	114	0	87	228	11	250
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1118	0	1789	1310	1870	1585
Q Serve(g_s), s	16.8	74.0	1.2	0.3	29.7	17.3	10.2	0.0	4.6	19.8	0.5	16.8
Cycle Q Clear(g_c), s	16.8	74.0	1.2	0.3	29.7	17.3	10.8	0.0	4.6	24.4	0.5	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	365	1753	782	55	1309	584	495	0	721	536	754	639
V/C Ratio(X)	0.92	1.00	0.02	0.09	0.65	0.42	0.23	0.00	0.12	0.43	0.01	0.39
Avail Cap(c_a), veh/h	433	1753	782	238	1540	687	495	0	721	536	754	639
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	62.8	32.3	39.8	39.3	35.4	30.1	0.0	28.1	35.8	26.9	31.7
Incr Delay (d2), s/veh	3.2	7.5	0.0	0.7	0.7	0.5	1.1	0.0	0.3	2.5	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	40.3	0.8	0.2	18.8	11.0	5.3	0.0	3.7	11.1	0.5	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	70.3	32.3	40.5	40.1	35.9	31.2	0.0	28.4	38.2	26.9	33.5
LnGrp LOS	D	F	C	D	D	D	C	A	C	D	C	C
Approach Vol, veh/h		2113			1098			201			489	
Approach Delay, s/veh		64.8			39.1			30.0			35.6	
Approach LOS		E			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		65.4	4.6	80.0		65.4	23.3	61.2				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0	4.0	6.0				
Max Green Setting (Gmax), s		45.0	16.0	74.0		45.0	25.0	65.0				
Max Q Clear Time (g_c+I1), s		12.8	2.3	76.0		26.4	18.8	31.7				
Green Ext Time (p_c), s		1.0	0.0	0.0		1.6	0.5	7.5				

Intersection Summary												
HCM 6th Ctrl Delay			52.1									
HCM 6th LOS			D									

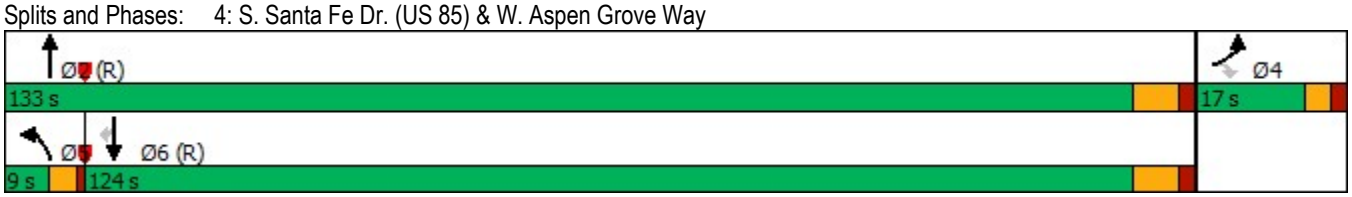
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		59				82
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1364	1740	
Travel Time (s)	42.0			20.7	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	100	95	30	2515	2260	75
Future Volume (vph)	100	95	30	2515	2260	75
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	17.0	17.0	9.0	133.0	124.0	124.0
Total Split (%)	11.3%	11.3%	6.0%	88.7%	82.7%	82.7%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	10.1	10.1	6.0	127.9	119.9	119.9
Actuated g/C Ratio	0.07	0.07	0.04	0.85	0.80	0.80
v/c Ratio	0.47	0.64	0.47	0.91	0.87	0.06
Control Delay	73.9	49.4	72.1	36.6	15.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.9	49.4	72.1	36.6	15.4	0.8
LOS	E	D	E	D	B	A
Approach Delay	62.0			37.0	14.9	
Approach LOS	E			D	B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 27.8	Intersection LOS: C
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	109	103	33	2734	2457	82
v/c Ratio	0.47	0.64	0.47	0.91	0.87	0.06
Control Delay	73.9	49.4	72.1	36.6	15.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.9	49.4	72.1	36.6	15.4	0.8
Queue Length 50th (ft)	54	42	30	1287	795	0
Queue Length 95th (ft)	86	108	m36	m1302	927	11
Internal Link Dist (ft)	1460			1284	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	274	180	70	3017	2828	1281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.57	0.47	0.91	0.87	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	95	30	2515	2260	75
Future Volume (veh/h)	100	95	30	2515	2260	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	103	33	2734	2457	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	268	123	42	2994	2814	1255
Arrive On Green	0.08	0.08	0.02	0.84	0.79	0.79
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	109	103	33	2734	2457	82
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.5	9.6	2.8	78.9	69.9	1.7
Cycle Q Clear(g_c), s	4.5	9.6	2.8	78.9	69.9	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	268	123	42	2994	2814	1255
V/C Ratio(X)	0.41	0.84	0.78	0.91	0.87	0.07
Avail Cap(c_a), veh/h	276	127	59	2994	2814	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	68.2	72.8	8.1	10.5	3.4
Incr Delay (d2), s/veh	1.0	35.7	34.2	5.5	4.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	14.5	3.0	27.6	28.7	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.9	104.0	107.0	13.6	14.6	3.5
LnGrp LOS	E	F	F	B	B	A
Approach Vol, veh/h	212			2767	2539	
Approach Delay, s/veh	84.9			14.7	14.3	
Approach LOS	F			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		133.4		16.6	7.6	125.8
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		126.0		12.0	5.0	117.0
Max Q Clear Time (g_c+I1), s		80.9		11.6	4.8	71.9
Green Ext Time (p_c), s		37.9		0.0	0.0	33.3

Intersection Summary		
HCM 6th Ctrl Delay		17.2
HCM 6th LOS		B

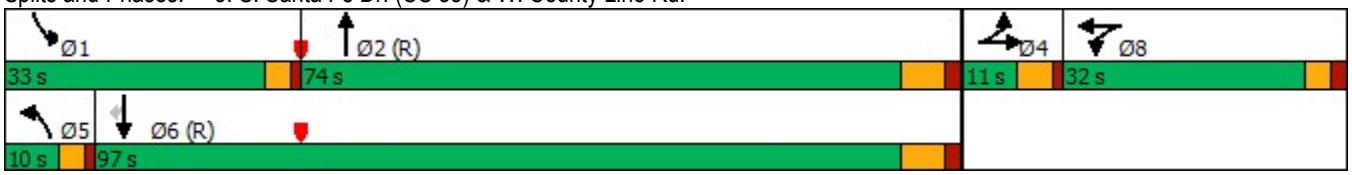
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1770	1863	0	3433	1863	1583	1863	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						429			160			80
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	20	20	140	5	395	2130	370	435	1150	25	
Future Volume (vph)	20	20	140	5	395	2130	370	435	1150	25	
Turn Type	Split	NA	Split	NA	Free	NA	Free	Prot	NA	Perm	
Protected Phases	4	4	8	8		2		1	6		5
Permitted Phases					Free		Free			6	
Detector Phase	4	4	8	8		2		1	6	6	
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
Minimum Split (s)	10.0	10.0	31.0	31.0		12.0		8.0	33.0	33.0	8.0
Total Split (s)	11.0	11.0	32.0	32.0		74.0		33.0	97.0	97.0	10.0
Total Split (%)	7.3%	7.3%	21.3%	21.3%		49.3%		22.0%	64.7%	64.7%	7%
Yellow Time (s)	4.0	4.0	3.0	3.0		5.0		3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0		2.0		1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0		7.0		4.0	7.0	7.0	
Lead/Lag						Lag		Lead	Lag	Lag	Lead
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None		C-Max		None	C-Max	C-Max	None
Act Effct Green (s)	5.9	5.9	12.0	12.0	150.0	67.0	150.0	46.2	117.2	117.2	
Actuated g/C Ratio	0.04	0.04	0.08	0.08	1.00	0.45	1.00	0.31	0.78	0.78	
v/c Ratio	0.32	0.30	0.55	0.03	0.27	1.47	0.25	0.87	0.45	0.02	
Control Delay	82.5	80.9	73.9	62.4	0.4	245.2	0.4	67.0	6.7	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	82.5	80.9	73.9	62.4	0.4	245.2	0.4	67.0	6.7	0.0	
LOS	F	F	E	E	A	F	A	E	A	A	
Approach Delay		81.7		20.0		209.0			22.9		
Approach LOS		F		C		F			C		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 122.2	Intersection LOS: F
Intersection Capacity Utilization 107.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	22	152	5	429	2315	402	473	1250	27
v/c Ratio	0.32	0.30	0.55	0.03	0.27	1.47	0.25	0.87	0.45	0.02
Control Delay	82.5	80.9	73.9	62.4	0.4	245.2	0.4	67.0	6.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.5	80.9	73.9	62.4	0.4	245.2	0.4	67.0	6.7	0.0
Queue Length 50th (ft)	21	21	75	5	0	~1627	0	448	205	0
Queue Length 95th (ft)	53	53	111	19	0	#1753	0	#696	267	0
Internal Link Dist (ft)		1870		2780		2048			660	
Turn Bay Length (ft)	100		250		50		400	600		360
Base Capacity (vph)	70	74	617	335	1583	1580	1583	545	2765	1254
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.30	0.25	0.01	0.27	1.47	0.25	0.87	0.45	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	0	140	5	395	0	2130	370	435	1150	25
Future Volume (veh/h)	20	20	0	140	5	395	0	2130	370	435	1150	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	22	0	152	5	0	0	2315	0	473	1250	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	40	0	205	111		1	2081		344	2863	1277
Arrive On Green	0.02	0.02	0.00	0.06	0.06	0.00	0.00	0.59	0.00	0.19	0.81	0.81
Sat Flow, veh/h	1781	1870	0	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	22	0	152	5	0	0	2315	0	473	1250	27
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.8	1.7	0.0	6.5	0.4	0.0	0.0	87.9	0.0	29.0	15.8	0.5
Cycle Q Clear(g_c), s	1.8	1.7	0.0	6.5	0.4	0.0	0.0	87.9	0.0	29.0	15.8	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	40	0	205	111		1	2081		344	2863	1277
V/C Ratio(X)	0.57	0.55	0.00	0.74	0.04		0.00	1.11		1.37	0.44	0.02
Avail Cap(c_a), veh/h	71	75	0	622	337		71	2081		344	2863	1277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	72.7	0.0	69.4	66.5	0.0	0.0	31.1	0.0	60.5	4.4	2.9
Incr Delay (d2), s/veh	12.7	11.0	0.0	5.2	0.2	0.0	0.0	58.0	0.0	185.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	1.7	0.0	5.4	0.3	0.0	0.0	68.1	0.0	45.8	7.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	83.6	0.0	74.6	66.7	0.0	0.0	89.1	0.0	246.0	4.9	2.9
LnGrp LOS	F	F	A	E	E		A	F		F	A	A
Approach Vol, veh/h		44			157	A		2315	A		1750	
Approach Delay, s/veh		84.5			74.3			89.1			70.0	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.0	94.9		8.2	0.0	127.9		13.9				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	29.0	67.0		6.0	6.0	90.0		27.0				
Max Q Clear Time (g_c+I1), s	31.0	89.9		3.8	0.0	17.8		8.5				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	11.3		0.4				

Intersection Summary		
HCM 6th Ctrl Delay	80.7	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

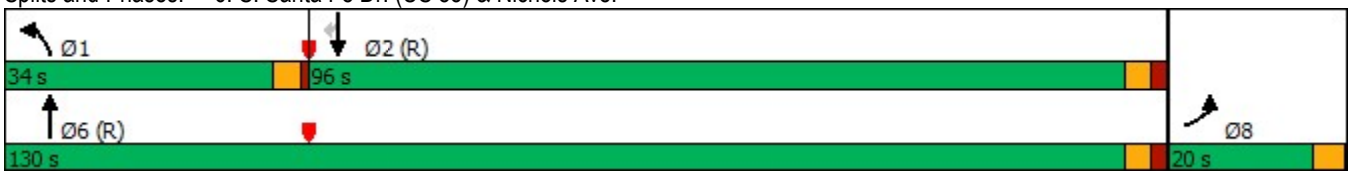
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	3614	1583	3433	3539	5085	1583
Flt Permitted			0.950			
Satd. Flow (perm)	3614	1583	3433	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		369				393
Link Speed (mph)	30			50	50	
Link Distance (ft)	312			855	868	
Travel Time (s)	7.1			11.7	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	515	415	2180	2285	600	
Future Volume (vph)	515	415	2180	2285	600	
Turn Type	Free	Prot	NA	NA	Perm	
Protected Phases		1	6	2		8
Permitted Phases	Free				2	
Detector Phase		1	6	2	2	
Switch Phase						
Minimum Initial (s)		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		8.0	35.0	30.0	30.0	20.0
Total Split (s)		34.0	130.0	96.0	96.0	20.0
Total Split (%)		22.7%	86.7%	64.0%	64.0%	13%
Yellow Time (s)		3.0	3.0	3.0	3.0	3.5
All-Red Time (s)		1.0	2.0	2.0	2.0	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0	5.0	5.0	5.0	
Lead/Lag		Lead		Lag	Lag	
Lead-Lag Optimize?						
Recall Mode		None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	150.0	24.8	150.0	116.2	116.2	
Actuated g/C Ratio	1.00	0.17	1.00	0.77	0.77	
v/c Ratio	0.35	0.79	0.67	0.63	0.50	
Control Delay	0.6	70.7	1.0	3.4	0.3	
Queue Delay	0.0	0.0	0.0	0.3	0.4	
Total Delay	0.6	70.7	1.0	3.7	0.7	
LOS	A	E	A	A	A	
Approach Delay			12.2	3.1		
Approach LOS			B	A		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	560	451	2370	2484	652
v/c Ratio	0.35	0.79	0.67	0.63	0.50
Control Delay	0.6	70.7	1.0	3.4	0.3
Queue Delay	0.0	0.0	0.0	0.3	0.4
Total Delay	0.6	70.7	1.0	3.7	0.7
Queue Length 50th (ft)	0	221	0	124	0
Queue Length 95th (ft)	0	272	0	m100	m0
Internal Link Dist (ft)			775	788	
Turn Bay Length (ft)		200			200
Base Capacity (vph)	1583	688	3539	3937	1314
Starvation Cap Reductn	0	0	0	702	262
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.66	0.67	0.77	0.62

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

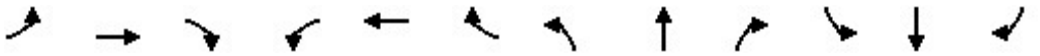
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	515	415	2180	2285	600
Future Volume (veh/h)	0	515	415	2180	2285	600
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	451	2370	2484	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2		513	3435	4042	
Arrive On Green	0.00	0.00	0.15	0.97	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	3647	5274	1585
Grp Volume(v), veh/h	0	0	451	2370	2484	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1777	1702	1585
Q Serve(g_s), s	0.0	0.0	19.2	10.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	19.2	10.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	2		513	3435	4042	
V/C Ratio(X)	0.00		0.88	0.69	0.61	
Avail Cap(c_a), veh/h	369		691	3435	4042	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	62.6	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.9	1.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	13.8	1.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.0	72.4	1.4	0.1	0.0
LnGrp LOS	A		E	A	A	
Approach Vol, veh/h	0	A		2821	2484	A
Approach Delay, s/veh	0.0			12.8	0.1	
Approach LOS				B	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	26.3	123.7				150.0	0.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	30.0	91.0				125.0	16.0
Max Q Clear Time (g_c+I1), s	21.2	2.0				12.0	0.0
Green Ext Time (p_c), s	1.1	44.4				51.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



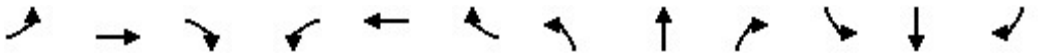
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850		0.997			0.995	
Flt Protected		0.974			0.960			0.999		0.950		
Satd. Flow (prot)	0	1873	0	0	1907	1689	0	1979	0	1888	1977	0
Flt Permitted		0.974			0.960			0.999		0.950		
Satd. Flow (perm)	0	1873	0	0	1907	1689	0	1979	0	1888	1977	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			350			385			424	
Travel Time (s)		9.7			8.0			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	3.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	21	1065	255	684
Demand Flow Rate, veh/h	21	1087	260	698
Vehicles Circulating, veh/h	721	266	570	38
Vehicles Exiting, veh/h	10	559	167	261
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	0.1	7.2	6.3
Approach LOS	A	A	A	A

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	R	L	TR	R
Assumed Moves	LT	R	LT	R	LT	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		0.799	0.201	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	5	4.328	1054	4.328	5	4.645	4.328	5
Entry Flow, veh/h	16	1164	33	1938	255	1938	554	139	1366
Cap Entry Lane, veh/h	769	0.980	1133	0.980	875	0.980	1303	1375	0.980
Entry HV Adj Factor	0.994	5	0.967	1033	0.981	5	0.980	0.980	5
Flow Entry, veh/h	16	1141	32	1900	250	1900	543	136	1339
Cap Entry, veh/h	765	0.004	1095	0.544	858	0.003	1278	1348	0.004
V/C Ratio	0.021	3.2	0.029	0.0	0.292	0.0	0.425	0.101	2.7
Control Delay, s/veh	4.9	A	3.5	A	7.4	A	7.0	3.5	A
LOS	A	0	A	3	A	0	A	A	0
95th %tile Queue, veh	0		0		1		2	0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	50		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850			0.995			0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3522	0	1770	3532	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	1770	1583	0	1770	3522	0	1770	3532	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		219			254			424			449	
Travel Time (s)		5.0			5.8			9.6			10.2	

Intersection Summary	
Area Type:	Other

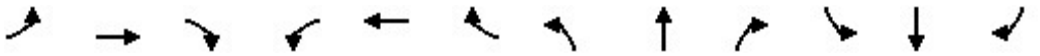
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	0	10	15	0	90	10	1140	40	75	605	10
Future Vol, veh/h	25	0	10	15	0	90	10	1140	40	75	605	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	11	16	0	98	11	1239	43	82	658	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1470	2132	335	1776	2116	641	669	0	0	1282	0	0
Stage 1	828	828	-	1283	1283	-	-	-	-	-	-	-
Stage 2	642	1304	-	493	833	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	89	49	661	52	50	417	917	-	-	537	-	-
Stage 1	332	384	-	175	234	-	-	-	-	-	-	-
Stage 2	429	229	-	526	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	41	661	45	42	417	917	-	-	537	-	-
Mov Cap-2 Maneuver	60	41	-	45	42	-	-	-	-	-	-	-
Stage 1	328	325	-	173	231	-	-	-	-	-	-	-
Stage 2	324	226	-	438	324	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	79.7	31.8	0.1	1.4
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	917	-	-	60	661	45	417	537	-	-
HCM Lane V/C Ratio	0.012	-	-	0.453	0.016	0.362	0.235	0.152	-	-
HCM Control Delay (s)	9	-	-	107.4	10.5	124.9	16.3	12.9	-	-
HCM Lane LOS	A	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.7	0.1	1.3	0.9	0.5	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.988			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3497	0	1770	1583	0	1770	1583	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3472	0	1770	3497	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		350			312			262			197	
Travel Time (s)		8.0			7.1			6.0			4.5	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	91.5

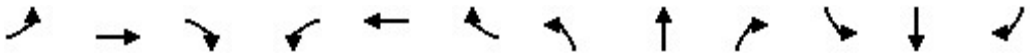
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	420	60	215	740	65	170	0	75	20	0	70
Future Vol, veh/h	35	420	60	215	740	65	170	0	75	20	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	50	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	457	65	234	804	71	185	0	82	22	0	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	875	0	0	522	0	0	1436	1909	261	1613	1906	438
Stage 1	-	-	-	-	-	-	566	566	-	1308	1308	-
Stage 2	-	-	-	-	-	-	870	1343	-	305	598	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	767	-	-	1041	-	-	~ 94	68	738	69	68	567
Stage 1	-	-	-	-	-	-	476	506	-	168	228	-
Stage 2	-	-	-	-	-	-	313	219	-	680	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	767	-	-	1041	-	-	~ 65	50	738	49	50	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 65	50	-	49	50	-
Stage 1	-	-	-	-	-	-	452	481	-	160	177	-
Stage 2	-	-	-	-	-	-	210	170	-	575	465	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2	$ 674.7	37.9
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	65	738	767	-	-	1041	-	-	49	567
HCM Lane V/C Ratio	2.843	0.11	0.05	-	-	0.224	-	-	0.444	0.134
HCM Control Delay (s)	$ 967.7	10.5	9.9	-	-	9.5	-	-	127.5	12.3
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	18.7	0.4	0.2	-	-	0.9	-	-	1.6	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.907			0.985			0.995	
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1664	0	1770	1835	0	1770	1853	0
Flt Permitted		0.976			0.985		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1664	0	1770	1835	0	1770	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			245			385	
Travel Time (s)		4.7			5.2			5.6			8.8	

Intersection Summary	
Area Type:	Other

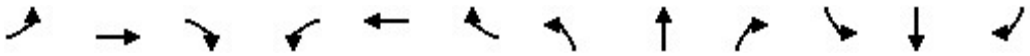
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	20	0	45	5	185	20	30	125	5
Future Vol, veh/h	5	0	5	20	0	45	5	185	20	30	125	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	22	0	49	5	201	22	33	136	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	452	438	139	429	429	212	141	0	0	223	0	0
Stage 1	205	205	-	222	222	-	-	-	-	-	-	-
Stage 2	247	233	-	207	207	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	518	512	909	536	518	828	1442	-	-	1346	-	-
Stage 1	797	732	-	780	720	-	-	-	-	-	-	-
Stage 2	757	712	-	795	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	498	909	522	503	828	1442	-	-	1346	-	-
Mov Cap-2 Maneuver	477	498	-	522	503	-	-	-	-	-	-	-
Stage 1	795	714	-	778	718	-	-	-	-	-	-	-
Stage 2	710	710	-	771	713	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	10.7	0.2	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1442	-	-	626	701	1346	-	-
HCM Lane V/C Ratio	0.004	-	-	0.017	0.101	0.024	-	-
HCM Control Delay (s)	7.5	-	-	10.9	10.7	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.932			0.997				
Flt Protected		0.976			0.976		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Flt Permitted		0.976			0.976		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			279			261			245	
Travel Time (s)		4.8			6.3			5.9			5.6	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	5	0	5	5	0	5	5	200	5	5	140	0
Future Vol, veh/h	5	0	5	5	0	5	5	200	5	5	140	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	5	0	5	5	217	5	5	152	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	394	394	152	395	392	220	152	0	0	222	0	0
Stage 1	162	162	-	230	230	-	-	-	-	-	-	-
Stage 2	232	232	-	165	162	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	566	542	894	565	544	820	1429	-	-	1347	-	-
Stage 1	840	764	-	773	714	-	-	-	-	-	-	-
Stage 2	771	713	-	837	764	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	559	538	894	558	540	820	1429	-	-	1347	-	-
Mov Cap-2 Maneuver	559	538	-	558	540	-	-	-	-	-	-	-
Stage 1	837	761	-	771	712	-	-	-	-	-	-	-
Stage 2	763	711	-	829	761	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	10.5	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	688	664	1347	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.016	0.004	-	-
HCM Control Delay (s)	7.5	-	-	10.3	10.5	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.923		0.908			
Flt Protected	0.979					0.965
Satd. Flow (prot)	1683	0	1691	0	0	1798
Flt Permitted	0.979					0.965
Satd. Flow (perm)	1683	0	1691	0	0	1798
Link Speed (mph)	30		30			30
Link Distance (ft)	239		457			206
Travel Time (s)	5.4		10.4			4.7

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	4.4
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	201	256	141
Demand Flow Rate, veh/h	205	261	144
Vehicles Circulating, veh/h	84	105	89
Vehicles Exiting, veh/h	282	128	200
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.8	3.9
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	205	261	144
Cap Entry Lane, veh/h	1267	1240	1260
Entry HV Adj Factor	0.980	0.982	0.981
Flow Entry, veh/h	201	256	141
Cap Entry, veh/h	1242	1218	1236
V/C Ratio	0.162	0.211	0.114
Control Delay, s/veh	4.3	4.8	3.9
LOS	A	A	A
95th %tile Queue, veh	1	1	0

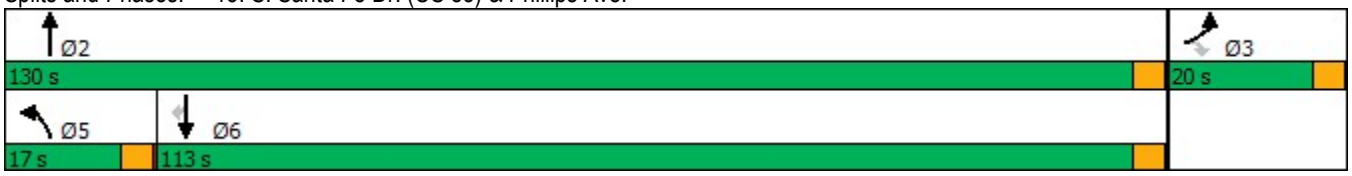
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	175	0	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		120				100
Link Speed (mph)	30			50	50	
Link Distance (ft)	243			1094	476	
Travel Time (s)	5.5			14.9	6.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	145	140	100	2445	2710	125
Future Volume (vph)	145	140	100	2445	2710	125
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	3		5	2	6	
Permitted Phases		3				6
Detector Phase	3	3	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	17.0	130.0	113.0	113.0
Total Split (%)	13.3%	13.3%	11.3%	86.7%	75.3%	75.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	11.9	11.9	12.0	117.4	101.3	101.3
Actuated g/C Ratio	0.09	0.09	0.09	0.85	0.74	0.74
v/c Ratio	0.53	0.62	0.71	0.88	0.79	0.11
Control Delay	69.0	28.7	87.9	10.9	13.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	28.7	87.9	10.9	13.5	2.0
LOS	E	C	F	B	B	A
Approach Delay	49.2			13.9	13.0	
Approach LOS	D			B	B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 137.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	158	152	109	2658	2946	136
v/c Ratio	0.53	0.62	0.71	0.88	0.79	0.11
Control Delay	69.0	28.7	87.9	10.9	13.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	28.7	87.9	10.9	13.5	2.0
Queue Length 50th (ft)	75	29	102	548	553	8
Queue Length 95th (ft)	114	104	#197	835	676	28
Internal Link Dist (ft)	163			1014	396	
Turn Bay Length (ft)	175		200			200
Base Capacity (vph)	406	293	170	3163	4069	1286
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	0.64	0.84	0.72	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

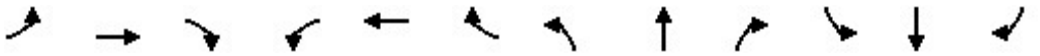
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	140	100	2445	2710	125
Future Volume (veh/h)	145	140	100	2445	2710	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	158	152	109	2658	2946	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	381	175	132	2953	3714	
Arrive On Green	0.11	0.11	0.07	0.83	0.73	0.00
Sat Flow, veh/h	3456	1585	1781	3647	5274	1585
Grp Volume(v), veh/h	158	152	109	2658	2946	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1702	1585
Q Serve(g_s), s	5.8	12.8	8.2	68.1	50.5	0.0
Cycle Q Clear(g_c), s	5.8	12.8	8.2	68.1	50.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	381	175	132	2953	3714	
V/C Ratio(X)	0.42	0.87	0.82	0.90	0.79	
Avail Cap(c_a), veh/h	407	187	170	3296	4097	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.4	59.5	62.0	7.7	11.9	0.0
Incr Delay (d2), s/veh	0.7	31.8	21.8	3.5	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	10.9	7.9	21.5	21.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.1	91.3	83.8	11.2	13.0	0.0
LnGrp LOS	E	F	F	B	B	
Approach Vol, veh/h	310			2767	2946	A
Approach Delay, s/veh	73.9			14.1	13.0	
Approach LOS	E			B	B	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		116.9			14.1	102.8	19.0
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		126.0			13.0	109.0	16.0
Max Q Clear Time (g_c+I1), s		70.1			10.2	52.5	14.8
Green Ext Time (p_c), s		42.7			0.1	44.8	0.1

Intersection Summary		
HCM 6th Ctrl Delay		16.6
HCM 6th LOS		B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.890			0.996			0.984	
Flt Protected		0.976			0.991		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1643	0	1770	1855	0	1770	1833	0
Flt Permitted		0.976			0.991		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1643	0	1770	1855	0	1770	1833	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		200			219			227			261	
Travel Time (s)		4.5			5.0			5.2			5.9	

Intersection Summary	
Area Type:	Other

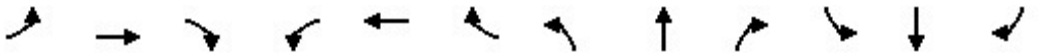
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	15	0	15	5	0	20	15	170	5	15	120	15
Future Vol, veh/h	15	0	15	5	0	20	15	170	5	15	120	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	16	5	0	22	16	185	5	16	130	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	401	392	138	398	398	188	146	0	0	190	0	0
Stage 1	170	170	-	220	220	-	-	-	-	-	-	-
Stage 2	231	222	-	178	178	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	560	544	910	562	540	854	1436	-	-	1384	-	-
Stage 1	832	758	-	782	721	-	-	-	-	-	-	-
Stage 2	772	720	-	824	752	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	536	531	910	542	528	854	1436	-	-	1384	-	-
Mov Cap-2 Maneuver	536	531	-	542	528	-	-	-	-	-	-	-
Stage 1	823	749	-	773	713	-	-	-	-	-	-	-
Stage 2	744	712	-	800	743	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	9.9	0.6	0.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1436	-	-	675	766	1384	-	-
HCM Lane V/C Ratio	0.011	-	-	0.048	0.035	0.012	-	-
HCM Control Delay (s)	7.5	-	-	10.6	9.9	7.6	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.911			0.977			0.980	
Flt Protected		0.976			0.983		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1668	0	1770	1820	0	1770	1825	0
Flt Permitted		0.976			0.983		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1668	0	1770	1820	0	1770	1825	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			141			206			227	
Travel Time (s)		3.6			3.2			4.7			5.2	

Intersection Summary	
Area Type:	Other

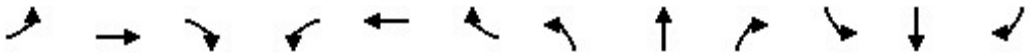
Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	15	20	0	40	15	140	25	35	95	15
Future Vol, veh/h	15	0	15	20	0	40	15	140	25	35	95	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	16	22	0	43	16	152	27	38	103	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	406	398	111	393	393	166	119	0	0	179	0	0
Stage 1	187	187	-	198	198	-	-	-	-	-	-	-
Stage 2	219	211	-	195	195	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	555	540	942	566	543	878	1469	-	-	1397	-	-
Stage 1	815	745	-	804	737	-	-	-	-	-	-	-
Stage 2	783	728	-	807	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	512	519	942	540	522	878	1469	-	-	1397	-	-
Mov Cap-2 Maneuver	512	519	-	540	522	-	-	-	-	-	-	-
Stage 1	806	725	-	795	729	-	-	-	-	-	-	-
Stage 2	736	720	-	771	719	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.4	0.6	1.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1469	-	-	663	726	1397	-	-
HCM Lane V/C Ratio	0.011	-	-	0.049	0.09	0.027	-	-
HCM Control Delay (s)	7.5	-	-	10.7	10.4	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.968			0.932			0.970	
Flt Protected	0.950			0.950				0.976			0.963	
Satd. Flow (prot)	1770	3529	0	1770	1803	0	0	1694	0	0	1740	0
Flt Permitted	0.950			0.950				0.976			0.963	
Satd. Flow (perm)	1770	3529	0	1770	1803	0	0	1694	0	0	1740	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			175			102			122	
Travel Time (s)		5.4			4.0			2.3			2.8	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	240	5	15	165	45	10	0	10	35	0	10
Future Vol, veh/h	10	240	5	15	165	45	10	0	10	35	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	261	5	16	179	49	11	0	11	38	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	266	0	0	527	546	133	389	524	204
Stage 1	-	-	-	-	-	-	286	286	-	236	236	-
Stage 2	-	-	-	-	-	-	241	260	-	153	288	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1339	-	-	1296	-	-	448	444	892	557	457	836
Stage 1	-	-	-	-	-	-	698	674	-	766	709	-
Stage 2	-	-	-	-	-	-	762	692	-	835	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1339	-	-	1296	-	-	435	435	892	541	448	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	435	435	-	541	448	-
Stage 1	-	-	-	-	-	-	692	669	-	760	700	-
Stage 2	-	-	-	-	-	-	743	684	-	818	668	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.5	11.4	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	585	1339	-	-	1296	-	-	587
HCM Lane V/C Ratio	0.037	0.008	-	-	0.013	-	-	0.083
HCM Control Delay (s)	11.4	7.7	-	-	7.8	-	-	11.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	50		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.998					0.865
Flt Protected						
Satd. Flow (prot)	3532	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	3532	0	0	1863	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	175			243	173	
Travel Time (s)	4.0			5.5	3.9	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	275	5	0	220	0	5
Future Vol, veh/h	275	5	0	220	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	299	5	0	239	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	152
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	868
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	868
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	868	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	9.2	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.959	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1786	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1786	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	394			113	457	
Travel Time (s)	9.0			2.6	10.4	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	85	0	0	150	80	35
Future Vol, veh/h	85	0	0	150	80	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	0	163	87	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	269	106	125	0	-	0
Stage 1	106	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	720	948	1462	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	866	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	720	948	1462	-	-	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	866	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1462	-	720	-	-
HCM Lane V/C Ratio	-	-	0.128	-	-
HCM Control Delay (s)	0	-	10.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.977
Satd. Flow (prot)	1611	0	1863	0	0	1820
Flt Permitted						0.977
Satd. Flow (perm)	1611	0	1863	0	0	1820
Link Speed (mph)	30		30			30
Link Distance (ft)	223		73			113
Travel Time (s)	5.1		1.7			2.6

Intersection Summary	
Area Type:	Other

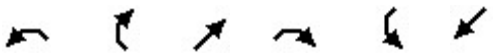
Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	105	0	40	45
Future Vol, veh/h	0	50	105	0	40	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	114	0	43	49

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	249	114	0	0	114	0
Stage 1	114	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	739	939	-	-	1475	-
Stage 1	911	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	717	939	-	-	1475	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	939	1475	-
HCM Lane V/C Ratio	-	-	0.058	0.029	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.989
Satd. Flow (prot)	1611	0	1863	0	0	1842
Flt Permitted						0.989
Satd. Flow (perm)	1611	0	1863	0	0	1842
Link Speed (mph)	30		30			30
Link Distance (ft)	159		190			379
Travel Time (s)	3.6		4.3			8.6

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	25	85	0	10	35
Future Vol, veh/h	0	25	85	0	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	92	0	11	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	152	92	0	0	92	0
Stage 1	92	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	840	965	-	-	1503	-
Stage 1	932	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	834	965	-	-	1503	-
Mov Cap-2 Maneuver	834	-	-	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.8	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	965	1503	-
HCM Lane V/C Ratio	-	-	0.028	0.007	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

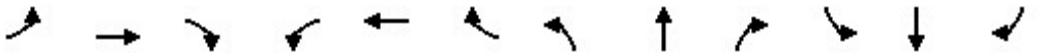
Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	218		275			190
Travel Time (s)	5.0		6.3			4.3

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	3.1
Intersection LOS	A

Approach	NB	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	92	38
Demand Flow Rate, veh/h	0	94	39
Vehicles Circulating, veh/h	94	0	0
Vehicles Exiting, veh/h	0	39	94
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.2	2.9
Approach LOS	-	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	0	94	39
Cap Entry Lane, veh/h	1254	1380	1380
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	0	92	38
Cap Entry, veh/h	1254	1353	1353
V/C Ratio	0.000	0.068	0.028
Control Delay, s/veh	2.9	3.2	2.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0



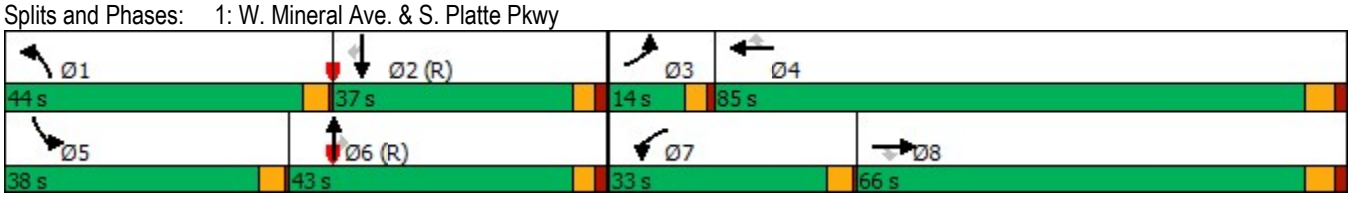
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	100		0	200		300	400		200
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.987	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	3539	1583	3433	1747	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	1770	3539	1583	3433	1747	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			647			85		2	262			115
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

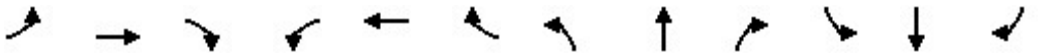
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	735	595	165	1550	175	765	305	290	435	20	315
Future Volume (vph)	190	735	595	165	1550	175	765	305	290	435	20	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	14.0	66.0	66.0	33.0	85.0	85.0	44.0	43.0	43.0	38.0	37.0	37.0
Total Split (%)	7.8%	36.7%	36.7%	18.3%	47.2%	47.2%	24.4%	23.9%	23.9%	21.1%	20.6%	20.6%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.0	66.0	66.0	23.0	79.0	79.0	40.0	42.6	42.6	29.4	32.0	32.0
Actuated g/C Ratio	0.06	0.37	0.37	0.13	0.44	0.44	0.22	0.24	0.24	0.16	0.18	0.18
v/c Ratio	1.09	0.43	0.65	0.79	1.08	0.26	1.09	0.88	0.51	0.84	0.07	0.91
Control Delay	165.2	44.3	6.3	97.9	104.3	26.6	123.3	87.5	11.7	87.1	62.4	75.9
Queue Delay	0.0	0.1	0.0	0.0	7.3	0.0	0.0	0.0	0.2	54.7	0.0	0.0
Total Delay	165.2	44.4	6.3	97.9	111.6	26.6	123.3	87.5	11.8	141.8	62.4	75.9
LOS	F	D	A	F	F	C	F	F	B	F	E	E
Approach Delay		44.6			102.6			93.1			112.8	
Approach LOS		D			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 85.8	Intersection LOS: F
Intersection Capacity Utilization 98.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy





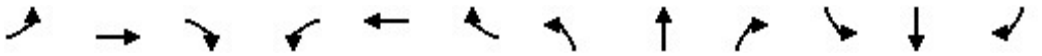
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	799	647	179	1685	190	832	364	283	473	22	342
v/c Ratio	1.09	0.43	0.65	0.79	1.08	0.26	1.09	0.88	0.51	0.84	0.07	0.91
Control Delay	165.2	44.3	6.3	97.9	104.3	26.6	123.3	87.5	11.7	87.1	62.4	75.9
Queue Delay	0.0	0.1	0.0	0.0	7.3	0.0	0.0	0.0	0.2	54.7	0.0	0.0
Total Delay	165.2	44.4	6.3	97.9	111.6	26.6	123.3	87.5	11.8	141.8	62.4	75.9
Queue Length 50th (ft)	~140	261	0	213	~1161	94	~568	441	21	282	22	280
Queue Length 95th (ft)	#235	319	106	m266	m#1191	m138	#704	#692	121	342	52	#475
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	250			100			200		300	400		200
Base Capacity (vph)	190	1865	990	285	1553	742	762	414	555	648	331	375
Starvation Cap Reductn	0	0	0	0	374	0	0	0	0	0	0	0
Spillback Cap Reductn	0	139	0	0	0	0	0	0	28	254	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.46	0.65	0.63	1.43	0.26	1.09	0.88	0.54	1.20	0.07	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	735	595	165	1550	175	765	305	290	435	20	315
Future Volume (veh/h)	190	735	595	165	1550	175	765	305	290	435	20	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	799	0	179	1685	190	832	332	315	473	22	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1949		201	1560	696	792	464	393	525	333	
Arrive On Green	0.06	0.38	0.00	0.04	0.14	0.14	0.22	0.25	0.25	0.15	0.18	0.00
Sat Flow, veh/h	3456	5106	1585	1781	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	207	799	0	179	1685	190	832	332	315	473	22	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	10.0	20.6	0.0	18.0	79.0	19.2	40.0	29.2	33.6	24.2	1.8	0.0
Cycle Q Clear(g_c), s	10.0	20.6	0.0	18.0	79.0	19.2	40.0	29.2	33.6	24.2	1.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1949		201	1560	696	792	464	393	525	333	
V/C Ratio(X)	1.08	0.41		0.89	1.08	0.27	1.05	0.72	0.80	0.90	0.07	
Avail Cap(c_a), veh/h	192	1949		287	1560	696	792	464	393	653	333	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.0	40.8	0.0	85.5	77.0	51.4	70.0	61.9	63.5	75.0	61.6	0.0
Incr Delay (d2), s/veh	87.3	0.1	0.0	21.0	47.9	0.2	46.2	9.1	15.7	13.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.3	13.5	0.0	15.0	63.4	13.0	32.3	21.6	21.5	17.5	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	172.3	40.9	0.0	106.6	124.8	51.6	116.2	71.0	79.2	88.6	62.0	0.0
LnGrp LOS	F	D		F	F	D	F	E	E	F	E	
Approach Vol, veh/h		1006	A		2054			1479			495	A
Approach Delay, s/veh		68.0			116.5			98.2			87.4	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	44.0	37.0	14.0	85.0	31.3	49.7	24.3	74.7
Change Period (Y+Rc), s	4.0	5.0	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	40.0	32.0	10.0	79.0	34.0	38.0	29.0	60.0
Max Q Clear Time (g_c+I1), s	42.0	3.8	12.0	81.0	26.2	35.6	20.0	22.6
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	1.1	0.8	0.3	5.8

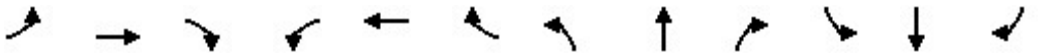
Intersection Summary	
HCM 6th Ctrl Delay	98.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



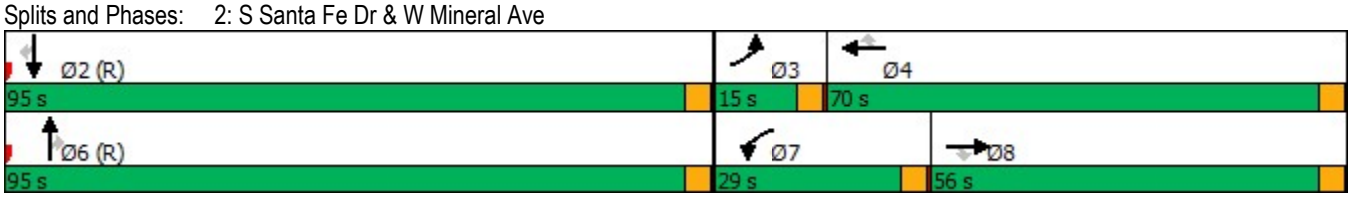
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	220		200	0		300	0		300
Storage Lanes	2		1	1		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950								
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55			30			166			168
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		274			335			245			264	
Travel Time (s)		6.2			7.6			5.6			6.0	

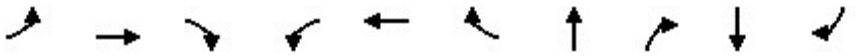
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	225	1075	450	240	1330	170	1905	220	2545	485
Future Volume (vph)	225	1075	450	240	1330	170	1905	220	2545	485
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4		6		2	
Permitted Phases			8			4		6		2
Detector Phase	3	8	8	7	4	4	6	6	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	15.0	56.0	56.0	29.0	70.0	70.0	95.0	95.0	95.0	95.0
Total Split (%)	8.3%	31.1%	31.1%	16.1%	38.9%	38.9%	52.8%	52.8%	52.8%	52.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	11.0	52.0	52.0	25.0	66.0	66.0	91.0	91.0	91.0	91.0
Actuated g/C Ratio	0.06	0.29	0.29	0.14	0.37	0.37	0.51	0.51	0.51	0.51
v/c Ratio	1.17	1.14	0.99	1.07	1.11	0.31	0.81	0.27	1.08	0.60
Control Delay	184.4	131.5	92.1	145.7	113.9	35.4	40.2	8.4	84.5	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	184.4	131.5	92.1	145.7	113.9	35.4	40.2	8.4	84.5	23.6
LOS	F	F	F	F	F	D	D	A	F	C
Approach Delay		128.2			110.6		36.9		74.7	
Approach LOS		F			F		D		E	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 83.5	Intersection LOS: F
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr & W Mineral Ave



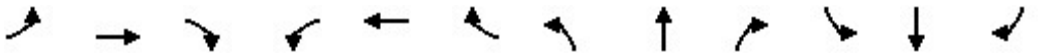


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	245	1168	489	261	1446	185	2071	239	2766	527
v/c Ratio	1.17	1.14	0.99	1.07	1.11	0.31	0.81	0.27	1.08	0.60
Control Delay	184.4	131.5	92.1	145.7	113.9	35.4	40.2	8.4	84.5	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	184.4	131.5	92.1	145.7	113.9	35.4	40.2	8.4	84.5	23.6
Queue Length 50th (ft)	~176	~845	529	~338	~1025	130	737	44	~1326	300
Queue Length 95th (ft)	#276	#985	#782	#536	#1163	202	795	101	#1390	425
Internal Link Dist (ft)		194			255		165		184	
Turn Bay Length (ft)	300			220		200		300		300
Base Capacity (vph)	209	1022	496	245	1297	599	2570	882	2570	883
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.17	1.14	0.99	1.07	1.11	0.31	0.81	0.27	1.08	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1075	450	240	1330	170	0	1905	220	0	2545	485
Future Volume (veh/h)	225	1075	450	240	1330	170	0	1905	220	0	2545	485
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	245	1168	489	261	1446	185	0	2071	239	0	2766	527
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	0	2	2
Cap, veh/h	211	1027	458	247	1303	581	0	2581	801	0	2581	801
Arrive On Green	0.06	0.29	0.29	0.14	0.37	0.37	0.00	0.51	0.51	0.00	0.51	0.51
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	245	1168	489	261	1446	185	0	2071	239	0	2766	527
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	11.0	52.0	52.0	25.0	66.0	15.1	0.0	60.7	15.8	0.0	91.0	44.3
Cycle Q Clear(g_c), s	11.0	52.0	52.0	25.0	66.0	15.1	0.0	60.7	15.8	0.0	91.0	44.3
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	211	1027	458	247	1303	581	0	2581	801	0	2581	801
V/C Ratio(X)	1.16	1.14	1.07	1.05	1.11	0.32	0.00	0.80	0.30	0.00	1.07	0.66
Avail Cap(c_a), veh/h	211	1027	458	247	1303	581	0	2581	801	0	2581	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	84.5	64.0	64.0	77.5	57.0	40.9	0.0	37.0	25.9	0.0	44.5	33.0
Incr Delay (d2), s/veh	111.8	74.1	61.4	72.4	60.7	0.3	0.0	2.7	1.0	0.0	40.5	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.5	47.4	39.3	23.8	54.9	10.1	0.0	34.4	10.5	0.0	62.4	25.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.3	138.1	125.4	149.9	117.7	41.2	0.0	39.8	26.9	0.0	85.0	37.2
LnGrp LOS	F	F	F	F	F	D	A	D	C	A	F	D
Approach Vol, veh/h		1902			1892			2310			3293	
Approach Delay, s/veh		142.3			114.7			38.4			77.3	
Approach LOS		F			F			D			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		95.0	15.0	70.0		95.0	29.0	56.0				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		91.0	11.0	66.0		91.0	25.0	52.0				
Max Q Clear Time (g_c+I1), s		93.0	13.0	68.0		62.7	27.0	54.0				
Green Ext Time (p_c), s		0.0	0.0	0.0		20.8	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	88.4
HCM 6th LOS	F

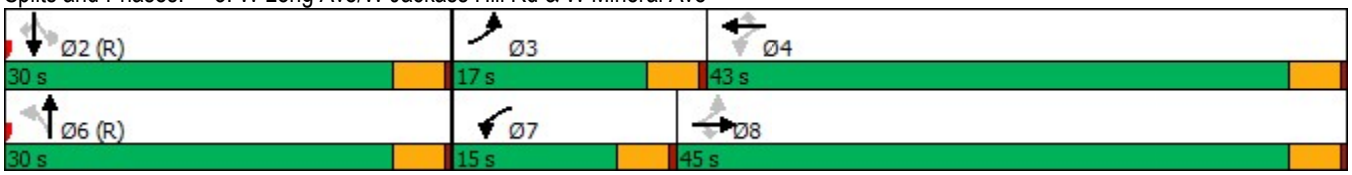
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		300	100		0	150		100
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1805	0	1770	1863	1583
Flt Permitted	0.086			0.270			0.725			0.722		
Satd. Flow (perm)	160	3539	1583	503	3539	1583	1350	1805	0	1345	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			65			277		11				248
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		235			320			215			175	
Travel Time (s)		5.3			7.3			4.9			4.0	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	275	965	60	5	1355	255	95	40	215	45	285
Future Volume (vph)	275	965	60	5	1355	255	95	40	215	45	285
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4			6		2	
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	7	4	4	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	17.0	45.0	45.0	15.0	43.0	43.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	18.9%	50.0%	50.0%	16.7%	47.8%	47.8%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	56.0	54.0	54.0	45.0	39.4	39.4	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.62	0.60	0.60	0.50	0.44	0.44	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.92	0.49	0.07	0.02	0.95	0.33	0.26	0.10	0.60	0.09	0.49
Control Delay	57.2	11.8	2.9	7.2	39.4	3.2	26.9	20.3	35.3	24.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	11.8	2.9	7.2	39.4	3.2	26.9	20.3	35.3	24.1	9.2
LOS	E	B	A	A	D	A	C	C	D	C	A
Approach Delay		21.0			33.6			24.6		20.7	
Approach LOS		C			C			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 26.7	Intersection LOS: C
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: W Long Ave/W Jackass Hill Rd & W Mineral Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	299	1049	65	5	1473	277	103	54	234	49	310
v/c Ratio	0.92	0.49	0.07	0.02	0.95	0.33	0.26	0.10	0.60	0.09	0.49
Control Delay	57.2	11.8	2.9	7.2	39.4	3.2	26.9	20.3	35.3	24.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	11.8	2.9	7.2	39.4	3.2	26.9	20.3	35.3	24.1	9.2
Queue Length 50th (ft)	120	152	0	1	415	0	45	18	114	20	26
Queue Length 95th (ft)	#272	266	19	5	#577	44	88	45	194	47	96
Internal Link Dist (ft)		155			240			135		95	
Turn Bay Length (ft)	180		220	100		300	100		150		100
Base Capacity (vph)	332	2124	976	436	1549	848	390	529	388	538	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.49	0.07	0.01	0.95	0.33	0.26	0.10	0.60	0.09	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	965	60	5	1355	255	95	40	10	215	45	285
Future Volume (veh/h)	275	965	60	5	1355	255	95	40	10	215	45	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	299	1049	65	5	1473	277	103	43	11	234	49	310
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	2006	895	282	1536	685	364	427	109	452	556	471
Arrive On Green	0.14	0.56	0.56	0.01	0.43	0.43	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1022	1437	368	1350	1870	1585
Grp Volume(v), veh/h	299	1049	65	5	1473	277	103	0	54	234	49	310
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1022	0	1804	1350	1870	1585
Q Serve(g_s), s	10.3	16.4	1.7	0.1	36.2	10.8	7.3	0.0	2.0	13.7	1.7	15.4
Cycle Q Clear(g_c), s	10.3	16.4	1.7	0.1	36.2	10.8	9.0	0.0	2.0	15.6	1.7	15.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	333	2006	895	282	1536	685	364	0	536	452	556	471
V/C Ratio(X)	0.90	0.52	0.07	0.02	0.96	0.40	0.28	0.00	0.10	0.52	0.09	0.66
Avail Cap(c_a), veh/h	346	2006	895	491	1540	687	364	0	536	452	556	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	12.1	8.9	14.4	24.8	17.6	26.1	0.0	22.9	28.6	22.8	27.6
Incr Delay (d2), s/veh	24.4	0.2	0.0	0.0	14.4	0.4	1.9	0.0	0.4	4.2	0.3	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.3	10.1	1.0	0.1	24.1	7.0	3.5	0.0	1.6	8.5	1.4	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	12.4	8.9	14.4	39.2	18.0	28.0	0.0	23.3	32.8	23.1	34.7
LnGrp LOS	D	B	A	B	D	B	C	A	C	C	C	C
Approach Vol, veh/h		1413			1755			157			593	
Approach Delay, s/veh		20.2			35.7			26.4			33.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.7	16.4	42.9		30.7	4.5	54.8				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		26.0	13.0	39.0		26.0	11.0	41.0				
Max Q Clear Time (g_c+I1), s		17.6	12.3	38.2		11.0	2.1	18.4				
Green Ext Time (p_c), s		1.5	0.1	0.7		0.6	0.0	8.4				

Intersection Summary												
HCM 6th Ctrl Delay			29.3									
HCM 6th LOS			C									

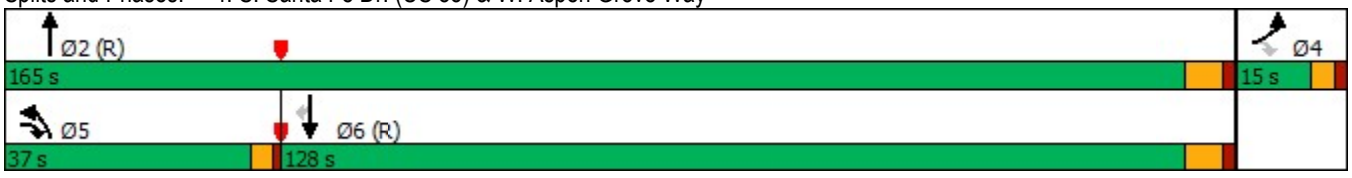
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		2				200
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1504	1740	
Travel Time (s)	42.0			22.8	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	150	165	2130	2875	275
Future Volume (vph)	130	150	165	2130	2875	275
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	8.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	37.0	37.0	165.0	128.0	128.0
Total Split (%)	8.3%	20.6%	20.6%	91.7%	71.1%	71.1%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	1.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	4.0	7.0	7.0	7.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.9	48.0	33.1	158.1	121.0	121.0
Actuated g/C Ratio	0.06	0.27	0.18	0.88	0.67	0.67
v/c Ratio	0.75	1.42	0.55	0.74	1.31	0.26
Control Delay	107.0	246.9	73.3	17.0	172.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.0	246.9	73.3	17.0	172.4	4.2
LOS	F	F	E	B	F	A
Approach Delay	220.2			21.0	157.7	
Approach LOS	F			C	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 113.5	Intersection LOS: F
Intersection Capacity Utilization 105.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	141	600	179	2315	3125	299
v/c Ratio	0.75	1.42	0.55	0.74	1.31	0.26
Control Delay	107.0	246.9	73.3	17.0	172.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.0	246.9	73.3	17.0	172.4	4.2
Queue Length 50th (ft)	86	~952	221	465	~2491	39
Queue Length 95th (ft)	#138	193	m259	m441	#2564	78
Internal Link Dist (ft)	1460			1424	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	190	423	325	3108	2378	1129
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.42	0.55	0.74	1.31	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	150	165	2130	2875	275
Future Volume (veh/h)	130	150	165	2130	2875	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	600	179	2315	3125	299
Peak Hour Factor	0.92	0.25	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	192	266	200	3119	2641	1178
Arrive On Green	0.06	0.06	0.11	0.88	0.74	0.74
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	141	600	179	2315	3125	299
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	7.2	10.0	17.9	41.1	133.8	10.7
Cycle Q Clear(g_c), s	7.2	10.0	17.9	41.1	133.8	10.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	192	266	200	3119	2641	1178
V/C Ratio(X)	0.73	2.26	0.90	0.74	1.18	0.25
Avail Cap(c_a), veh/h	192	266	327	3119	2641	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.7	74.9	78.9	3.9	23.1	7.3
Incr Delay (d2), s/veh	13.6	576.9	16.6	1.6	86.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	96.4	14.0	14.1	107.7	6.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	97.3	651.8	95.4	5.5	109.7	7.8
LnGrp LOS	F	F	F	A	F	A
Approach Vol, veh/h	741			2494	3424	
Approach Delay, s/veh	546.3			11.9	100.8	
Approach LOS	F			B	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		165.0		15.0	24.2	140.8
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		158.0		10.0	33.0	121.0
Max Q Clear Time (g_c+I1), s		43.1		12.0	19.9	135.8
Green Ext Time (p_c), s		50.9		0.0	0.4	0.0

Intersection Summary		
HCM 6th Ctrl Delay		117.1
HCM 6th LOS		F

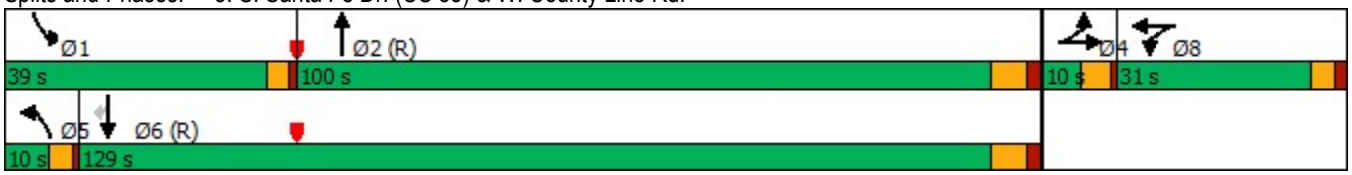
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	600		360
Storage Lanes	1		0	2		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	3433	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				416			133			67
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	20	5	410	20	835	20	1935	140	365	1390	35
Future Volume (vph)	20	5	410	20	835	20	1935	140	365	1390	35
Turn Type	Split	NA	Split	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	4	4	8	8		5	2		1	6	
Permitted Phases					Free			Free			6
Detector Phase	4	4	8	8		5	2		1	6	6
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0		3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	10.0	10.0	31.0	31.0		8.0	12.0		8.0	33.0	33.0
Total Split (s)	10.0	10.0	31.0	31.0		10.0	100.0		39.0	129.0	129.0
Total Split (%)	5.6%	5.6%	17.2%	17.2%		5.6%	55.6%		21.7%	71.7%	71.7%
Yellow Time (s)	4.0	4.0	3.0	3.0		3.0	5.0		3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		4.0	7.0		4.0	7.0	7.0
Lead/Lag						Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes
Recall Mode	None	None	None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.0	5.0	25.7	25.7	180.0	6.0	93.0	180.0	39.3	130.3	130.3
Actuated g/C Ratio	0.03	0.03	0.14	0.14	1.00	0.03	0.52	1.00	0.22	0.72	0.72
v/c Ratio	0.45	0.19	0.91	0.08	0.57	0.37	1.15	0.10	1.03	0.59	0.03
Control Delay	113.8	67.3	98.8	67.7	1.5	102.8	114.2	0.1	118.4	14.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.8	67.3	98.8	67.7	1.5	102.8	114.2	0.1	118.4	14.4	0.3
LOS	F	E	F	E	A	F	F	A	F	B	A
Approach Delay		99.3		34.1			106.5			35.3	
Approach LOS		F		C			F			D	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 64.2	Intersection LOS: E
Intersection Capacity Utilization 105.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

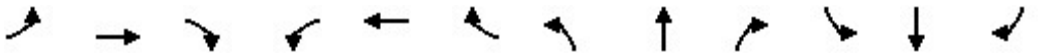


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	10	446	22	908	22	2103	152	397	1511	38
v/c Ratio	0.45	0.19	0.91	0.08	0.57	0.37	1.15	0.10	1.03	0.59	0.03
Control Delay	113.8	67.3	98.8	67.7	1.5	102.8	114.2	0.1	118.4	14.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.8	67.3	98.8	67.7	1.5	102.8	114.2	0.1	118.4	14.4	0.3
Queue Length 50th (ft)	26	6	271	23	0	26	~1530	0	~550	501	0
Queue Length 95th (ft)	#65	30	#369	54	0	61	#1649	0	#777	565	3
Internal Link Dist (ft)		1870		2780			2048			660	
Turn Bay Length (ft)	100		250		50	160		400	600		360
Base Capacity (vph)	49	52	499	271	1583	60	1828	1583	386	2561	1164
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.19	0.89	0.08	0.57	0.37	1.15	0.10	1.03	0.59	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	5	410	20	835	20	1935	140	365	1390	35
Future Volume (veh/h)	20	5	5	410	20	835	20	1935	140	365	1390	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	5	5	446	22	0	22	2103	0	397	1511	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	16	16	483	261		28	1885		346	2520	1124
Arrive On Green	0.02	0.02	0.02	0.14	0.14	0.00	0.02	0.53	0.00	0.19	0.71	0.71
Sat Flow, veh/h	1781	858	858	3456	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	22	0	10	446	22	0	22	2103	0	397	1511	38
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1728	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.2	0.0	1.0	22.9	1.8	0.0	2.2	95.5	0.0	35.0	38.7	1.3
Cycle Q Clear(g_c), s	2.2	0.0	1.0	22.9	1.8	0.0	2.2	95.5	0.0	35.0	38.7	1.3
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	0	32	483	261		28	1885		346	2520	1124
V/C Ratio(X)	0.66	0.00	0.31	0.92	0.08		0.79	1.12		1.15	0.60	0.03
Avail Cap(c_a), veh/h	49	0	48	499	270		59	1885		346	2520	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.8	0.0	87.2	76.5	67.4	0.0	88.3	42.3	0.0	72.5	13.2	7.8
Incr Delay (d2), s/veh	20.2	0.0	5.4	22.6	0.1	0.0	37.6	60.0	0.0	94.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	0.9	17.3	1.6	0.0	2.3	73.7	0.0	35.4	20.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.9	0.0	92.6	99.0	67.5	0.0	125.9	102.3	0.0	166.7	14.3	7.9
LnGrp LOS	F	A	F	F	E		F	F		F	B	A
Approach Vol, veh/h		32			468	A		2125	A		1946	
Approach Delay, s/veh		103.1			97.6			102.6			45.3	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.0	102.5		8.4	6.8	134.7		30.2				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	35.0	93.0		5.0	6.0	122.0		26.0				
Max Q Clear Time (g_c+I1), s	37.0	97.5		4.2	4.2	40.7		24.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	16.4		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		77.7
HCM 6th LOS		E

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

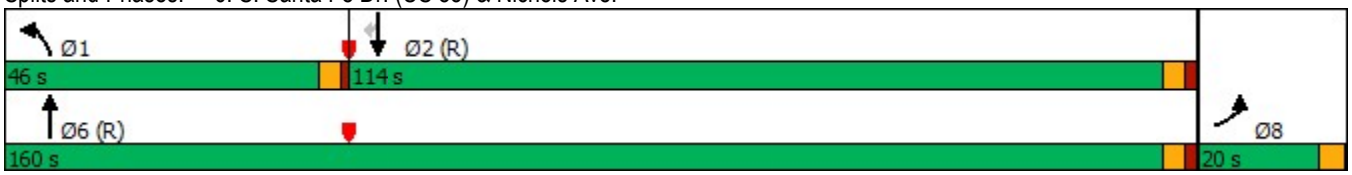
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	3614	1583	3433	3539	5085	1583
Flt Permitted			0.950			
Satd. Flow (perm)	3614	1583	3433	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		380				220
Link Speed (mph)	30			50	50	
Link Distance (ft)	299			837	866	
Travel Time (s)	6.8			11.4	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBR	NBL	NBT	SBT	SBR	Ø8
Lane Configurations						
Traffic Volume (vph)	525	690	2065	2745	485	
Future Volume (vph)	525	690	2065	2745	485	
Turn Type	Free	Prot	NA	NA	Perm	
Protected Phases		1	6	2		8
Permitted Phases	Free				2	
Detector Phase		1	6	2	2	
Switch Phase						
Minimum Initial (s)		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		8.0	35.0	30.0	30.0	20.0
Total Split (s)		46.0	160.0	114.0	114.0	20.0
Total Split (%)		25.6%	88.9%	63.3%	63.3%	11%
Yellow Time (s)		3.0	3.0	3.0	3.0	3.5
All-Red Time (s)		1.0	2.0	2.0	2.0	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0	5.0	5.0	5.0	
Lead/Lag		Lead		Lag	Lag	
Lead-Lag Optimize?						
Recall Mode		None	C-Min	C-Min	C-Min	None
Act Effct Green (s)	180.0	45.5	180.0	125.5	125.5	
Actuated g/C Ratio	1.00	0.25	1.00	0.70	0.70	
v/c Ratio	0.36	0.87	0.63	0.84	0.45	
Control Delay	0.6	75.2	0.9	6.4	0.8	
Queue Delay	0.0	0.0	0.0	2.4	0.5	
Total Delay	0.6	75.2	0.9	8.8	1.3	
LOS	A	E	A	A	A	
Approach Delay			19.5	7.7		
Approach LOS			B	A		

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 80.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	571	750	2245	2984	527
v/c Ratio	0.36	0.87	0.63	0.84	0.45
Control Delay	0.6	75.2	0.9	6.4	0.8
Queue Delay	0.0	0.0	0.0	2.4	0.5
Total Delay	0.6	75.2	0.9	8.8	1.3
Queue Length 50th (ft)	0	439	0	235	8
Queue Length 95th (ft)	0	500	0	m211	m5
Internal Link Dist (ft)			757	786	
Turn Bay Length (ft)		200			200
Base Capacity (vph)	1583	882	3539	3545	1170
Starvation Cap Reductn	0	0	0	423	269
Spillback Cap Reductn	0	0	91	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.85	0.65	0.96	0.58

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

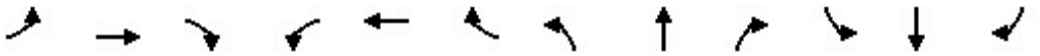
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	525	690	2065	2745	485
Future Volume (veh/h)	0	525	690	2065	2745	485
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	750	2245	2984	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2		788	3455	3687	
Arrive On Green	0.00	0.00	0.23	0.97	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	3647	5274	1585
Grp Volume(v), veh/h	0	0	750	2245	2984	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1777	1702	1585
Q Serve(g_s), s	0.0	0.0	38.5	8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	38.5	8.6	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	2		788	3455	3687	
V/C Ratio(X)	0.00		0.95	0.65	0.81	
Avail Cap(c_a), veh/h	307		806	3455	3687	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	68.5	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.7	1.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	26.1	0.8	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.0	89.2	1.1	0.2	0.0
LnGrp LOS	A		F	A	A	
Approach Vol, veh/h	0	A		2995	2984	A
Approach Delay, s/veh	0.0			23.2	0.2	
Approach LOS				C	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	45.0	135.0				180.0	0.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	42.0	109.0				155.0	16.0
Max Q Clear Time (g_c+I1), s	40.5	2.0				10.6	0.0
Green Ext Time (p_c), s	0.5	72.7				46.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



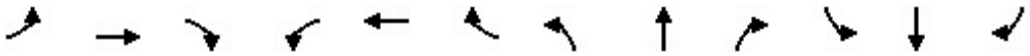
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850		0.997			0.991	
Flt Protected		0.974			0.965			0.999		0.950		
Satd. Flow (prot)	0	1873	0	0	1917	1689	0	1979	0	1888	1969	0
Flt Permitted		0.974			0.965			0.999		0.950		
Satd. Flow (perm)	0	1873	0	0	1917	1689	0	1979	0	1888	1969	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	3.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	21	1249	222	755
Demand Flow Rate, veh/h	21	1274	226	770
Vehicles Circulating, veh/h	803	232	592	65
Vehicles Exiting, veh/h	21	581	227	227
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.2	6.9	6.6
Approach LOS	A	A	A	A

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	R	L	TR	R
Assumed Moves	LT	R	LT	R	LT	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		0.759	0.241	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	5	4.328	1214	4.328	5	4.645	4.328	11
Entry Flow, veh/h	16	1095	60	1938	221	1938	576	183	1351
Cap Entry Lane, veh/h	718	0.980	1166	0.980	859	0.980	1271	1344	0.980
Entry HV Adj Factor	0.994	5	0.978	1190	0.981	5	0.981	0.980	11
Flow Entry, veh/h	16	1073	59	1900	217	1900	565	179	1324
Cap Entry, veh/h	713	0.005	1140	0.626	842	0.003	1247	1317	0.008
V/C Ratio	0.022	3.4	0.051	0.0	0.257	0.0	0.453	0.136	2.8
Control Delay, s/veh	5.3	A	3.6	A	7.0	A	7.5	3.8	A
LOS	A	0	A	5	A	0	A	A	0
95th %tile Queue, veh	0		0		1		2	0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	50		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850			0.995			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3522	0	1770	3522	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	1770	1583	0	1770	3522	0	1770	3522	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		219			247			424			449	
Travel Time (s)		5.0			5.6			9.6			10.2	

Intersection Summary	
Area Type:	Other

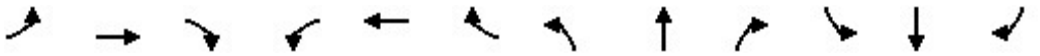
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	10	20	0	100	20	1235	45	85	665	25
Future Vol, veh/h	20	0	10	20	0	100	20	1235	45	85	665	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	11	22	0	109	22	1342	49	92	723	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1636	2356	375	1957	2345	696	750	0	0	1391	0	0
Stage 1	921	921	-	1411	1411	-	-	-	-	-	-	-
Stage 2	715	1435	-	546	934	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	67	35	623	38	36	384	855	-	-	488	-	-
Stage 1	291	347	-	145	203	-	-	-	-	-	-	-
Stage 2	388	197	-	490	343	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	40	28	623	31	28	384	855	-	-	488	-	-
Mov Cap-2 Maneuver	40	28	-	31	28	-	-	-	-	-	-	-
Stage 1	283	281	-	141	198	-	-	-	-	-	-	-
Stage 2	271	192	-	391	278	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	118.8	57.8	0.1	1.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	855	-	-	40	623	31	384	488	-	-
HCM Lane V/C Ratio	0.025	-	-	0.543	0.017	0.701	0.283	0.189	-	-
HCM Control Delay (s)	9.3	-	-	172.7	10.9	256.8	18	14.1	-	-
HCM Lane LOS	A	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.1	2.3	1.1	0.7	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.982			0.989			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3500	0	1770	1583	0	1770	1583	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3500	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			299			265			220	
Travel Time (s)		7.8			6.8			6.0			5.0	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	93.2

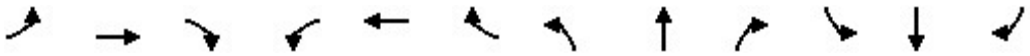
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	435	60	190	910	75	160	0	70	25	0	80
Future Vol, veh/h	40	435	60	190	910	75	160	0	70	25	0	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	50	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	473	65	207	989	82	174	0	76	27	0	87

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1071	0	0	538	0	0	1501	2077	269	1767	2068	536
Stage 1	-	-	-	-	-	-	592	592	-	1444	1444	-
Stage 2	-	-	-	-	-	-	909	1485	-	323	624	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	647	-	-	1026	-	-	~ 84	53	729	53	54	489
Stage 1	-	-	-	-	-	-	460	492	-	139	195	-
Stage 2	-	-	-	-	-	-	296	187	-	663	476	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	647	-	-	1026	-	-	~ 55	39	729	38	40	489
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 55	39	-	38	40	-
Stage 1	-	-	-	-	-	-	430	460	-	130	156	-
Stage 2	-	-	-	-	-	-	194	149	-	554	445	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.5	$ 790.1	63.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	55	729	647	-	-	1026	-	-	38	489
HCM Lane V/C Ratio	3.162	0.104	0.067	-	-	0.201	-	-	0.715	0.178
HCM Control Delay (s)	$ 1131.2	10.5	11	-	-	9.4	-	-	221.6	13.9
HCM Lane LOS	F	B	B	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	18.4	0.3	0.2	-	-	0.8	-	-	2.6	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.904			0.983			0.996	
Flt Protected		0.976			0.986		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1660	0	1770	1831	0	1770	1855	0
Flt Permitted		0.976			0.986		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1660	0	1770	1831	0	1770	1855	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			245			385	
Travel Time (s)		4.7			5.2			5.6			8.8	

Intersection Summary	
Area Type:	Other

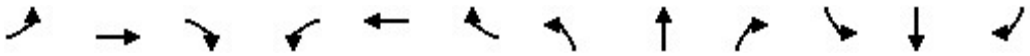
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	20	0	50	5	155	20	35	165	5
Future Vol, veh/h	5	0	5	20	0	50	5	155	20	35	165	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	22	0	54	5	168	22	38	179	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	474	458	182	449	449	179	184	0	0	190	0	0
Stage 1	258	258	-	189	189	-	-	-	-	-	-	-
Stage 2	216	200	-	260	260	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	501	499	861	520	505	864	1391	-	-	1384	-	-
Stage 1	747	694	-	813	744	-	-	-	-	-	-	-
Stage 2	786	736	-	745	693	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	458	484	861	504	489	864	1391	-	-	1384	-	-
Mov Cap-2 Maneuver	458	484	-	504	489	-	-	-	-	-	-	-
Stage 1	744	675	-	810	741	-	-	-	-	-	-	-
Stage 2	734	733	-	720	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	10.6	0.2	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1391	-	-	598	718	1384	-	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.106	0.027	-	-
HCM Control Delay (s)	7.6	-	-	11.1	10.6	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.932			0.996				
Flt Protected		0.976			0.976		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1694	0	1770	1855	0	1770	1863	0
Flt Permitted		0.976			0.976		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1694	0	1770	1855	0	1770	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			279			261			245	
Travel Time (s)		4.8			6.3			5.9			5.6	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	5	0	5	5	0	5	5	165	5	5	180	0
Future Vol, veh/h	5	0	5	5	0	5	5	165	5	5	180	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	5	0	5	5	179	5	5	196	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	400	400	196	401	398	182	196	0	0	184	0	0
Stage 1	206	206	-	192	192	-	-	-	-	-	-	-
Stage 2	194	194	-	209	206	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	560	538	845	560	540	861	1377	-	-	1391	-	-
Stage 1	796	731	-	810	742	-	-	-	-	-	-	-
Stage 2	808	740	-	793	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	553	534	845	553	536	861	1377	-	-	1391	-	-
Mov Cap-2 Maneuver	553	534	-	553	536	-	-	-	-	-	-	-
Stage 1	793	728	-	807	739	-	-	-	-	-	-	-
Stage 2	800	737	-	785	728	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10.4	0.2	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1377	-	-	669	673	1391	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.016	0.004	-	-
HCM Control Delay (s)	7.6	-	-	10.5	10.4	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.956		0.909			
Flt Protected	0.967					0.974
Satd. Flow (prot)	1722	0	1693	0	0	1814
Flt Permitted	0.967					0.974
Satd. Flow (perm)	1722	0	1693	0	0	1814
Link Speed (mph)	30		30			30
Link Distance (ft)	197		457			206
Travel Time (s)	4.5		10.4			4.7

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	353	201	174
Demand Flow Rate, veh/h	360	205	178
Vehicles Circulating, veh/h	66	94	244
Vehicles Exiting, veh/h	233	328	182
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.3	4.3	4.9
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	360	205	178
Cap Entry Lane, veh/h	1290	1254	1076
Entry HV Adj Factor	0.981	0.979	0.980
Flow Entry, veh/h	353	201	174
Cap Entry, veh/h	1265	1227	1054
V/C Ratio	0.279	0.164	0.165
Control Delay, s/veh	5.3	4.3	4.9
LOS	A	A	A
95th %tile Queue, veh	1	1	1

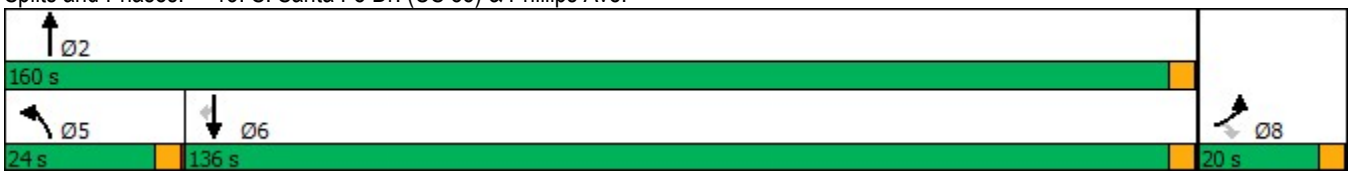
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	175	0	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		125				122
Link Speed (mph)	30			50	50	
Link Distance (ft)	242			1094	496	
Travel Time (s)	5.5			14.9	6.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	115	160	2630	3110	205
Future Volume (vph)	115	115	160	2630	3110	205
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	24.0	160.0	136.0	136.0
Total Split (%)	11.1%	11.1%	13.3%	88.9%	75.6%	75.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	11.7	11.7	19.3	155.4	132.0	132.0
Actuated g/C Ratio	0.07	0.07	0.11	0.89	0.75	0.75
v/c Ratio	0.55	0.56	0.89	0.90	0.88	0.18
Control Delay	88.3	21.3	117.2	11.4	20.0	3.2
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0
Total Delay	88.3	21.3	117.2	11.4	21.1	3.2
LOS	F	C	F	B	C	A
Approach Delay	54.8			17.5	20.0	
Approach LOS	D			B	C	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 175.1	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	125	125	174	2828	3380	223
v/c Ratio	0.55	0.56	0.89	0.90	0.88	0.18
Control Delay	88.3	21.3	117.2	11.4	20.0	3.2
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0
Total Delay	88.3	21.3	117.2	11.4	21.1	3.2
Queue Length 50th (ft)	73	0	201	707	967	28
Queue Length 95th (ft)	111	70	#354	1008	1103	57
Internal Link Dist (ft)	162			1014	416	
Turn Bay Length (ft)	175		200			200
Base Capacity (vph)	313	258	202	3153	3834	1223
Starvation Cap Reductn	0	0	0	0	232	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.48	0.86	0.90	0.94	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

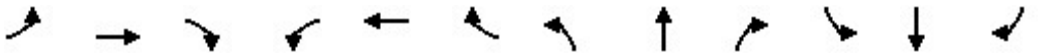
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	115	160	2630	3110	205
Future Volume (veh/h)	115	115	160	2630	3110	205
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	125	174	2828	3380	0
Peak Hour Factor	0.92	0.92	0.92	0.93	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	309	142	193	3074	3750	
Arrive On Green	0.09	0.09	0.11	0.87	0.73	0.00
Sat Flow, veh/h	3456	1585	1781	3647	5274	1585
Grp Volume(v), veh/h	125	125	174	2828	3380	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1702	1585
Q Serve(g_s), s	6.0	13.7	17.0	92.6	91.7	0.0
Cycle Q Clear(g_c), s	6.0	13.7	17.0	92.6	91.7	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	309	142	193	3074	3750	
V/C Ratio(X)	0.40	0.88	0.90	0.92	0.90	
Avail Cap(c_a), veh/h	314	144	202	3146	3825	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	75.8	79.3	77.7	7.8	18.4	0.0
Incr Delay (d2), s/veh	0.9	42.0	36.9	5.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	11.7	14.8	29.3	41.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	76.6	121.3	114.6	12.8	21.7	0.0
LnGrp LOS	E	F	F	B	C	
Approach Vol, veh/h	250			3002	3380	A
Approach Delay, s/veh	99.0			18.7	21.7	
Approach LOS	F			B	C	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		156.4			23.1	133.4	19.8
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		156.0			20.0	132.0	16.0
Max Q Clear Time (g_c+I1), s		94.6			19.0	93.7	15.7
Green Ext Time (p_c), s		49.8			0.0	35.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.897			0.991			0.991	
Flt Protected		0.976			0.988		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1651	0	1770	1846	0	1770	1846	0
Flt Permitted		0.976			0.988		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1651	0	1770	1846	0	1770	1846	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		200			219			227			261	
Travel Time (s)		4.5			5.0			5.2			5.9	

Intersection Summary	
Area Type:	Other

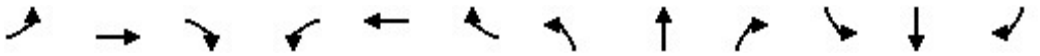
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	10	5	0	15	15	150	10	15	155	10
Future Vol, veh/h	10	0	10	5	0	15	15	150	10	15	155	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	5	0	16	16	163	11	16	168	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	415	412	174	412	412	169	179	0	0	174	0	0
Stage 1	206	206	-	201	201	-	-	-	-	-	-	-
Stage 2	209	206	-	211	211	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	548	530	869	550	530	875	1397	-	-	1403	-	-
Stage 1	796	731	-	801	735	-	-	-	-	-	-	-
Stage 2	793	731	-	791	728	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	528	518	869	534	518	875	1397	-	-	1403	-	-
Mov Cap-2 Maneuver	528	518	-	534	518	-	-	-	-	-	-	-
Stage 1	787	723	-	792	727	-	-	-	-	-	-	-
Stage 2	769	723	-	772	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	9.9	0.7	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1397	-	-	657	755	1403	-	-
HCM Lane V/C Ratio	0.012	-	-	0.033	0.029	0.012	-	-
HCM Control Delay (s)	7.6	-	-	10.7	9.9	7.6	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.919			0.976			0.992	
Flt Protected		0.976			0.980		0.950				0.991	
Satd. Flow (prot)	0	1694	0	0	1678	0	1770	1818	0	0	1831	0
Flt Permitted		0.976			0.980		0.950				0.991	
Satd. Flow (perm)	0	1694	0	0	1678	0	1770	1818	0	0	1831	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			141			206			227	
Travel Time (s)		3.6			3.2			4.7			5.2	

Intersection Summary	
Area Type:	Other

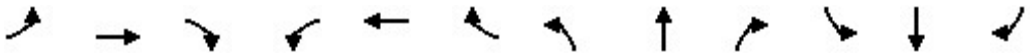
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	10	20	0	30	15	130	25	30	130	10
Future Vol, veh/h	10	0	10	20	0	30	15	130	25	30	130	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	22	0	33	16	141	27	33	141	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	416	413	147	405	405	155	152	0	0	168	0	0
Stage 1	213	213	-	187	187	-	-	-	-	-	-	-
Stage 2	203	200	-	218	218	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	547	529	900	556	535	891	1429	-	-	1410	-	-
Stage 1	789	726	-	815	745	-	-	-	-	-	-	-
Stage 2	799	736	-	784	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	512	509	900	534	515	891	1429	-	-	1410	-	-
Mov Cap-2 Maneuver	512	509	-	534	515	-	-	-	-	-	-	-
Stage 1	780	707	-	806	737	-	-	-	-	-	-	-
Stage 2	761	728	-	754	704	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.6	0.7	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	653	703	1410	-	-
HCM Lane V/C Ratio	0.011	-	-	0.033	0.077	0.023	-	-
HCM Control Delay (s)	7.5	-	-	10.7	10.6	7.6	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.981			0.958			0.966	
Flt Protected	0.950			0.950				0.967			0.964	
Satd. Flow (prot)	1770	3529	0	1770	1827	0	0	1726	0	0	1735	0
Flt Permitted	0.950			0.950				0.967			0.964	
Satd. Flow (perm)	1770	3529	0	1770	1827	0	0	1726	0	0	1735	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		197			218			114			63	
Travel Time (s)		4.5			5.0			2.6			1.4	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	200	5	15	310	45	10	0	5	30	0	10
Future Vol, veh/h	10	200	5	15	310	45	10	0	5	30	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	217	5	16	337	49	11	0	5	33	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	386	0	0	222	0	0	641	660	111	525	638	362
Stage 1	-	-	-	-	-	-	242	242	-	394	394	-
Stage 2	-	-	-	-	-	-	399	418	-	131	244	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1171	-	-	1346	-	-	373	382	922	449	394	682
Stage 1	-	-	-	-	-	-	741	705	-	630	604	-
Stage 2	-	-	-	-	-	-	626	590	-	859	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1171	-	-	1346	-	-	361	374	922	439	386	682
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	374	-	439	386	-
Stage 1	-	-	-	-	-	-	734	699	-	624	597	-
Stage 2	-	-	-	-	-	-	609	583	-	846	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	13.2	13.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	453	1171	-	-	1346	-	-	482
HCM Lane V/C Ratio	0.036	0.009	-	-	0.012	-	-	0.09
HCM Control Delay (s)	13.2	8.1	-	-	7.7	-	-	13.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	50		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997					0.865
Flt Protected						
Satd. Flow (prot)	3529	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	3529	0	0	1863	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	218			242	114	
Travel Time (s)	5.0			5.5	2.6	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	225	5	0	360	0	5
Future Vol, veh/h	225	5	0	360	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	5	0	391	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	125
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	903
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	903
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	903	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.950	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1770	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1770	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	394			113	457	
Travel Time (s)	9.0			2.6	10.4	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	0	0	120	185	110
Future Vol, veh/h	70	0	0	120	185	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	0	0	130	201	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	391	261	321	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	613	778	1239	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	613	778	1239	-	-	-
Mov Cap-2 Maneuver	613	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1239	-	613	-	-
HCM Lane V/C Ratio	-	-	0.124	-	-
HCM Control Delay (s)	0	-	11.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.985
Satd. Flow (prot)	1611	0	1863	0	0	1835
Flt Permitted						0.985
Satd. Flow (perm)	1611	0	1863	0	0	1835
Link Speed (mph)	30		30			30
Link Distance (ft)	223		73			113
Travel Time (s)	5.1		1.7			2.6

Intersection Summary	
Area Type:	Other

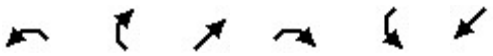
Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	40	80	0	55	130
Future Vol, veh/h	0	40	80	0	55	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	87	0	60	141

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	87	0	0	87	0
Stage 1	87	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	649	971	-	-	1509	-
Stage 1	936	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	621	971	-	-	1509	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	971	1509	-
HCM Lane V/C Ratio	-	-	0.045	0.04	-
HCM Control Delay (s)	-	-	8.9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.989
Satd. Flow (prot)	1611	0	1863	0	0	1842
Flt Permitted						0.989
Satd. Flow (perm)	1611	0	1863	0	0	1842
Link Speed (mph)	30		30			30
Link Distance (ft)	159		190			379
Travel Time (s)	3.6		4.3			8.6

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	20	65	0	30	105
Future Vol, veh/h	0	20	65	0	30	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	71	0	33	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	251	71	0	0	71	0
Stage 1	71	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	738	991	-	-	1529	-
Stage 1	952	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	721	991	-	-	1529	-
Mov Cap-2 Maneuver	721	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.7	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	991	1529	-
HCM Lane V/C Ratio	-	-	0.022	0.021	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	218		316			190
Travel Time (s)	5.0		7.2			4.3

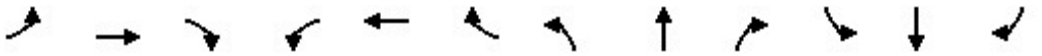
Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	3.2
Intersection LOS	A

Approach	NB	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	71	114
Demand Flow Rate, veh/h	0	72	116
Vehicles Circulating, veh/h	72	0	0
Vehicles Exiting, veh/h	0	116	72
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.1	3.3
Approach LOS	-	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	0	72	116
Cap Entry Lane, veh/h	1282	1380	1380
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	0	71	114
Cap Entry, veh/h	1282	1353	1353
V/C Ratio	0.000	0.052	0.084
Control Delay, s/veh	2.8	3.1	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

2040 TOTAL TRAFFIC



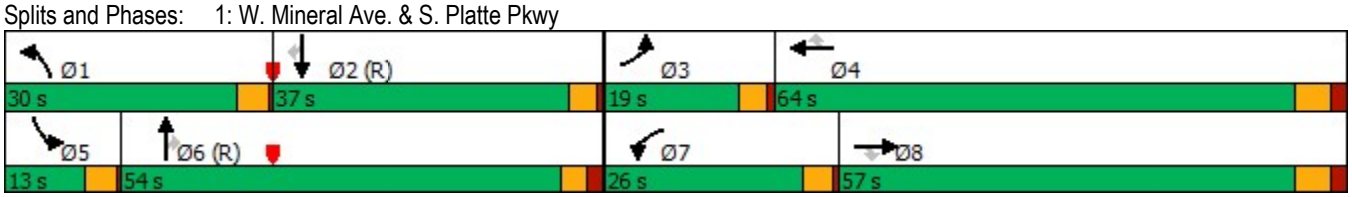
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	200		0	200		300	200		0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.987	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			572			228		3	262			138
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

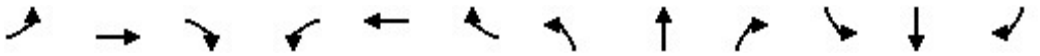
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	1690	885	495	370	210	585	310	290	105	30	70
Future Volume (vph)	205	1690	885	495	370	210	585	310	290	105	30	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	19.0	57.0	57.0	26.0	64.0	64.0	30.0	54.0	54.0	13.0	37.0	37.0
Total Split (%)	12.7%	38.0%	38.0%	17.3%	42.7%	42.7%	20.0%	36.0%	36.0%	8.7%	24.7%	24.7%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.9	51.0	51.0	22.0	59.1	59.1	26.0	49.3	49.3	8.7	33.0	33.0
Actuated g/C Ratio	0.09	0.34	0.34	0.15	0.39	0.39	0.17	0.33	0.33	0.06	0.22	0.22
v/c Ratio	0.70	1.06	1.05	1.07	0.29	0.30	1.07	0.64	0.42	0.58	0.08	0.17
Control Delay	78.3	87.6	63.6	126.7	36.7	10.3	114.0	48.7	7.5	80.6	47.3	0.8
Queue Delay	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.3	0.0	0.0
Total Delay	78.3	104.6	63.6	126.7	36.7	10.3	114.0	48.7	7.6	83.0	47.3	0.8
LOS	E	F	E	F	D	B	F	D	A	F	D	A
Approach Delay		89.6			73.0			71.9			49.7	
Approach LOS		F			E			E			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 80.6	Intersection LOS: F
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy



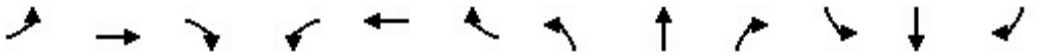


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	223	1837	962	538	402	228	636	369	283	114	33	76
v/c Ratio	0.70	1.06	1.05	1.07	0.29	0.30	1.07	0.64	0.42	0.58	0.08	0.17
Control Delay	78.3	87.6	63.6	126.7	36.7	10.3	114.0	48.7	7.5	80.6	47.3	0.8
Queue Delay	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.3	0.0	0.0
Total Delay	78.3	104.6	63.6	126.7	36.7	10.3	114.0	48.7	7.6	83.0	47.3	0.8
Queue Length 50th (ft)	110	~722	~631	~304	121	31	~354	322	14	57	26	0
Queue Length 95th (ft)	156	#816	#896	#426	169	77	#478	446	91	91	57	0
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	225			200			200		300	200		
Base Capacity (vph)	343	1728	915	503	1394	761	595	576	670	205	409	455
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	635	0	0	0	0	0	0	41	30	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	1.68	1.05	1.07	0.29	0.30	1.07	0.64	0.45	0.65	0.08	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1690	885	495	370	210	585	310	290	105	30	70
Future Volume (veh/h)	205	1690	885	495	370	210	585	310	290	105	30	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1837	0	538	402	228	636	337	315	114	33	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	1736		507	1451	647	618	1061	899	158	823	
Arrive On Green	0.08	0.34	0.00	0.24	0.68	0.68	0.17	0.57	0.57	0.05	0.44	0.00
Sat Flow, veh/h	3456	5106	1585	3456	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	223	1837	0	538	402	228	636	337	315	114	33	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	9.5	51.0	0.0	22.0	6.7	9.0	26.0	14.3	16.1	4.9	1.5	0.0
Cycle Q Clear(g_c), s	9.5	51.0	0.0	22.0	6.7	9.0	26.0	14.3	16.1	4.9	1.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	1736		507	1451	647	618	1061	899	158	823	
V/C Ratio(X)	0.82	1.06		1.06	0.28	0.35	1.03	0.32	0.35	0.72	0.04	
Avail Cap(c_a), veh/h	346	1736		507	1451	647	618	1061	899	207	823	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	68.1	49.5	0.0	56.6	15.2	15.6	62.0	17.1	17.5	70.6	23.9	0.0
Incr Delay (d2), s/veh	11.9	38.9	0.0	57.3	0.1	0.3	44.1	0.8	1.1	8.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	37.2	0.0	18.9	4.4	5.1	22.4	10.6	10.0	4.2	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.0	88.4	0.0	113.9	15.3	15.9	106.1	17.9	18.6	78.7	24.0	0.0
LnGrp LOS	F	F		F	B	B	F	B	B	E	C	
Approach Vol, veh/h		2060	A		1168			1288			147	A
Approach Delay, s/veh		87.5			60.8			61.6			66.4	
Approach LOS		F			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	72.0	15.8	67.2	10.9	91.1	26.0	57.0
Change Period (Y+Rc), s	4.0	* 5	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	26.0	* 33	15.0	58.0	9.0	49.0	22.0	51.0
Max Q Clear Time (g_c+I1), s	28.0	3.5	11.5	11.0	6.9	18.1	24.0	53.0
Green Ext Time (p_c), s	0.0	0.1	0.2	3.4	0.1	3.4	0.0	0.0

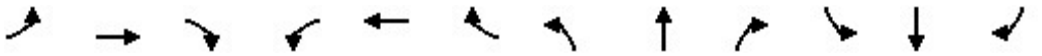
Intersection Summary			
HCM 6th Ctrl Delay		73.0	
HCM 6th LOS		E	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



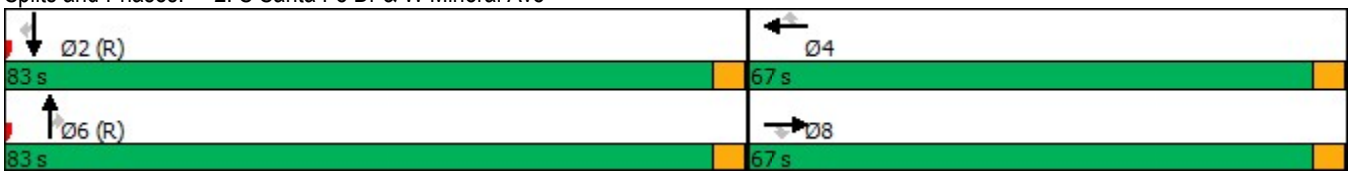
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		300	0		300	0		300
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Flt Permitted												
Satd. Flow (perm)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			7			7			7			31
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		224			314			260			233	
Travel Time (s)		5.1			7.1			5.9			5.3	

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1885	495	1015	310	3280	335	3300	170
Future Volume (vph)	1885	495	1015	310	3280	335	3300	170
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	8		4		6		2	
Permitted Phases		8		4		6		2
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	67.0	67.0	67.0	67.0	83.0	83.0	83.0	83.0
Total Split (%)	44.7%	44.7%	44.7%	44.7%	55.3%	55.3%	55.3%	55.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	63.0	63.0	63.0	63.0	79.0	79.0	79.0	79.0
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.53	0.53	0.53	0.53
v/c Ratio	1.38	0.81	0.52	0.50	1.33	0.43	1.34	0.22
Control Delay	209.6	48.5	33.3	34.5	182.9	23.4	186.5	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	209.6	48.5	33.3	34.5	182.9	23.4	186.5	16.4
LOS	F	D	C	C	F	C	F	B
Approach Delay	176.1		33.6		168.2		178.1	
Approach LOS	F		C		F		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 156.6	Intersection LOS: F
Intersection Capacity Utilization 122.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S Santa Fe Dr & W Mineral Ave

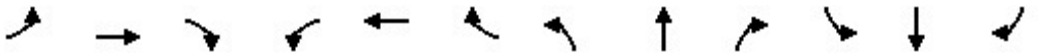


Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	2049	538	1103	337	3565	364	3587	185
v/c Ratio	1.38	0.81	0.52	0.50	1.33	0.43	1.34	0.22
Control Delay	209.6	48.5	33.3	34.5	182.9	23.4	186.5	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	209.6	48.5	33.3	34.5	182.9	23.4	186.5	16.4
Queue Length 50th (ft)	~1394	452	290	236	~1653	209	~1670	77
Queue Length 95th (ft)	#1526	618	335	334	#1710	293	#1726	126
Internal Link Dist (ft)	144		234		180		153	
Turn Bay Length (ft)				300		300		300
Base Capacity (vph)	1486	668	2135	668	2678	837	2678	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.38	0.81	0.52	0.50	1.33	0.43	1.34	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

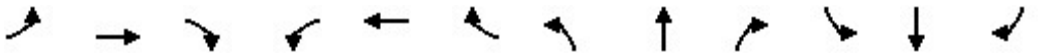
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑	↱		↑↑↑	↱		↑↑↑	↱
Traffic Volume (veh/h)	0	1885	495	0	1015	310	0	3280	335	0	3300	170
Future Volume (veh/h)	0	1885	495	0	1015	310	0	3280	335	0	3300	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	2049	538	0	1103	337	0	3565	364	0	3587	185
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
Arrive On Green	0.00	0.42	0.42	0.00	0.42	0.42	0.00	0.53	0.53	0.00	0.53	0.53
Sat Flow, veh/h	0	3647	1585	0	5274	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	0	2049	538	0	1103	337	0	3565	364	0	3587	185
Grp Sat Flow(s),veh/h/ln	0	1777	1585	0	1702	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	0.0	63.0	44.7	0.0	24.0	23.5	0.0	79.0	21.2	0.0	79.0	9.4
Cycle Q Clear(g_c), s	0.0	63.0	44.7	0.0	24.0	23.5	0.0	79.0	21.2	0.0	79.0	9.4
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
V/C Ratio(X)	0.00	1.37	0.81	0.00	0.51	0.51	0.00	1.33	0.44	0.00	1.33	0.22
Avail Cap(c_a), veh/h	0	1493	666	0	2145	666	0	2689	835	0	2689	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	43.5	38.2	0.0	32.2	32.0	0.0	35.5	21.8	0.0	35.5	19.0
Incr Delay (d2), s/veh	0.0	172.1	7.3	0.0	0.2	0.6	0.0	149.2	1.7	0.0	152.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	92.9	25.8	0.0	15.2	14.2	0.0	100.7	13.1	0.0	102.3	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	215.6	45.5	0.0	32.4	32.7	0.0	184.7	23.5	0.0	188.4	19.6
LnGrp LOS	A	F	D	A	C	C	A	F	C	A	F	B
Approach Vol, veh/h		2587			1440			3929			3772	
Approach Delay, s/veh		180.2			32.5			169.8			180.1	
Approach LOS		F			C			F			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.0		67.0		83.0		67.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		79.0		63.0		79.0		63.0				
Max Q Clear Time (g_c+I1), s		81.0		26.0		81.0		65.0				
Green Ext Time (p_c), s		0.0		12.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			158.5									
HCM 6th LOS			F									



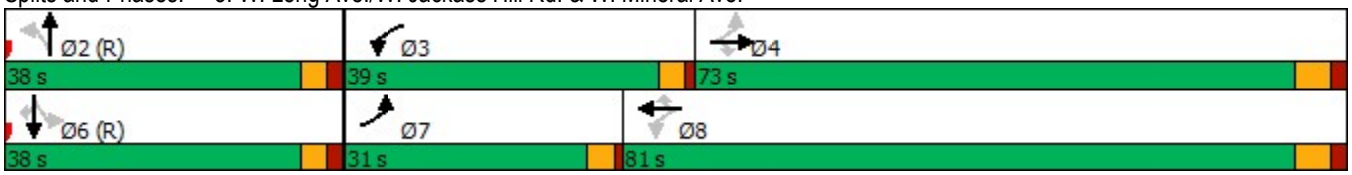
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		220	100		460	100		0	75		60
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1786	0	1770	1863	1583
Flt Permitted	0.192			0.049			0.750			0.659		
Satd. Flow (perm)	358	3539	1583	91	3539	1583	1397	1786	0	1228	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			283		12				288
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1378			1230			1150			1120	
Travel Time (s)		23.5			21.0			26.1			25.5	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	355	1850	20	5	935	260	120	65	240	10	265
Future Volume (vph)	355	1850	20	5	935	260	120	65	240	10	265
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	3.0	25.0	25.0	3.0	25.0	25.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	8.0	31.0	31.0	8.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	31.0	73.0	73.0	39.0	81.0	81.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	20.7%	48.7%	48.7%	26.0%	54.0%	54.0%	25.3%	25.3%	25.3%	25.3%	25.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?		Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	103.8	99.8	99.8	85.4	77.7	77.7	37.2	37.2	37.2	37.2	37.2
Actuated g/C Ratio	0.69	0.67	0.67	0.57	0.52	0.52	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.89	0.85	0.02	0.04	0.55	0.30	0.38	0.22	0.86	0.02	0.47
Control Delay	15.5	24.0	0.6	8.8	25.9	2.8	52.0	42.2	80.0	45.7	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	24.0	0.6	8.8	25.9	2.8	52.0	42.2	80.0	45.7	7.8
LOS	B	C	A	A	C	A	D	D	E	D	A
Approach Delay		22.4			20.8			47.8		42.2	
Approach LOS		C			C			D		D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 86.9%	ICU Level of Service E
Analysis Period (min) 15	

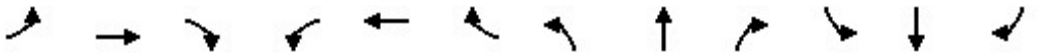
Splits and Phases: 3: W. Long Ave./W. Jackass Hill Rd. & W. Mineral Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	386	2011	22	5	1016	283	130	98	261	11	288
v/c Ratio	0.89	0.85	0.02	0.04	0.55	0.30	0.38	0.22	0.86	0.02	0.47
Control Delay	15.5	24.0	0.6	8.8	25.9	2.8	52.0	42.2	80.0	45.7	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	24.0	0.6	8.8	25.9	2.8	52.0	42.2	80.0	45.7	7.8
Queue Length 50th (ft)	94	1067	0	1	330	0	107	68	249	8	0
Queue Length 95th (ft)	m52	m722	m0	5	427	48	180	125	#440	27	81
Internal Link Dist (ft)		1298			1150			1070		1040	
Turn Bay Length (ft)	180		220	100		460	100		75		60
Base Capacity (vph)	501	2355	1077	454	1834	956	346	452	304	461	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.85	0.02	0.01	0.55	0.30	0.38	0.22	0.86	0.02	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	1850	20	5	935	260	120	65	25	240	10	265
Future Volume (veh/h)	355	1850	20	5	935	260	120	65	25	240	10	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	386	2011	22	5	1016	283	130	71	27	261	11	288
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	401	1837	820	55	1211	540	454	490	186	493	709	601
Arrive On Green	0.12	0.35	0.35	0.00	0.34	0.34	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1080	1291	491	1297	1870	1585
Grp Volume(v), veh/h	386	2011	22	5	1016	283	130	0	98	261	11	288
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1080	0	1782	1297	1870	1585
Q Serve(g_s), s	25.5	77.6	1.4	0.3	39.6	21.5	12.8	0.0	5.4	24.8	0.6	20.7
Cycle Q Clear(g_c), s	25.5	77.6	1.4	0.3	39.6	21.5	13.4	0.0	5.4	30.2	0.6	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	401	1837	820	55	1211	540	454	0	676	493	709	601
V/C Ratio(X)	0.96	1.09	0.03	0.09	0.84	0.52	0.29	0.00	0.15	0.53	0.02	0.48
Avail Cap(c_a), veh/h	401	1837	820	464	1777	793	454	0	676	493	709	601
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	49.0	24.1	41.0	45.6	39.7	33.2	0.0	30.6	40.5	29.1	35.3
Incr Delay (d2), s/veh	6.9	43.5	0.0	0.7	2.5	0.8	1.6	0.0	0.5	4.0	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.7	53.9	0.9	0.2	24.4	13.2	6.5	0.0	4.4	13.4	0.5	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	92.5	24.1	41.7	48.1	40.5	34.8	0.0	31.0	44.5	29.1	38.0
LnGrp LOS	D	F	C	D	D	D	C	A	C	D	C	D
Approach Vol, veh/h		2419			1304			228			560	
Approach Delay, s/veh		85.8			46.4			33.2			40.9	
Approach LOS		F			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		61.9	4.6	83.6		61.9	31.0	57.1				
Change Period (Y+Rc), s		5.0	4.0	6.0		5.0	4.0	6.0				
Max Green Setting (Gmax), s		33.0	35.0	67.0		33.0	27.0	75.0				
Max Q Clear Time (g_c+I1), s		15.4	2.3	79.6		32.2	27.5	41.6				
Green Ext Time (p_c), s		1.0	0.0	0.0		0.2	0.0	9.5				

Intersection Summary												
HCM 6th Ctrl Delay			66.2									
HCM 6th LOS			E									

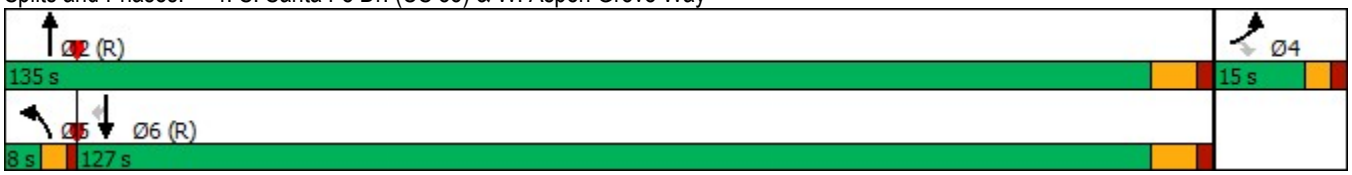
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		37				92
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1754	1740	
Travel Time (s)	42.0			26.6	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	110	35	3550	3360	85
Future Volume (vph)	115	110	35	3550	3360	85
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	15.0	8.0	135.0	127.0	127.0
Total Split (%)	10.0%	10.0%	5.3%	90.0%	84.7%	84.7%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.7	9.7	4.3	128.3	121.9	121.9
Actuated g/C Ratio	0.06	0.06	0.03	0.86	0.81	0.81
v/c Ratio	0.56	0.88	0.76	1.28	1.27	0.07
Control Delay	78.3	96.3	78.4	157.4	143.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	96.3	78.4	157.4	143.2	0.7
LOS	E	F	E	F	F	A
Approach Delay	87.1			156.6	139.7	
Approach LOS	F			F	F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 84 (56%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 146.4	Intersection LOS: F
Intersection Capacity Utilization 111.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	125	120	38	3859	3652	92
v/c Ratio	0.56	0.88	0.76	1.28	1.27	0.07
Control Delay	78.3	96.3	78.4	157.4	143.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	96.3	78.4	157.4	143.2	0.7
Queue Length 50th (ft)	62	82	36	~2480	~2387	0
Queue Length 95th (ft)	98	#203	m31	m#1430	#2465	10
Internal Link Dist (ft)	1460			1674	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	228	140	50	3026	2875	1303
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.86	0.76	1.28	1.27	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

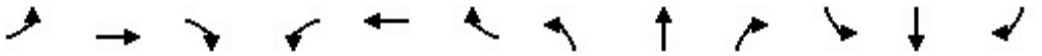
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	110	35	3550	3360	85
Future Volume (veh/h)	115	110	35	3550	3360	85
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	120	38	3859	3652	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	230	106	48	3032	2843	1268
Arrive On Green	0.07	0.07	0.03	0.85	0.80	0.80
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	125	120	38	3859	3652	92
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	5.3	10.0	3.2	128.0	120.0	1.8
Cycle Q Clear(g_c), s	5.3	10.0	3.2	128.0	120.0	1.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	230	106	48	3032	2843	1268
V/C Ratio(X)	0.54	1.14	0.80	1.27	1.28	0.07
Avail Cap(c_a), veh/h	230	106	48	3032	2843	1268
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	70.0	72.6	11.0	15.0	3.2
Incr Delay (d2), s/veh	2.6	128.7	61.7	125.4	130.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	18.8	4.1	115.1	122.0	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.4	198.7	134.3	136.4	145.9	3.3
LnGrp LOS	E	F	F	F	F	A
Approach Vol, veh/h	245			3897	3744	
Approach Delay, s/veh	133.2			136.3	142.4	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		135.0		15.0	8.0	127.0
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		128.0		10.0	4.0	120.0
Max Q Clear Time (g_c+I1), s		130.0		12.0	5.2	122.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	139.1
HCM 6th LOS	F



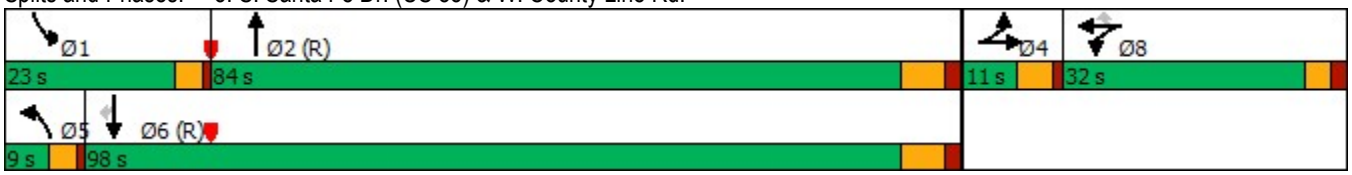
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		50	160		400	300		400
Storage Lanes	1		0	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950	0.955					0.950		
Satd. Flow (prot)	1770	1863	0	1681	1690	1583	1863	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950	0.955					0.950		
Satd. Flow (perm)	1770	1863	0	1681	1690	1583	1863	5085	1583	3433	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						195			160			80
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	25	25	165	5	455	3130	420	495	2055	30	
Future Volume (vph)	25	25	165	5	455	3130	420	495	2055	30	
Turn Type	Split	NA	Split	NA	Perm	NA	Free	Prot	NA	Perm	
Protected Phases	4	4	8	8		2		1	6		5
Permitted Phases					8		Free			6	
Detector Phase	4	4	8	8	8	2		1	6	6	
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0	3.0
Minimum Split (s)	10.0	10.0	31.0	31.0	31.0	12.0		8.0	33.0	33.0	8.0
Total Split (s)	11.0	11.0	32.0	32.0	32.0	84.0		23.0	98.0	98.0	9.0
Total Split (%)	7.3%	7.3%	21.3%	21.3%	21.3%	56.0%		15.3%	65.3%	65.3%	6%
Yellow Time (s)	4.0	4.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	2.0		1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	7.0		4.0	7.0	7.0	
Lead/Lag						Lag		Lead	Lag	Lag	Lead
Lead-Lag Optimize?						Yes			Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max		None	C-Max	C-Max	None
Act Effct Green (s)	5.9	5.9	29.2	29.2	29.2	77.0	150.0	19.0	100.0	100.0	
Actuated g/C Ratio	0.04	0.04	0.19	0.19	0.19	0.51	1.00	0.13	0.67	0.67	
v/c Ratio	0.39	0.37	0.28	0.28	1.07	1.30	0.29	1.24	0.66	0.03	
Control Delay	86.8	84.6	55.5	55.5	94.3	171.6	0.5	177.9	16.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	86.8	84.6	55.5	55.5	94.3	171.6	0.5	177.9	16.0	0.1	
LOS	F	F	E	E	F	F	A	F	B	A	
Approach Delay		85.7		83.8		151.4			46.9		
Approach LOS		F		F		F			D		

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 105.1	Intersection LOS: F
Intersection Capacity Utilization 106.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

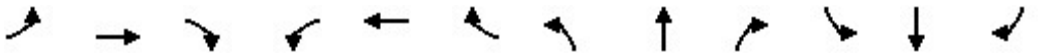


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	27	91	93	495	3402	457	538	2234	33
v/c Ratio	0.39	0.37	0.28	0.28	1.07	1.30	0.29	1.24	0.66	0.03
Control Delay	86.8	84.6	55.5	55.5	94.3	171.6	0.5	177.9	16.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.8	84.6	55.5	55.5	94.3	171.6	0.5	177.9	16.0	0.1
Queue Length 50th (ft)	26	26	82	84	~388	~1557	0	~335	446	0
Queue Length 95th (ft)	62	61	142	145	#618	#1619	0	#455	490	0
Internal Link Dist (ft)		1870		2780		2048			660	
Turn Bay Length (ft)	100		250		50		400	300		400
Base Capacity (vph)	70	74	327	329	464	2610	1583	434	3390	1082
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.36	0.28	0.28	1.07	1.30	0.29	1.24	0.66	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	25	0	165	5	455	0	3130	420	495	2055	30
Future Volume (veh/h)	25	25	0	165	5	455	0	3130	420	495	2055	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	27	0	183	0	0	0	3402	0	538	2234	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	48	0	239	0		1	3271		438	4054	1259
Arrive On Green	0.03	0.03	0.00	0.07	0.00	0.00	0.00	0.64	0.00	0.13	0.79	0.79
Sat Flow, veh/h	1781	1870	0	3563	0	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	27	27	0	183	0	0	0	3402	0	538	2234	33
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	2.2	2.1	0.0	7.6	0.0	0.0	0.0	96.1	0.0	19.0	24.0	0.7
Cycle Q Clear(g_c), s	2.2	2.1	0.0	7.6	0.0	0.0	0.0	96.1	0.0	19.0	24.0	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	48	0	239	0		1	3271		438	4054	1259
V/C Ratio(X)	0.60	0.57	0.00	0.76	0.00		0.00	1.04		1.23	0.55	0.03
Avail Cap(c_a), veh/h	71	75	0	641	0		59	3271		438	4054	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	72.3	0.0	68.8	0.0	0.0	0.0	26.9	0.0	65.5	5.7	3.2
Incr Delay (d2), s/veh	11.9	10.2	0.0	5.0	0.0	0.0	0.0	27.4	0.0	121.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	2.1	0.0	6.5	0.0	0.0	0.0	54.8	0.0	24.0	10.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.2	82.5	0.0	73.8	0.0	0.0	0.0	54.3	0.0	187.3	6.2	3.3
LnGrp LOS	F	F	A	E	A		A	F		F	A	A
Approach Vol, veh/h		54			183	A		3402	A		2805	
Approach Delay, s/veh		83.3			73.8			54.3			40.9	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	103.1		8.8	0.0	126.1		15.1				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	19.0	77.0		6.0	5.0	91.0		27.0				
Max Q Clear Time (g_c+I1), s	21.0	98.1		4.2	0.0	26.0		9.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	31.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		49.3	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

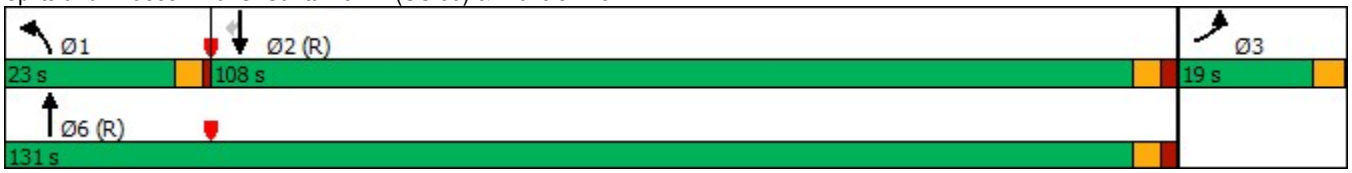
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	200			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	3433	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	3433	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		271				333
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			837	866	
Travel Time (s)	7.0			11.4	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	425	745	460	3210	3220	570
Future Volume (vph)	425	745	460	3210	3220	570
Turn Type	Prot	Free	Prot	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases		Free				2
Detector Phase	3		1	6	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	8.0		8.0	35.0	30.0	30.0
Total Split (s)	19.0		23.0	131.0	108.0	108.0
Total Split (%)	12.7%		15.3%	87.3%	72.0%	72.0%
Yellow Time (s)	3.5		3.0	3.0	3.0	3.0
All-Red Time (s)	0.5		1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		4.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None		None	C-Min	C-Min	C-Min
Act Effct Green (s)	15.0	150.0	19.0	126.0	103.0	103.0
Actuated g/C Ratio	0.10	1.00	0.13	0.84	0.69	0.69
v/c Ratio	1.35	0.51	1.15	0.82	1.00	0.52
Control Delay	222.9	1.2	141.0	4.8	14.2	0.1
Queue Delay	0.0	0.0	0.0	46.4	37.9	0.6
Total Delay	222.9	1.2	141.0	51.2	52.1	0.8
LOS	F	A	F	D	D	A
Approach Delay	81.8			62.5	44.4	
Approach LOS	F			E	D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 57.1	Intersection LOS: E
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	462	810	500	3489	3500	620
v/c Ratio	1.35	0.51	1.15	0.82	1.00	0.52
Control Delay	222.9	1.2	141.0	4.8	14.2	0.1
Queue Delay	0.0	0.0	0.0	46.4	37.9	0.6
Total Delay	222.9	1.2	141.0	51.2	52.1	0.8
Queue Length 50th (ft)	~303	0	~302	297	~160	0
Queue Length 95th (ft)	#418	0	m#381	310	m104	m0
Internal Link Dist (ft)	230			757	786	
Turn Bay Length (ft)	125		200			200
Base Capacity (vph)	343	1583	434	4271	3491	1191
Starvation Cap Reductn	0	0	0	83	470	252
Spillback Cap Reductn	0	62	0	1356	202	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.35	0.53	1.15	1.20	1.16	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

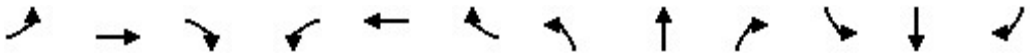
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	425	745	460	3210	3220	570
Future Volume (veh/h)	425	745	460	3210	3220	570
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	462	0	500	3489	3500	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	346		438	4289	3506	
Arrive On Green	0.10	0.00	0.13	0.84	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	5274	5274	1585
Grp Volume(v), veh/h	462	0	500	3489	3500	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1702	1702	1585
Q Serve(g_s), s	15.0	0.0	19.0	51.8	0.0	0.0
Cycle Q Clear(g_c), s	15.0	0.0	19.0	51.8	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	346		438	4289	3506	
V/C Ratio(X)	1.34		1.14	0.81	1.00	
Avail Cap(c_a), veh/h	346		438	4289	3506	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	67.5	0.0	65.5	6.1	0.0	0.0
Incr Delay (d2), s/veh	170.0	0.0	88.0	1.8	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.4	0.0	20.7	16.8	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	237.5	0.0	153.5	7.9	4.2	0.0
LnGrp LOS	F		F	A	A	
Approach Vol, veh/h	462	A		3989	3500	A
Approach Delay, s/veh	237.5			26.1	4.2	
Approach LOS	F			C	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	23.0	108.0				131.0	19.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	19.0	103.0				126.0	15.0
Max Q Clear Time (g_c+I1), s	21.0	2.0				53.8	17.0
Green Ext Time (p_c), s	0.0	88.4				65.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



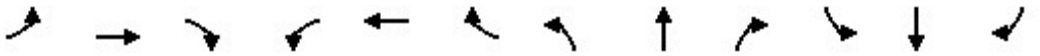
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.974				0.850		0.982			0.998	
Flt Protected		0.990			0.961			0.999		0.950		
Satd. Flow (prot)	0	1916	0	0	1909	1689	0	1949	0	1888	1983	0
Flt Permitted		0.990			0.961			0.999		0.950		
Satd. Flow (perm)	0	1916	0	0	1909	1689	0	1949	0	1888	1983	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	26	994	282	1467
Demand Flow Rate, veh/h	26	1013	288	1497
Vehicles Circulating, veh/h	1514	254	1174	32
Vehicles Exiting, veh/h	10	1169	361	249
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.9	0.1	13.5	18.8
Approach LOS	A	A	B	C

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	R	L	TR	R
Assumed Moves	LT	R	LT	R	LT	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		0.773	0.227	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	5	4.328	986	4.328	39	4.645	4.328	5
Entry Flow, veh/h	21	955	27	1938	249	1938	1153	339	1366
Cap Entry Lane, veh/h	392	0.980	1144	0.980	523	0.980	1311	1382	0.980
Entry HV Adj Factor	0.985	5	0.996	967	0.981	38	0.980	0.980	5
Flow Entry, veh/h	21	936	27	1900	244	1900	1130	332	1339
Cap Entry, veh/h	386	0.005	1140	0.509	513	0.020	1285	1355	0.004
V/C Ratio	0.054	3.9	0.024	0.0	0.476	0.0	0.880	0.245	2.7
Control Delay, s/veh	10.1	A	3.4	A	15.6	A	23.1	4.7	A
LOS	B	0	A	3	C	0	C	A	0
95th %tile Queue, veh	0		0		3		13	1	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	50		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850			0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3529	0	1770	3536	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	1770	1583	0	1770	3529	0	1770	3536	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		219			254			424			449	
Travel Time (s)		5.0			5.8			9.6			10.2	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	16.7

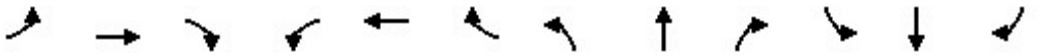
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	20	40	0	85	5	1080	25	105	1285	10
Future Vol, veh/h	15	0	20	40	0	85	5	1080	25	105	1285	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	22	43	0	92	5	1174	27	114	1397	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2228	2842	704	2125	2834	601	1408	0	0	1201	0	0
Stage 1	1631	1631	-	1198	1198	-	-	-	-	-	-	-
Stage 2	597	1211	-	927	1636	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	17	379	~ 28	17	443	481	-	-	577	-	-
Stage 1	106	158	-	197	257	-	-	-	-	-	-	-
Stage 2	456	253	-	289	157	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 16	13	379	~ 22	13	443	481	-	-	577	-	-
Mov Cap-2 Maneuver	~ 16	13	-	~ 22	13	-	-	-	-	-	-	-
Stage 1	105	127	-	195	254	-	-	-	-	-	-	-
Stage 2	357	250	-	219	126	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	246.7	275.5	0.1	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	481	-	-	16	379	22	443	577	-	-
HCM Lane V/C Ratio	0.011	-	-	1.019	0.057	1.976	0.209	0.198	-	-
HCM Control Delay (s)	12.6	-	-	$ 555.5	15.1	$ 828.5	15.3	12.8	-	-
HCM Lane LOS	B	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	2.5	0.2	5.6	0.8	0.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986			0.994			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3518	0	1770	1583	0	1770	1583	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3490	0	1770	3518	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			310			265			220	
Travel Time (s)		7.8			7.0			6.0			5.0	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	57.6

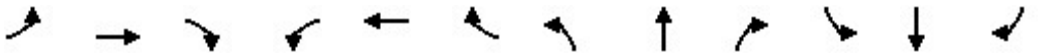
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	945	95	175	825	35	65	0	180	45	0	25
Future Vol, veh/h	45	945	95	175	825	35	65	0	180	45	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	50	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	1027	103	190	897	38	71	0	196	49	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	935	0	0	1130	0	0	2006	2492	565	1908	2524	468
Stage 1	-	-	-	-	-	-	1177	1177	-	1296	1296	-
Stage 2	-	-	-	-	-	-	829	1315	-	612	1228	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	728	-	-	614	-	-	~ 35	29	468	~ 42	27	542
Stage 1	-	-	-	-	-	-	203	263	-	171	231	-
Stage 2	-	-	-	-	-	-	331	226	-	447	249	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	728	-	-	614	-	-	~ 24	19	468	~ 18	17	542
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 24	19	-	~ 18	17	-
Stage 1	-	-	-	-	-	-	189	245	-	160	160	-
Stage 2	-	-	-	-	-	-	217	156	-	243	232	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	2.3	$ 336.1	$ 787.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	24	468	728	-	-	614	-	-	18	542
HCM Lane V/C Ratio	2.944	0.418	0.067	-	-	0.31	-	-	2.717	0.05
HCM Control Delay (s)	$ 1216.9	18.1	10.3	-	-	13.5	-	-	$ 1219	12
HCM Lane LOS	F	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	8.8	2	0.2	-	-	1.3	-	-	6.6	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.907			0.986			0.998	
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1664	0	1770	1837	0	1770	1859	0
Flt Permitted		0.976			0.985		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1664	0	1770	1837	0	1770	1859	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			245			385	
Travel Time (s)		4.7			5.2			5.6			8.8	

Intersection Summary	
Area Type:	Other

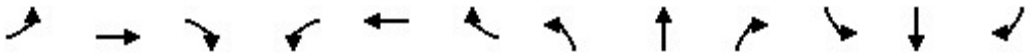
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	20	0	45	5	200	20	30	300	5
Future Vol, veh/h	5	0	5	20	0	45	5	200	20	30	300	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	22	0	49	5	217	22	33	326	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	658	644	329	635	635	228	331	0	0	239	0	0
Stage 1	395	395	-	238	238	-	-	-	-	-	-	-
Stage 2	263	249	-	397	397	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	378	391	712	391	396	811	1228	-	-	1328	-	-
Stage 1	630	605	-	765	708	-	-	-	-	-	-	-
Stage 2	742	701	-	629	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	347	380	712	380	385	811	1228	-	-	1328	-	-
Mov Cap-2 Maneuver	347	380	-	380	385	-	-	-	-	-	-	-
Stage 1	627	590	-	762	705	-	-	-	-	-	-	-
Stage 2	694	698	-	609	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	11.8	0.2	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1228	-	-	467	601	1328	-	-
HCM Lane V/C Ratio	0.004	-	-	0.023	0.118	0.025	-	-
HCM Control Delay (s)	7.9	-	-	12.9	11.8	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.932			0.997				
Flt Protected		0.976			0.976		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Flt Permitted		0.976			0.976		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			279			261			245	
Travel Time (s)		4.8			6.3			5.9			5.6	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	5	0	5	5	215	5	5	315	0
Future Vol, veh/h	5	0	5	5	0	5	5	215	5	5	315	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	5	0	5	5	234	5	5	342	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	601	601	342	602	599	237	342	0	0	239	0	0
Stage 1	352	352	-	247	247	-	-	-	-	-	-	-
Stage 2	249	249	-	355	352	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	412	414	701	412	415	802	1217	-	-	1328	-	-
Stage 1	665	632	-	757	702	-	-	-	-	-	-	-
Stage 2	755	701	-	662	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	407	411	701	406	412	802	1217	-	-	1328	-	-
Mov Cap-2 Maneuver	407	411	-	406	412	-	-	-	-	-	-	-
Stage 1	662	629	-	754	699	-	-	-	-	-	-	-
Stage 2	747	698	-	654	629	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	11.8	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1217	-	-	515	539	1328	-	-
HCM Lane V/C Ratio	0.004	-	-	0.021	0.02	0.004	-	-
HCM Control Delay (s)	8	-	-	12.1	11.8	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.951		0.906			
Flt Protected	0.969					0.982
Satd. Flow (prot)	1717	0	1688	0	0	1829
Flt Permitted	0.969					0.982
Satd. Flow (perm)	1717	0	1688	0	0	1829
Link Speed (mph)	30		30			30
Link Distance (ft)	220		457			206
Travel Time (s)	5.0		10.4			4.7

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	5.4
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	255	342	305
Demand Flow Rate, veh/h	260	349	311
Vehicles Circulating, veh/h	105	111	166
Vehicles Exiting, veh/h	355	366	199
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.6	5.6
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	260	349	311
Cap Entry Lane, veh/h	1240	1232	1165
Entry HV Adj Factor	0.981	0.980	0.981
Flow Entry, veh/h	255	342	305
Cap Entry, veh/h	1216	1207	1143
V/C Ratio	0.210	0.283	0.267
Control Delay, s/veh	4.8	5.6	5.6
LOS	A	A	A
95th %tile Queue, veh	1	1	1

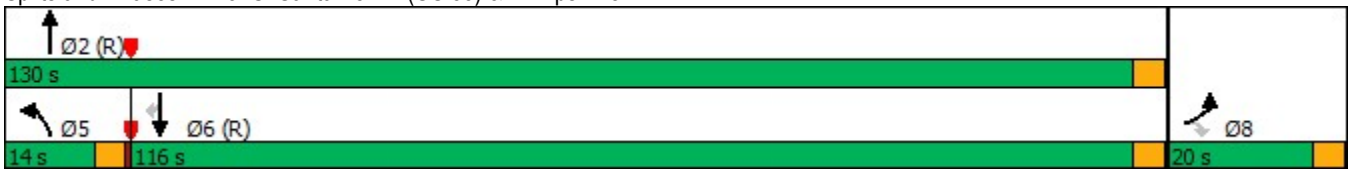
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	175	0	150			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		90				76
Link Speed (mph)	30			50	50	
Link Distance (ft)	246			1094	496	
Travel Time (s)	5.6			14.9	6.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	195	150	145	3470	3855	125
Future Volume (vph)	195	150	145	3470	3855	125
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	14.0	130.0	116.0	116.0
Total Split (%)	13.3%	13.3%	9.3%	86.7%	77.3%	77.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	14.0	14.0	12.0	128.0	112.0	112.0
Actuated g/C Ratio	0.09	0.09	0.08	0.85	0.75	0.75
v/c Ratio	0.66	0.71	1.12	0.87	1.10	0.11
Control Delay	75.8	46.9	170.8	9.6	59.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	46.9	170.8	9.6	59.7	1.0
LOS	E	D	F	A	E	A
Approach Delay	63.2			16.1	57.9	
Approach LOS	E			B	E	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 39.1	Intersection LOS: D
Intersection Capacity Utilization 98.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	212	163	158	3772	4190	136
v/c Ratio	0.66	0.71	1.12	0.87	1.10	0.11
Control Delay	75.8	46.9	170.8	9.6	59.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	46.9	170.8	9.6	59.7	1.0
Queue Length 50th (ft)	104	69	~183	616	~1691	3
Queue Length 95th (ft)	148	152	#353	721	m#1693	m3
Internal Link Dist (ft)	166			1014	416	
Turn Bay Length (ft)	175		150			200
Base Capacity (vph)	366	249	141	4338	3796	1201
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.65	1.12	0.87	1.10	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

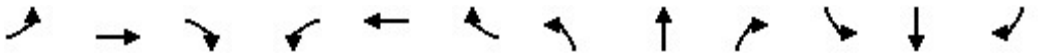
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	195	150	145	3470	3855	125
Future Volume (veh/h)	195	150	145	3470	3855	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	163	158	3772	4190	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	369	169	119	4289	3813	
Arrive On Green	0.11	0.11	0.07	0.84	0.75	0.00
Sat Flow, veh/h	3456	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	212	163	158	3772	4190	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1702	1702	1585
Q Serve(g_s), s	8.8	15.4	10.0	67.9	112.0	0.0
Cycle Q Clear(g_c), s	8.8	15.4	10.0	67.9	112.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	369	169	119	4289	3813	
V/C Ratio(X)	0.58	0.96	1.33	0.88	1.10	
Avail Cap(c_a), veh/h	369	169	119	4289	3813	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.8	66.7	70.0	7.3	19.0	0.0
Incr Delay (d2), s/veh	2.2	58.4	195.2	2.9	49.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	13.9	17.8	21.4	68.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.9	125.1	265.2	10.3	68.3	0.0
LnGrp LOS	E	F	F	B	F	
Approach Vol, veh/h	375			3930	4190	A
Approach Delay, s/veh	91.7			20.5	68.3	
Approach LOS	F			C	E	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		130.0			14.0	116.0	20.0
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		126.0			10.0	112.0	16.0
Max Q Clear Time (g_c+I1), s		69.9			12.0	114.0	17.4
Green Ext Time (p_c), s		54.0			0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.886			0.996			0.993	
Flt Protected		0.976			0.992		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1637	0	1770	1855	0	1770	1850	0
Flt Permitted		0.976			0.992		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1637	0	1770	1855	0	1770	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		200			219			227			261	
Travel Time (s)		4.5			5.0			5.2			5.9	

Intersection Summary	
Area Type:	Other

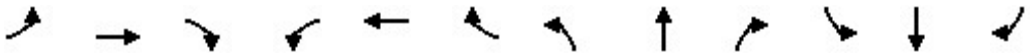
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	15	5	0	25	15	180	5	20	285	15
Future Vol, veh/h	15	0	15	5	0	25	15	180	5	20	285	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	16	5	0	27	16	196	5	22	310	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	606	595	318	601	601	199	326	0	0	201	0	0
Stage 1	362	362	-	231	231	-	-	-	-	-	-	-
Stage 2	244	233	-	370	370	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	409	417	723	412	414	842	1234	-	-	1371	-	-
Stage 1	657	625	-	772	713	-	-	-	-	-	-	-
Stage 2	760	712	-	650	620	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	387	405	723	394	402	842	1234	-	-	1371	-	-
Mov Cap-2 Maneuver	387	405	-	394	402	-	-	-	-	-	-	-
Stage 1	648	615	-	762	704	-	-	-	-	-	-	-
Stage 2	726	703	-	625	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	10.3	0.6	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1234	-	-	504	708	1371	-	-
HCM Lane V/C Ratio	0.013	-	-	0.065	0.046	0.016	-	-
HCM Control Delay (s)	8	-	-	12.6	10.3	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.919			0.982			0.993	
Flt Protected		0.976			0.980		0.950				0.993	
Satd. Flow (prot)	0	1694	0	0	1678	0	1770	1829	0	0	1837	0
Flt Permitted		0.976			0.980		0.950				0.993	
Satd. Flow (perm)	0	1694	0	0	1678	0	1770	1829	0	0	1837	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			141			206			227	
Travel Time (s)		3.6			3.2			4.7			5.2	

Intersection Summary	
Area Type:	Other

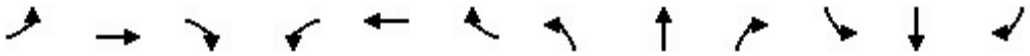
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑			↕	
Traffic Vol, veh/h	15	0	15	20	0	30	15	150	20	45	245	15
Future Vol, veh/h	15	0	15	20	0	30	15	150	20	45	245	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	16	22	0	33	16	163	22	49	266	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	595	589	274	586	586	174	282	0	0	185	0	0
Stage 1	372	372	-	206	206	-	-	-	-	-	-	-
Stage 2	223	217	-	380	380	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	416	421	765	422	422	869	1280	-	-	1390	-	-
Stage 1	648	619	-	796	731	-	-	-	-	-	-	-
Stage 2	780	723	-	642	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	384	399	765	396	400	869	1280	-	-	1390	-	-
Mov Cap-2 Maneuver	384	399	-	396	400	-	-	-	-	-	-	-
Stage 1	640	593	-	786	722	-	-	-	-	-	-	-
Stage 2	741	714	-	602	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	11.7	0.6	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	511	588	1390	-	-
HCM Lane V/C Ratio	0.013	-	-	0.064	0.092	0.035	-	-
HCM Control Delay (s)	7.8	-	-	12.5	11.7	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.977			0.958			0.972	
Flt Protected	0.950			0.950				0.967			0.962	
Satd. Flow (prot)	1770	3522	0	1770	1820	0	0	1726	0	0	1742	0
Flt Permitted	0.950			0.950				0.967			0.962	
Satd. Flow (perm)	1770	3522	0	1770	1820	0	0	1726	0	0	1742	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		220			191			163			130	
Travel Time (s)		5.0			4.3			3.7			3.0	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	305	10	10	220	40	10	0	5	40	0	10
Future Vol, veh/h	10	305	10	10	220	40	10	0	5	40	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	332	11	11	239	43	11	0	5	43	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	282	0	0	343	0	0	648	664	172	471	648	261
Stage 1	-	-	-	-	-	-	360	360	-	283	283	-
Stage 2	-	-	-	-	-	-	288	304	-	188	365	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1279	-	-	1214	-	-	369	380	842	489	388	777
Stage 1	-	-	-	-	-	-	632	626	-	723	676	-
Stage 2	-	-	-	-	-	-	719	662	-	796	623	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1279	-	-	1214	-	-	359	373	842	479	381	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	373	-	479	381	-
Stage 1	-	-	-	-	-	-	626	620	-	716	670	-
Stage 2	-	-	-	-	-	-	703	656	-	784	617	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	13.4	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	444	1279	-	-	1214	-	-	519
HCM Lane V/C Ratio	0.037	0.008	-	-	0.009	-	-	0.105
HCM Control Delay (s)	13.4	7.8	-	-	8	-	-	12.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	30		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996					0.865
Flt Protected						
Satd. Flow (prot)	3525	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	3525	0	0	1863	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	191			246	154	
Travel Time (s)	4.3			5.6	3.5	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	340	10	0	260	0	10
Future Vol, veh/h	340	10	0	260	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	11	0	283	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	191
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	819
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	819
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	819	-	-	-
HCM Lane V/C Ratio	0.013	-	-	-
HCM Control Delay (s)	9.5	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.986	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1837	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1837	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	394			113	457	
Travel Time (s)	9.0			2.6	10.4	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	85	0	0	230	295	35
Future Vol, veh/h	85	0	0	230	295	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	0	250	321	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	590	340	359	0	-	0
Stage 1	340	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	470	702	1200	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	470	702	1200	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1200	-	470	-	-
HCM Lane V/C Ratio	-	-	0.197	-	-
HCM Control Delay (s)	0	-	14.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.993
Satd. Flow (prot)	1611	0	1863	0	0	1850
Flt Permitted						0.993
Satd. Flow (perm)	1611	0	1863	0	0	1850
Link Speed (mph)	30		30			30
Link Distance (ft)	223		73			113
Travel Time (s)	5.1		1.7			2.6

Intersection Summary	
Area Type:	Other

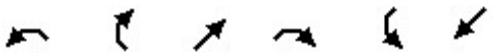
Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	185	0	40	260
Future Vol, veh/h	0	50	185	0	40	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	201	0	43	283

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	570	201	0	0	201	0
Stage 1	201	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	483	840	-	-	1371	-
Stage 1	833	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	465	840	-	-	1371	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	673	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	840	1371	-
HCM Lane V/C Ratio	-	-	0.065	0.032	-
HCM Control Delay (s)	-	-	9.6	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.998
Satd. Flow (prot)	1611	0	1863	0	0	1859
Flt Permitted						0.998
Satd. Flow (perm)	1611	0	1863	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	159		190			379
Travel Time (s)	3.6		4.3			8.6

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	25	165	0	10	250
Future Vol, veh/h	0	25	165	0	10	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	179	0	11	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	473	179	0	0	179	0
Stage 1	179	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	550	864	-	-	1397	-
Stage 1	852	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	545	864	-	-	1397	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.3	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	864	1397	-
HCM Lane V/C Ratio	-	-	0.031	0.008	-
HCM Control Delay (s)	-	-	9.3	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

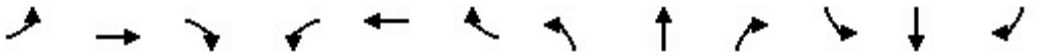
Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	218		344			190
Travel Time (s)	5.0		7.8			4.3

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	4.1
Intersection LOS	A

Approach	NB	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	179	272
Demand Flow Rate, veh/h	0	183	277
Vehicles Circulating, veh/h	183	0	0
Vehicles Exiting, veh/h	0	277	183
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.7	4.3
Approach LOS	-	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	0	183	277
Cap Entry Lane, veh/h	1145	1380	1380
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	0	179	272
Cap Entry, veh/h	1145	1353	1353
V/C Ratio	0.000	0.133	0.201
Control Delay, s/veh	3.1	3.7	4.3
LOS	A	A	A
95th %tile Queue, veh	0	0	1



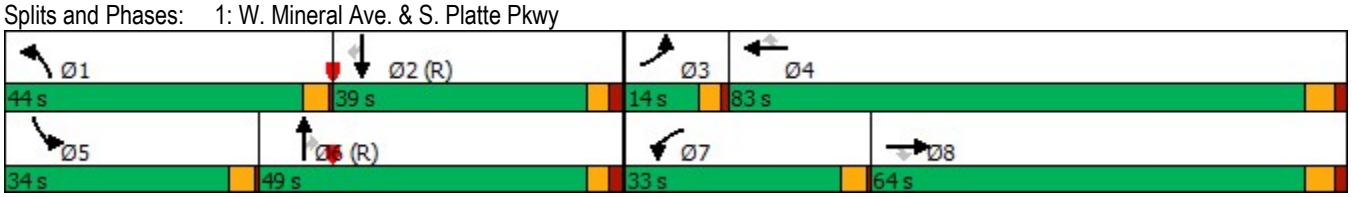
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	200		0	200		300	200		0
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.987	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	1747	1504	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			668			85		2	211			115
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		448			294			449			603	
Travel Time (s)		6.8			4.5			10.2			13.7	

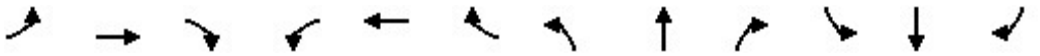
Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	745	795	500	1730	200	915	230	215	455	60	360
Future Volume (vph)	215	745	795	500	1730	200	915	230	215	455	60	360
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	3.0	25.0	25.0	4.0	25.0	25.0	4.0	5.0	5.0	4.0	3.0	3.0
Minimum Split (s)	8.0	32.0	32.0	8.0	31.0	31.0	8.0	40.0	40.0	8.0	35.0	35.0
Total Split (s)	14.0	64.0	64.0	33.0	83.0	83.0	44.0	49.0	49.0	34.0	39.0	39.0
Total Split (%)	7.8%	35.6%	35.6%	18.3%	46.1%	46.1%	24.4%	27.2%	27.2%	18.9%	21.7%	21.7%
Yellow Time (s)	3.0	4.0	4.0	3.5	4.0	4.0	3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.0	58.0	58.0	29.0	77.0	77.0	40.0	45.2	45.2	28.8	34.0	34.0
Actuated g/C Ratio	0.06	0.32	0.32	0.16	0.43	0.43	0.22	0.25	0.25	0.16	0.19	0.19
v/c Ratio	1.23	0.49	0.90	0.98	1.24	0.30	1.31	0.62	0.39	0.90	0.19	1.00
Control Delay	205.6	50.4	25.6	106.6	165.2	30.6	198.8	66.9	8.2	94.1	63.0	94.4
Queue Delay	0.0	0.2	0.0	0.0	0.9	0.0	0.0	0.0	0.1	55.2	0.0	0.0
Total Delay	205.6	50.6	25.6	106.6	166.1	30.6	198.8	66.9	8.3	149.3	63.0	94.4
LOS	F	D	C	F	F	C	F	E	A	F	E	F
Approach Delay		58.3			142.7			147.3			120.8	
Approach LOS		E			F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 117.6	Intersection LOS: F
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: W. Mineral Ave. & S. Platte Pkwy





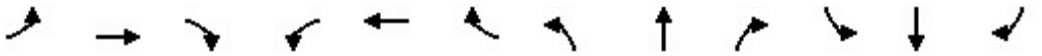
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	810	864	543	1880	217	995	273	211	495	65	391
v/c Ratio	1.23	0.49	0.90	0.98	1.24	0.30	1.31	0.62	0.39	0.90	0.19	1.00
Control Delay	205.6	50.4	25.6	106.6	165.2	30.6	198.8	66.9	8.2	94.1	63.0	94.4
Queue Delay	0.0	0.2	0.0	0.0	0.9	0.0	0.0	0.0	0.1	55.2	0.0	0.0
Total Delay	205.6	50.6	25.6	106.6	166.1	30.6	198.8	66.9	8.3	149.3	63.0	94.4
Queue Length 50th (ft)	~174	284	287	338	~1457	123	~773	305	0	297	66	350
Queue Length 95th (ft)	#273	330	#593	m#396	m#1415	m170	#910	422	76	#386	116	#585
Internal Link Dist (ft)		368			214			369			523	
Turn Bay Length (ft)	165			200			200		300	200		
Base Capacity (vph)	190	1638	962	553	1513	725	762	440	535	572	351	392
Starvation Cap Reductn	0	0	0	0	327	0	0	0	0	0	0	0
Spillback Cap Reductn	0	241	0	0	0	0	0	0	32	292	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.58	0.90	0.98	1.59	0.30	1.31	0.62	0.42	1.77	0.19	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	745	795	500	1730	200	915	230	215	455	60	360
Future Volume (veh/h)	215	745	795	500	1730	200	915	230	215	455	60	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	810	0	543	1880	217	995	250	234	495	65	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1645		557	1520	678	792	478	405	537	353	
Arrive On Green	0.06	0.32	0.00	0.05	0.14	0.14	0.22	0.26	0.26	0.16	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	3456	3554	1585	3563	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	234	810	0	543	1880	217	995	250	234	495	65	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	10.0	23.0	0.0	28.2	77.0	22.2	40.0	20.7	23.2	25.4	5.3	0.0
Cycle Q Clear(g_c), s	10.0	23.0	0.0	28.2	77.0	22.2	40.0	20.7	23.2	25.4	5.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1645		557	1520	678	792	478	405	537	353	
V/C Ratio(X)	1.22	0.49		0.98	1.24	0.32	1.26	0.52	0.58	0.92	0.18	
Avail Cap(c_a), veh/h	192	1645		557	1520	678	792	478	405	576	353	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.0	49.1	0.0	84.9	77.3	53.7	70.0	57.5	58.5	75.0	61.3	0.0
Incr Delay (d2), s/veh	136.2	0.2	0.0	31.8	112.4	0.3	125.8	4.0	5.9	19.8	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.5	14.9	0.0	22.2	85.1	14.6	46.8	15.7	15.1	18.7	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	221.2	49.4	0.0	116.6	189.7	54.0	195.8	61.6	64.4	94.8	62.5	0.0
LnGrp LOS	F	D		F	F	D	F	E	E	F	E	
Approach Vol, veh/h		1044	A		2640			1479			560	A
Approach Delay, s/veh		87.9			163.5			152.3			91.0	
Approach LOS		F			F			F			F	

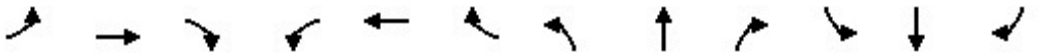
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	44.0	39.0	14.0	83.0	32.0	51.0	33.0	64.0
Change Period (Y+Rc), s	4.0	5.0	4.0	6.0	4.0	5.0	4.0	6.0
Max Green Setting (Gmax), s	40.0	34.0	10.0	77.0	30.0	44.0	29.0	58.0
Max Q Clear Time (g_c+I1), s	42.0	7.3	12.0	79.0	27.4	25.2	30.2	25.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.5	2.2	0.0	5.8

Intersection Summary	
HCM 6th Ctrl Delay	139.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



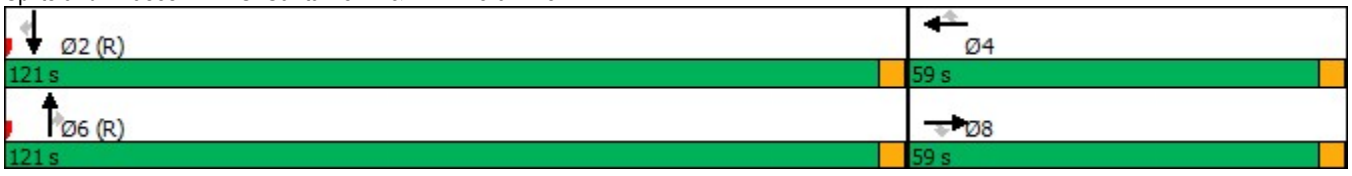
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		300	0		300	0		300
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Flt Permitted												
Satd. Flow (perm)	0	3539	1583	0	5085	1583	0	5085	1583	0	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			6			6			6			6
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		230			326			246			224	
Travel Time (s)		5.2			7.4			5.6			5.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1200	510	1805	195	3185	330	3785	545
Future Volume (vph)	1200	510	1805	195	3185	330	3785	545
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	8		4		6		2	
Permitted Phases		8		4		6		2
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	59.0	59.0	59.0	59.0	121.0	121.0	121.0	121.0
Total Split (%)	32.8%	32.8%	32.8%	32.8%	67.2%	67.2%	67.2%	67.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	55.0	55.0	55.0	55.0	117.0	117.0	117.0	117.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.65	0.65	0.65	0.65
v/c Ratio	1.21	1.14	1.26	0.44	1.05	0.35	1.24	0.57
Control Delay	153.2	137.8	172.9	51.9	61.0	15.1	142.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.2	137.8	172.9	51.9	61.0	15.1	142.7	20.1
LOS	F	F	F	D	E	B	F	C
Approach Delay	148.6		161.1		56.7		127.2	
Approach LOS	F		F		E		F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 114.8	Intersection LOS: F
Intersection Capacity Utilization 114.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: S. Santa Fe Dr & W. Mineral Ave

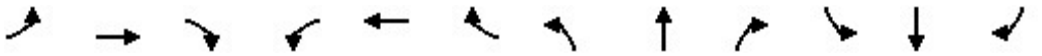


Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1304	554	1962	212	3462	359	4114	592
v/c Ratio	1.21	1.14	1.26	0.44	1.05	0.35	1.24	0.57
Control Delay	153.2	137.8	172.9	51.9	61.0	15.1	142.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.2	137.8	172.9	51.9	61.0	15.1	142.7	20.1
Queue Length 50th (ft)	~982	~755	~1061	196	~1620	181	~2204	370
Queue Length 95th (ft)	#1122	#1002	#1148	283	#1660	244	#2216	485
Internal Link Dist (ft)	150		246		166		144	
Turn Bay Length (ft)				300		300		300
Base Capacity (vph)	1081	487	1553	487	3305	1031	3305	1031
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	1.14	1.26	0.44	1.05	0.35	1.24	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑↑	↱		↑↑↑	↱		↑↑↑	↱
Traffic Volume (veh/h)	0	1200	510	0	1805	195	0	3185	330	0	3785	545
Future Volume (veh/h)	0	1200	510	0	1805	195	0	3185	330	0	3785	545
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1304	554	0	1962	212	0	3462	359	0	4114	592
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	1086	484	0	1560	484	0	3319	1030	0	3319	1030
Arrive On Green	0.00	0.31	0.31	0.00	0.31	0.31	0.00	0.65	0.65	0.00	0.65	0.65
Sat Flow, veh/h	0	3647	1585	0	5274	1585	0	5274	1585	0	5274	1585
Grp Volume(v), veh/h	0	1304	554	0	1962	212	0	3462	359	0	4114	592
Grp Sat Flow(s),veh/h/ln	0	1777	1585	0	1702	1585	0	1702	1585	0	1702	1585
Q Serve(g_s), s	0.0	55.0	55.0	0.0	55.0	19.3	0.0	117.0	18.4	0.0	117.0	37.6
Cycle Q Clear(g_c), s	0.0	55.0	55.0	0.0	55.0	19.3	0.0	117.0	18.4	0.0	117.0	37.6
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	1086	484	0	1560	484	0	3319	1030	0	3319	1030
V/C Ratio(X)	0.00	1.20	1.14	0.00	1.26	0.44	0.00	1.04	0.35	0.00	1.24	0.57
Avail Cap(c_a), veh/h	0	1086	484	0	1560	484	0	3319	1030	0	3319	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	62.5	62.5	0.0	62.5	50.1	0.0	31.5	14.3	0.0	31.5	17.6
Incr Delay (d2), s/veh	0.0	99.4	86.8	0.0	121.3	0.6	0.0	28.4	0.9	0.0	110.5	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	56.3	47.3	0.0	59.5	12.5	0.0	69.7	11.4	0.0	112.7	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	161.9	149.3	0.0	183.8	50.7	0.0	59.9	15.2	0.0	142.0	19.9
LnGrp LOS	A	F	F	A	F	D	A	F	B	A	F	B
Approach Vol, veh/h		1858			2174			3821			4706	
Approach Delay, s/veh		158.2			170.8			55.7			126.7	
Approach LOS		F			F			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		121.0		59.0		121.0		59.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		117.0		55.0		117.0		55.0				
Max Q Clear Time (g_c+I1), s		119.0		57.0		119.0		57.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			117.4									
HCM 6th LOS			F									

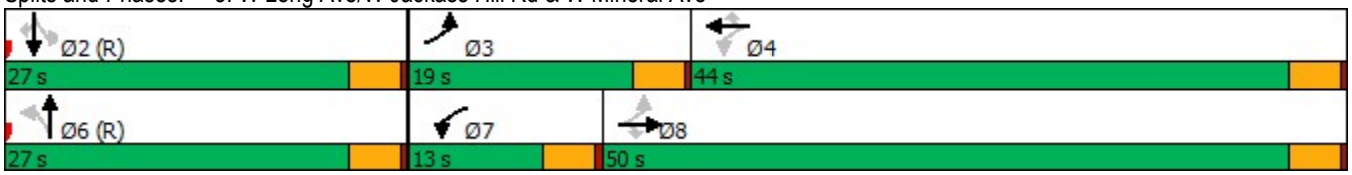
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		300	100		0	100		75
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1816	0	1770	1863	1583
Flt Permitted	0.084			0.217			0.718			0.715		
Satd. Flow (perm)	156	3539	1583	404	3539	1583	1337	1816	0	1332	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			315		11				240
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			359			270			224	
Travel Time (s)		7.1			8.2			6.1			5.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	315	1145	65	5	1565	290	110	50	245	55	325
Future Volume (vph)	315	1145	65	5	1565	290	110	50	245	55	325
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	3	8		7	4			6		2	
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	7	4	4	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	19.0	50.0	50.0	13.0	44.0	44.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	21.1%	55.6%	55.6%	14.4%	48.9%	48.9%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	59.0	57.0	57.0	46.1	40.4	40.4	23.0	23.0	23.0	23.0	23.0
Actuated g/C Ratio	0.66	0.63	0.63	0.51	0.45	0.45	0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.94	0.56	0.07	0.02	1.07	0.36	0.35	0.14	0.78	0.13	0.61
Control Delay	60.1	11.1	3.0	6.6	70.0	3.1	31.0	23.2	49.1	26.7	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	11.1	3.0	6.6	70.0	3.1	31.0	23.2	49.1	26.7	14.6
LOS	E	B	A	A	E	A	C	C	D	C	B
Approach Delay		20.9			59.4			28.3		29.2	
Approach LOS		C			E			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 39.5	Intersection LOS: D
Intersection Capacity Utilization 91.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: W Long Ave/W Jackass Hill Rd & W Mineral Ave

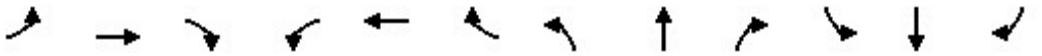


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	342	1245	71	5	1701	315	120	65	266	60	353
v/c Ratio	0.94	0.56	0.07	0.02	1.07	0.36	0.35	0.14	0.78	0.13	0.61
Control Delay	60.1	11.1	3.0	6.6	70.0	3.1	31.0	23.2	49.1	26.7	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	11.1	3.0	6.6	70.0	3.1	31.0	23.2	49.1	26.7	14.6
Queue Length 50th (ft)	144	175	2	1	~575	0	56	24	141	26	52
Queue Length 95th (ft)	#308	314	21	4	#711	45	106	56	#265	58	141
Internal Link Dist (ft)		233			279			190		144	
Turn Bay Length (ft)	100		150	100		300	100		100		75
Base Capacity (vph)	371	2242	1025	358	1589	884	341	472	340	476	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.56	0.07	0.01	1.07	0.36	0.35	0.14	0.78	0.13	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1145	65	5	1565	290	110	50	10	245	55	325
Future Volume (veh/h)	315	1145	65	5	1565	290	110	50	10	245	55	325
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	1245	71	5	1701	315	120	54	11	266	60	353
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	2148	958	253	1579	704	306	388	79	387	481	407
Arrive On Green	0.17	0.60	0.60	0.01	0.44	0.44	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	973	1508	307	1337	1870	1585
Grp Volume(v), veh/h	342	1245	71	5	1701	315	120	0	65	266	60	353
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	973	0	1815	1337	1870	1585
Q Serve(g_s), s	12.9	19.2	1.7	0.1	40.0	12.4	9.7	0.0	2.5	17.2	2.2	19.2
Cycle Q Clear(g_c), s	12.9	19.2	1.7	0.1	40.0	12.4	11.9	0.0	2.5	19.7	2.2	19.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	374	2148	958	253	1579	704	306	0	467	387	481	407
V/C Ratio(X)	0.91	0.58	0.07	0.02	1.08	0.45	0.39	0.00	0.14	0.69	0.12	0.87
Avail Cap(c_a), veh/h	377	2148	958	421	1579	704	306	0	467	387	481	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	10.8	7.4	13.8	25.0	17.3	30.2	0.0	25.8	33.4	25.7	32.0
Incr Delay (d2), s/veh	26.1	0.4	0.0	0.0	46.5	0.4	3.7	0.0	0.6	9.6	0.5	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	11.1	1.0	0.1	36.1	7.9	4.6	0.0	2.0	10.6	1.9	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	11.2	7.4	13.8	71.5	17.8	34.0	0.0	26.4	43.0	26.2	53.1
LnGrp LOS	D	B	A	B	F	B	C	A	C	D	C	D
Approach Vol, veh/h		1658			2021			185			679	
Approach Delay, s/veh		19.8			63.0			31.3			46.8	
Approach LOS		B			E			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.1	18.9	44.0		27.1	4.5	58.4				
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s		23.0	15.0	40.0		23.0	9.0	46.0				
Max Q Clear Time (g_c+I1), s		21.7	14.9	42.0		13.9	2.1	21.2				
Green Ext Time (p_c), s		0.4	0.0	0.0		0.5	0.0	10.8				

Intersection Summary												
HCM 6th Ctrl Delay			43.5									
HCM 6th LOS			D									

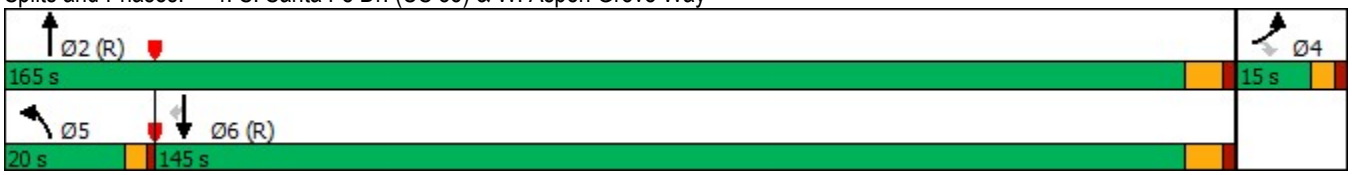
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	230	400			425
Storage Lanes	2	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		114				222
Link Speed (mph)	25			45	50	
Link Distance (ft)	1540			1473	1740	
Travel Time (s)	42.0			22.3	23.7	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	170	185	3190	4155	315
Future Volume (vph)	150	170	185	3190	4155	315
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	3.0	3.0	3.0	25.0	25.0	25.0
Minimum Split (s)	15.0	15.0	8.0	32.0	32.0	32.0
Total Split (s)	15.0	15.0	20.0	165.0	145.0	145.0
Total Split (%)	8.3%	8.3%	11.1%	91.7%	80.6%	80.6%
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?					Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	10.0	10.0	16.0	158.0	138.0	138.0
Actuated g/C Ratio	0.06	0.06	0.09	0.88	0.77	0.77
v/c Ratio	0.86	0.95	1.28	1.12	1.66	0.27
Control Delay	119.2	83.0	185.0	78.1	322.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.2	83.0	185.0	78.1	322.7	2.5
LOS	F	F	F	E	F	A
Approach Delay	99.9			83.9	300.1	
Approach LOS	F			F	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay: 202.9	Intersection LOS: F
Intersection Capacity Utilization 142.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: S. Santa Fe Dr. (US 85) & W. Aspen Grove Way



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	163	185	201	3467	4516	342
v/c Ratio	0.86	0.95	1.28	1.12	1.66	0.27
Control Delay	119.2	83.0	185.0	78.1	322.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.2	83.0	185.0	78.1	322.7	2.5
Queue Length 50th (ft)	100	86	~302	~1194	~4065	32
Queue Length 95th (ft)	#171	#256	m#293	m#1012	#4056	60
Internal Link Dist (ft)	1460			1393	1660	
Turn Bay Length (ft)		230	400			425
Base Capacity (vph)	190	195	157	3106	2713	1265
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.95	1.28	1.12	1.66	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	170	185	3190	4155	315
Future Volume (veh/h)	150	170	185	3190	4155	315
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	185	201	3467	4516	342
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	192	88	158	3119	2724	1215
Arrive On Green	0.06	0.06	0.09	0.88	0.77	0.77
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	163	185	201	3467	4516	342
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	8.4	10.0	16.0	158.0	138.0	11.6
Cycle Q Clear(g_c), s	8.4	10.0	16.0	158.0	138.0	11.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	192	88	158	3119	2724	1215
V/C Ratio(X)	0.85	2.10	1.27	1.11	1.66	0.28
Avail Cap(c_a), veh/h	192	88	158	3119	2724	1215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.3	85.0	82.0	11.0	21.0	6.2
Incr Delay (d2), s/veh	28.4	531.7	161.5	55.4	297.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	34.2	22.4	76.2	251.1	6.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	112.6	616.7	243.5	66.4	318.6	6.8
LnGrp LOS	F	F	F	F	F	A
Approach Vol, veh/h	348			3668	4858	
Approach Delay, s/veh	380.6			76.1	296.6	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		165.0		15.0	20.0	145.0
Change Period (Y+Rc), s		7.0		5.0	4.0	7.0
Max Green Setting (Gmax), s		158.0		10.0	16.0	138.0
Max Q Clear Time (g_c+I1), s		160.0		12.0	18.0	140.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	208.7
HCM 6th LOS	F

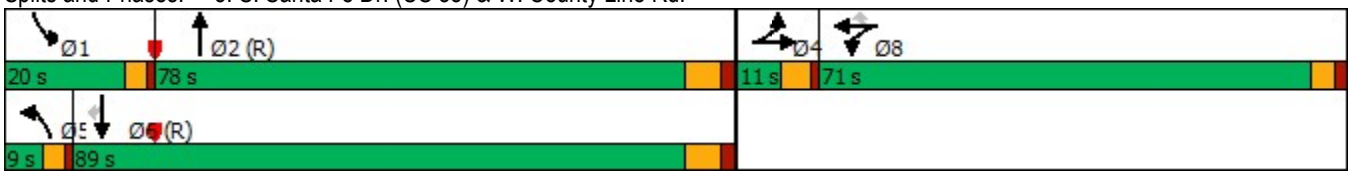
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	250		0	160		400	300		400
Storage Lanes	1		0	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor												
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950	0.957		0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1681	1694	1583	1770	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950	0.957		0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1681	1694	1583	1770	5085	1583	3433	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				173			133			67
Link Speed (mph)		30			40			50			50	
Link Distance (ft)		1950			2860			2128			740	
Travel Time (s)		44.3			48.8			29.0			10.1	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	25	5	470	25	955	25	2940	165	430	2470	40
Future Volume (vph)	25	5	470	25	955	25	2940	165	430	2470	40
Turn Type	Split	NA	Split	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	4	4	8	8		5	2		1	6	
Permitted Phases					8			Free			6
Detector Phase	4	4	8	8	8	5	2		1	6	6
Switch Phase											
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	10.0	10.0	31.0	31.0	31.0	8.0	12.0		8.0	33.0	33.0
Total Split (s)	11.0	11.0	71.0	71.0	71.0	9.0	78.0		20.0	89.0	89.0
Total Split (%)	6.1%	6.1%	39.4%	39.4%	39.4%	5.0%	43.3%		11.1%	49.4%	49.4%
Yellow Time (s)	4.0	4.0	3.0	3.0	3.0	3.0	5.0		3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	7.0		4.0	7.0	7.0
Lead/Lag						Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	5.9	5.9	68.2	68.2	68.2	5.0	71.0	180.0	16.0	83.8	83.8
Actuated g/C Ratio	0.03	0.03	0.38	0.38	0.38	0.03	0.39	1.00	0.09	0.47	0.47
v/c Ratio	0.47	0.16	0.43	0.42	1.47	0.55	1.59	0.11	1.53	1.13	0.06
Control Delay	110.6	64.3	44.7	44.4	250.8	123.3	305.2	0.1	303.5	109.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.6	64.3	44.7	44.4	250.8	123.3	305.2	0.1	303.5	109.6	1.9
LOS	F	E	D	D	F	F	F	A	F	F	A
Approach Delay		98.1		180.4			287.7			136.5	
Approach LOS		F		F			F			F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.59	
Intersection Signal Delay: 207.4	Intersection LOS: F
Intersection Capacity Utilization 133.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: S. Santa Fe Dr. (US 85) & W. County Line Rd.

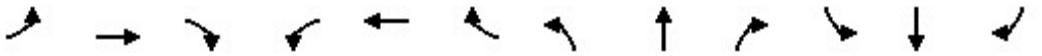


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	10	271	267	1038	27	3196	179	467	2685	43
v/c Ratio	0.47	0.16	0.43	0.42	1.47	0.55	1.59	0.11	1.53	1.13	0.06
Control Delay	110.6	64.3	44.7	44.4	250.8	123.3	305.2	0.1	303.5	109.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.6	64.3	44.7	44.4	250.8	123.3	305.2	0.1	303.5	109.6	1.9
Queue Length 50th (ft)	32	6	254	250	~1567	32	~1964	0	~396	~1367	0
Queue Length 95th (ft)	71	30	352	346	#1839	#84	#2013	0	#517	#1433	10
Internal Link Dist (ft)		1870		2780			2048			660	
Turn Bay Length (ft)	100		250			160		400	300		400
Base Capacity (vph)	59	62	637	642	707	49	2005	1583	305	2367	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.16	0.43	0.42	1.47	0.55	1.59	0.11	1.53	1.13	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	5	5	470	25	955	25	2940	165	430	2470	40
Future Volume (veh/h)	25	5	5	470	25	955	25	2940	165	430	2470	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	5	5	530	0	0	27	3196	0	467	2685	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	19	19	597	0		35	3089		307	3443	1069
Arrive On Green	0.02	0.02	0.02	0.17	0.00	0.00	0.02	0.60	0.00	0.09	0.67	0.67
Sat Flow, veh/h	1781	858	858	3563	0	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	27	0	10	530	0	0	27	3196	0	467	2685	43
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1781	0	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	2.7	0.0	1.0	26.2	0.0	0.0	2.7	108.9	0.0	16.0	65.0	1.6
Cycle Q Clear(g_c), s	2.7	0.0	1.0	26.2	0.0	0.0	2.7	108.9	0.0	16.0	65.0	1.6
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	0	38	597	0		35	3089		307	3443	1069
V/C Ratio(X)	0.69	0.00	0.26	0.89	0.00		0.78	1.03		1.52	0.78	0.04
Avail Cap(c_a), veh/h	59	0	57	1306	0		49	3089		307	3443	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.4	0.0	86.6	73.3	0.0	0.0	87.9	35.6	0.0	82.0	20.1	9.8
Incr Delay (d2), s/veh	19.1	0.0	3.6	4.7	0.0	0.0	38.4	26.1	0.0	250.2	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	0.9	18.1	0.0	0.0	2.9	62.5	0.0	28.1	32.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.5	0.0	90.2	78.0	0.0	0.0	126.3	61.6	0.0	332.2	21.9	9.9
LnGrp LOS	F	A	F	E	A		F	F		F	C	A
Approach Vol, veh/h		37			530	A		3223	A		3195	
Approach Delay, s/veh		102.1			78.0			62.2			67.1	
Approach LOS		F			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	115.9		9.0	7.5	128.4		35.1				
Change Period (Y+Rc), s	4.0	7.0		5.0	4.0	7.0		5.0				
Max Green Setting (Gmax), s	16.0	71.0		6.0	5.0	82.0		66.0				
Max Q Clear Time (g_c+I1), s	18.0	110.9		4.7	4.7	67.0		28.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	13.4		2.0				

Intersection Summary			
HCM 6th Ctrl Delay		65.8	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

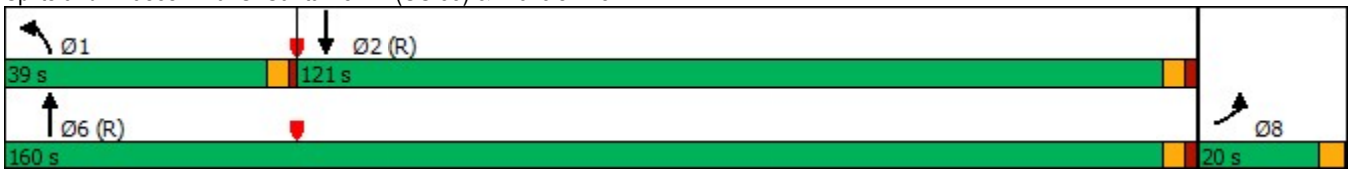
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	125	0	400			200
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	3433	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	3433	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				55
Link Speed (mph)	30			50	50	
Link Distance (ft)	310			837	866	
Travel Time (s)	7.0			11.4	11.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	325	720	770	3210	3870	430
Future Volume (vph)	325	720	770	3210	3870	430
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		8.0	35.0	30.0	
Total Split (s)	20.0		39.0	160.0	121.0	
Total Split (%)	11.1%		21.7%	88.9%	67.2%	
Yellow Time (s)	3.5		3.0	3.0	3.0	
All-Red Time (s)	0.5		1.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None		None	C-Min	C-Min	
Act Effct Green (s)	16.0	180.0	35.0	155.0	116.0	180.0
Actuated g/C Ratio	0.09	1.00	0.19	0.86	0.64	1.00
v/c Ratio	1.16	0.49	1.25	0.80	1.28	0.30
Control Delay	168.6	1.1	182.4	7.3	147.3	0.0
Queue Delay	0.0	0.0	0.0	36.4	0.1	0.0
Total Delay	168.6	1.1	182.4	43.7	147.4	0.0
LOS	F	A	F	D	F	A
Approach Delay	53.2			70.6	132.6	
Approach LOS	D			E	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 97.2	Intersection LOS: F
Intersection Capacity Utilization 116.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 6: S. Santa Fe Dr. (US 85) & Nichols Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	353	783	837	3489	4207	467
v/c Ratio	1.16	0.49	1.25	0.80	1.28	0.30
Control Delay	168.6	1.1	182.4	7.3	147.3	0.0
Queue Delay	0.0	0.0	0.0	36.4	0.1	0.0
Total Delay	168.6	1.1	182.4	43.7	147.4	0.0
Queue Length 50th (ft)	~252	0	~634	539	~2294	0
Queue Length 95th (ft)	#364	0	#770	561	m#1556	m0
Internal Link Dist (ft)	230			757	786	
Turn Bay Length (ft)	125		400			200
Base Capacity (vph)	305	1583	667	4378	3277	1583
Starvation Cap Reductn	0	0	0	402	135	0
Spillback Cap Reductn	0	0	0	1139	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.49	1.25	1.08	1.34	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

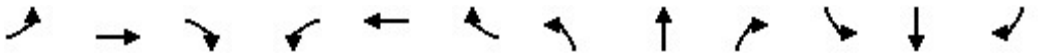
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	325	720	770	3210	3870	430
Future Volume (veh/h)	325	720	770	3210	3870	430
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	353	0	837	3489	4207	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	307		672	4397	3291	
Arrive On Green	0.09	0.00	0.19	0.86	1.00	0.00
Sat Flow, veh/h	3456	1585	3456	5274	5274	1585
Grp Volume(v), veh/h	353	0	837	3489	4207	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1728	1702	1702	1585
Q Serve(g_s), s	16.0	0.0	35.0	53.9	116.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	35.0	53.9	116.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	307		672	4397	3291	
V/C Ratio(X)	1.15		1.25	0.79	1.28	
Avail Cap(c_a), veh/h	307		672	4397	3291	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.09	0.00
Uniform Delay (d), s/veh	82.0	0.0	72.5	5.5	0.0	0.0
Incr Delay (d2), s/veh	98.0	0.0	122.8	1.5	125.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.8	0.0	39.2	18.0	50.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	180.0	0.0	195.3	7.0	125.5	0.0
LnGrp LOS	F		F	A	F	
Approach Vol, veh/h	353	A		4326	4207	A
Approach Delay, s/veh	180.0			43.5	125.5	
Approach LOS	F			D	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	39.0	121.0				160.0	20.0
Change Period (Y+Rc), s	4.0	5.0				5.0	4.0
Max Green Setting (Gmax), s	35.0	116.0				155.0	16.0
Max Q Clear Time (g_c+I1), s	37.0	118.0				55.9	18.0
Green Ext Time (p_c), s	0.0	0.0				86.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	87.7
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



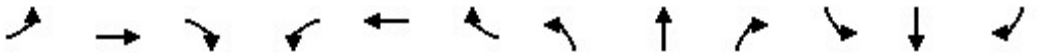
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	14	14	14	14	14	14
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850		0.985			0.995	
Flt Protected		0.988			0.966			0.999		0.950		
Satd. Flow (prot)	0	1900	0	0	1919	1689	0	1955	0	1888	1977	0
Flt Permitted		0.988			0.966			0.999		0.950		
Satd. Flow (perm)	0	1900	0	0	1919	1689	0	1955	0	1888	1977	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		426			345			385			424	
Travel Time (s)		9.7			7.8			8.8			9.6	

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	21	1195	288	1364
Demand Flow Rate, veh/h	21	1219	294	1391
Vehicles Circulating, veh/h	1419	265	1047	60
Vehicles Exiting, veh/h	21	1042	388	260
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.9	0.2	11.9	14.3
Approach LOS	A	A	B	B

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	R	L	TR	R
Assumed Moves	LT	R	LT	R	LT	R	L	TR	R
RT Channelized		Yield		Free		Free			Yield
Lane Util	1.000		1.000		1.000		0.747	0.253	
Follow-Up Headway, s	2.535		2.535		2.535		2.667	2.535	
Critical Headway, s	4.328	5	4.328	1164	4.328	34	4.645	4.328	11
Entry Flow, veh/h	16	929	55	1938	260	1938	1031	349	1351
Cap Entry Lane, veh/h	425	0.980	1134	0.980	583	0.980	1277	1349	0.980
Entry HV Adj Factor	0.987	5	0.976	1141	0.981	33	0.981	0.980	11
Flow Entry, veh/h	16	911	54	1900	255	1900	1011	342	1324
Cap Entry, veh/h	419	0.005	1107	0.601	572	0.017	1253	1323	0.008
V/C Ratio	0.038	4.0	0.049	0.0	0.446	0.0	0.807	0.259	2.8
Control Delay, s/veh	9.1	A	3.7	A	13.5	A	17.6	5.0	A
LOS	A	0	A	4	B	0	C	A	0
95th %tile Queue, veh	0		0		2		10	1	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	50		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850			0.996			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	3525	0	1770	3529	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	1770	1583	0	1770	3525	0	1770	3529	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		219			247			424			449	
Travel Time (s)		5.0			5.6			9.6			10.2	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	28.4

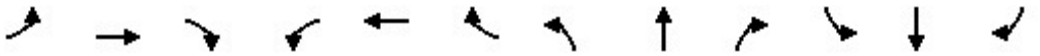
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	15	45	0	100	15	1240	30	125	1195	25
Future Vol, veh/h	10	0	15	45	0	100	15	1240	30	125	1195	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	16	49	0	109	16	1348	33	136	1299	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2291	2998	663	2319	2995	691	1326	0	0	1381	0	0
Stage 1	1585	1585	-	1397	1397	-	-	-	-	-	-	-
Stage 2	706	1413	-	922	1598	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	21	13	404	~ 20	13	387	517	-	-	492	-	-
Stage 1	113	167	-	148	206	-	-	-	-	-	-	-
Stage 2	393	202	-	291	164	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	12	9	404	~ 15	9	387	517	-	-	492	-	-
Mov Cap-2 Maneuver	12	9	-	~ 15	9	-	-	-	-	-	-	-
Stage 1	109	121	-	143	200	-	-	-	-	-	-	-
Stage 2	274	196	-	202	119	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	262.2	$ 488.8	0.1	1.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	517	-	-	12	404	15	387	492	-	-
HCM Lane V/C Ratio	0.032	-	-	0.906	0.04	3.261	0.281	0.276	-	-
HCM Control Delay (s)	12.2	-	-	$ 634.1	14.3	$ 1535.3	17.9	15.1	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.1	6.9	1.1	1.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.985			0.994			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3486	0	1770	3518	0	1770	1583	0	1770	1583	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3486	0	1770	3518	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			310			265			220	
Travel Time (s)		7.8			7.0			6.0			5.0	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	62.2

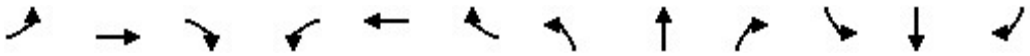
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	830	95	155	1005	40	65	0	160	55	0	30
Future Vol, veh/h	50	830	95	155	1005	40	65	0	160	55	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	50	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	902	103	168	1092	43	71	0	174	60	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1135	0	0	1005	0	0	1944	2533	503	2009	2563	568
Stage 1	-	-	-	-	-	-	1062	1062	-	1450	1450	-
Stage 2	-	-	-	-	-	-	882	1471	-	559	1113	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	611	-	-	685	-	-	~ 39	27	514	~ 35	26	466
Stage 1	-	-	-	-	-	-	239	298	-	137	194	-
Stage 2	-	-	-	-	-	-	307	190	-	481	282	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	611	-	-	685	-	-	~ 27	19	514	~ 18	18	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 27	19	-	~ 18	18	-
Stage 1	-	-	-	-	-	-	218	272	-	125	146	-
Stage 2	-	-	-	-	-	-	215	143	-	290	257	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.5	$ 311.5	$ 964.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	27	514	611	-	-	685	-	-	18	466
HCM Lane V/C Ratio	2.617	0.338	0.089	-	-	0.246	-	-	3.321	0.07
HCM Control Delay (s)	$ 1040	15.5	11.5	-	-	12	-	-	$ 1483.4	13.3
HCM Lane LOS	F	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	8.6	1.5	0.3	-	-	1	-	-	8	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.904			0.987			0.998	
Flt Protected		0.976			0.986		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1660	0	1770	1839	0	1770	1859	0
Flt Permitted		0.976			0.986		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1660	0	1770	1839	0	1770	1859	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			245			385	
Travel Time (s)		4.7			5.2			5.6			8.8	

Intersection Summary	
Area Type:	Other

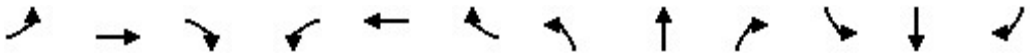
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	20	0	50	5	215	20	35	315	5
Future Vol, veh/h	5	0	5	20	0	50	5	215	20	35	315	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	22	0	54	5	234	22	38	342	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	703	687	345	678	678	245	347	0	0	256	0	0
Stage 1	421	421	-	255	255	-	-	-	-	-	-	-
Stage 2	282	266	-	423	423	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	352	370	698	366	374	794	1212	-	-	1309	-	-
Stage 1	610	589	-	749	696	-	-	-	-	-	-	-
Stage 2	725	689	-	609	588	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	320	358	698	354	362	794	1212	-	-	1309	-	-
Mov Cap-2 Maneuver	320	358	-	354	362	-	-	-	-	-	-	-
Stage 1	608	572	-	746	693	-	-	-	-	-	-	-
Stage 2	673	686	-	587	571	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	12.1	0.2	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1212	-	-	439	586	1309	-	-
HCM Lane V/C Ratio	0.004	-	-	0.025	0.13	0.029	-	-
HCM Control Delay (s)	8	-	-	13.4	12.1	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.932			0.997				
Flt Protected		0.976			0.976		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Flt Permitted		0.976			0.976		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1694	0	1770	1857	0	1770	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			279			261			245	
Travel Time (s)		4.8			6.3			5.9			5.6	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	5	0	5	5	225	5	5	330	0
Future Vol, veh/h	5	0	5	5	0	5	5	225	5	5	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	5	0	5	5	245	5	5	359	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	629	629	359	630	627	248	359	0	0	250	0	0
Stage 1	369	369	-	258	258	-	-	-	-	-	-	-
Stage 2	260	260	-	372	369	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	395	399	685	394	400	791	1200	-	-	1316	-	-
Stage 1	651	621	-	747	694	-	-	-	-	-	-	-
Stage 2	745	693	-	648	621	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	390	396	685	388	397	791	1200	-	-	1316	-	-
Mov Cap-2 Maneuver	390	396	-	388	397	-	-	-	-	-	-	-
Stage 1	648	619	-	744	691	-	-	-	-	-	-	-
Stage 2	737	690	-	640	619	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	12.1	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1200	-	-	497	521	1316	-	-
HCM Lane V/C Ratio	0.005	-	-	0.022	0.021	0.004	-	-
HCM Control Delay (s)	8	-	-	12.4	12.1	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.961		0.905			
Flt Protected	0.966					0.985
Satd. Flow (prot)	1729	0	1686	0	0	1835
Flt Permitted	0.966					0.985
Satd. Flow (perm)	1729	0	1686	0	0	1835
Link Speed (mph)	30		30			30
Link Distance (ft)	202		457			206
Travel Time (s)	4.6		10.4			4.7

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	6.2
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	343	440	315
Demand Flow Rate, veh/h	350	449	321
Vehicles Circulating, veh/h	133	100	250
Vehicles Exiting, veh/h	416	471	233
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.7	6.4	6.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	350	449	321
Cap Entry Lane, veh/h	1205	1246	1069
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	343	440	315
Cap Entry, veh/h	1181	1222	1048
V/C Ratio	0.291	0.360	0.300
Control Delay, s/veh	5.7	6.4	6.4
LOS	A	A	A
95th %tile Queue, veh	1	2	1

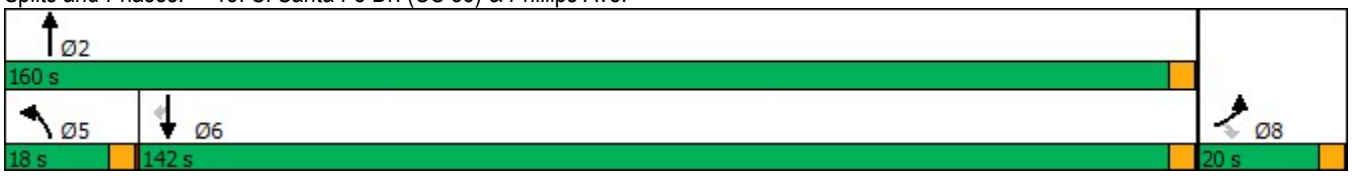
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	175	0	150			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	5085	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	5085	5085	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		101				110
Link Speed (mph)	30			50	50	
Link Distance (ft)	255			1094	496	
Travel Time (s)	5.8			14.9	6.8	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	235	160	185	3735	4440	160
Future Volume (vph)	235	160	185	3735	4440	160
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	18.0	160.0	142.0	142.0
Total Split (%)	11.1%	11.1%	10.0%	88.9%	78.9%	78.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	15.7	15.7	14.0	156.0	138.0	138.0
Actuated g/C Ratio	0.09	0.09	0.08	0.87	0.77	0.77
v/c Ratio	0.85	0.76	1.47	0.92	1.24	0.14
Control Delay	105.4	54.2	295.8	12.6	131.3	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.4	54.2	295.8	12.6	131.3	2.2
LOS	F	D	F	B	F	A
Approach Delay	84.6			26.0	126.8	
Approach LOS	F			C	F	

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 179.7	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 80.6	Intersection LOS: F
Intersection Capacity Utilization 112.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: S. Santa Fe Dr. (US 85) & Phillips Ave.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	255	174	201	4060	4826	174
v/c Ratio	0.85	0.76	1.47	0.92	1.24	0.14
Control Delay	105.4	54.2	295.8	12.6	131.3	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.4	54.2	295.8	12.6	131.3	2.2
Queue Length 50th (ft)	155	85	~323	926	~2576	17
Queue Length 95th (ft)	#229	#197	#504	942	#2556	37
Internal Link Dist (ft)	175			1014	416	
Turn Bay Length (ft)	175		150			300
Base Capacity (vph)	306	232	137	4415	3905	1241
Starvation Cap Reductn	0	0	0	0	30	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.75	1.47	0.92	1.25	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

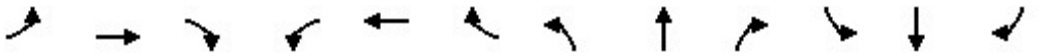
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	235	160	185	3735	4440	160
Future Volume (veh/h)	235	160	185	3735	4440	160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	255	174	201	4060	4826	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	307	141	139	4425	3915	
Arrive On Green	0.09	0.09	0.08	0.87	0.77	0.00
Sat Flow, veh/h	3456	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	255	174	201	4060	4826	0
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1702	1702	1585
Q Serve(g_s), s	13.1	16.0	14.0	93.1	138.0	0.0
Cycle Q Clear(g_c), s	13.1	16.0	14.0	93.1	138.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	307	141	139	4425	3915	
V/C Ratio(X)	0.83	1.23	1.45	0.92	1.23	
Avail Cap(c_a), veh/h	307	141	139	4425	3915	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	80.7	82.0	83.0	7.8	21.0	0.0
Incr Delay (d2), s/veh	17.2	152.3	238.4	3.6	107.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	19.8	24.7	28.0	117.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	97.8	234.3	321.4	11.4	128.1	0.0
LnGrp LOS	F	F	F	B	F	
Approach Vol, veh/h	429			4261	4826	A
Approach Delay, s/veh	153.2			26.0	128.1	
Approach LOS	F			C	F	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		160.0			18.0	142.0	20.0
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0
Max Green Setting (Gmax), s		156.0			14.0	138.0	16.0
Max Q Clear Time (g_c+I1), s		95.1			16.0	140.0	18.0
Green Ext Time (p_c), s		59.7			0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.5
HCM 6th LOS	F

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.890			0.997			0.993	
Flt Protected		0.976			0.991		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1643	0	1770	1857	0	1770	1850	0
Flt Permitted		0.976			0.991		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1643	0	1770	1857	0	1770	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		200			219			227			261	
Travel Time (s)		4.5			5.0			5.2			5.9	

Intersection Summary	
Area Type:	Other

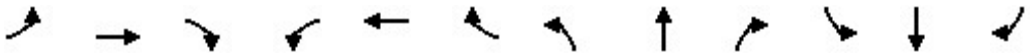
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	10	0	10	5	0	20	10	200	5	20	295	15
Future Vol, veh/h	10	0	10	5	0	20	10	200	5	20	295	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	5	0	22	11	217	5	22	321	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	626	617	329	621	623	220	337	0	0	222	0	0
Stage 1	373	373	-	242	242	-	-	-	-	-	-	-
Stage 2	253	244	-	379	381	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	397	405	712	400	402	820	1222	-	-	1347	-	-
Stage 1	648	618	-	762	705	-	-	-	-	-	-	-
Stage 2	751	704	-	643	613	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	379	395	712	386	392	820	1222	-	-	1347	-	-
Mov Cap-2 Maneuver	379	395	-	386	392	-	-	-	-	-	-	-
Stage 1	642	608	-	755	699	-	-	-	-	-	-	-
Stage 2	725	698	-	623	603	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	10.6	0.4	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1222	-	-	495	669	1347	-	-
HCM Lane V/C Ratio	0.009	-	-	0.044	0.041	0.016	-	-
HCM Control Delay (s)	8	-	-	12.6	10.6	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.926			0.985			0.994	
Flt Protected		0.976			0.978		0.950				0.994	
Satd. Flow (prot)	0	1694	0	0	1687	0	1770	1835	0	0	1840	0
Flt Permitted		0.976			0.978		0.950				0.994	
Satd. Flow (perm)	0	1694	0	0	1687	0	1770	1835	0	0	1840	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			141			206			227	
Travel Time (s)		3.6			3.2			4.7			5.2	

Intersection Summary	
Area Type:	Other

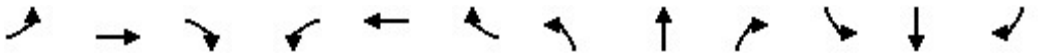
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	10	20	0	25	10	180	20	40	260	15
Future Vol, veh/h	10	0	10	20	0	25	10	180	20	40	260	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	22	0	27	11	196	22	43	283	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	620	617	291	612	614	207	299	0	0	218	0	0
Stage 1	377	377	-	229	229	-	-	-	-	-	-	-
Stage 2	243	240	-	383	385	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	400	405	748	405	407	833	1262	-	-	1352	-	-
Stage 1	644	616	-	774	715	-	-	-	-	-	-	-
Stage 2	761	707	-	640	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	373	386	748	385	388	833	1262	-	-	1352	-	-
Mov Cap-2 Maneuver	373	386	-	385	388	-	-	-	-	-	-	-
Stage 1	638	593	-	767	709	-	-	-	-	-	-	-
Stage 2	730	701	-	607	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	12.2	0.4	1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1262	-	-	498	549	1352	-	-
HCM Lane V/C Ratio	0.009	-	-	0.044	0.089	0.032	-	-
HCM Control Delay (s)	7.9	-	-	12.6	12.2	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.984			0.958			0.982	
Flt Protected	0.950			0.950				0.967			0.958	
Satd. Flow (prot)	1770	3525	0	1770	1833	0	0	1726	0	0	1752	0
Flt Permitted	0.950			0.950				0.967			0.958	
Satd. Flow (perm)	1770	3525	0	1770	1833	0	0	1726	0	0	1752	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		202			200			158			84	
Travel Time (s)		4.6			4.5			3.6			1.9	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	360	10	10	300	35	10	0	5	30	0	5
Future Vol, veh/h	10	360	10	10	300	35	10	0	5	30	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	391	11	11	326	38	11	0	5	33	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	364	0	0	402	0	0	789	805	201	585	791	345
Stage 1	-	-	-	-	-	-	419	419	-	367	367	-
Stage 2	-	-	-	-	-	-	370	386	-	218	424	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1193	-	-	1155	-	-	294	315	807	408	321	697
Stage 1	-	-	-	-	-	-	583	589	-	652	621	-
Stage 2	-	-	-	-	-	-	649	609	-	765	586	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1193	-	-	1155	-	-	288	309	807	399	315	697
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	309	-	399	315	-
Stage 1	-	-	-	-	-	-	578	584	-	646	615	-
Stage 2	-	-	-	-	-	-	638	603	-	753	581	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	15.3	14.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	367	1193	-	-	1155	-	-	425
HCM Lane V/C Ratio	0.044	0.009	-	-	0.009	-	-	0.09
HCM Control Delay (s)	15.3	8	-	-	8.1	-	-	14.3
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	50		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996					0.865
Flt Protected						
Satd. Flow (prot)	3525	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	3525	0	0	1863	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	200			255	188	
Travel Time (s)	4.5			5.8	4.3	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	385	10	0	340	0	5
Future Vol, veh/h	385	10	0	340	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	418	11	0	370	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	215
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	790
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	790
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	790	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.965	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1798	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1798	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	394			113	457	
Travel Time (s)	9.0			2.6	10.4	

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	0	0	340	315	110
Future Vol, veh/h	70	0	0	340	315	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	0	0	370	342	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	772	402	462	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	368	648	1099	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	368	648	1099	-	-	-
Mov Cap-2 Maneuver	368	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1099	-	368	-	-
HCM Lane V/C Ratio	-	-	0.207	-	-
HCM Control Delay (s)	0	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.991
Satd. Flow (prot)	1611	0	1863	0	0	1846
Flt Permitted						0.991
Satd. Flow (perm)	1611	0	1863	0	0	1846
Link Speed (mph)	30		30			30
Link Distance (ft)	223		73			113
Travel Time (s)	5.1		1.7			2.6

Intersection Summary	
Area Type:	Other

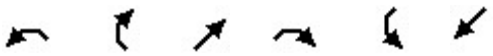
Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	40	300	0	55	260
Future Vol, veh/h	0	40	300	0	55	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	326	0	60	283

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	729	326	0	0	326	0
Stage 1	326	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	390	715	-	-	1234	-
Stage 1	731	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	715	-	-	1234	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	636	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	715	1234	-
HCM Lane V/C Ratio	-	-	0.061	0.048	-
HCM Control Delay (s)	-	-	10.4	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected						0.994
Satd. Flow (prot)	1611	0	1863	0	0	1852
Flt Permitted						0.994
Satd. Flow (perm)	1611	0	1863	0	0	1852
Link Speed (mph)	30		30			30
Link Distance (ft)	159		190			379
Travel Time (s)	3.6		4.3			8.6

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	0.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	20	285	0	30	235
Future Vol, veh/h	0	20	285	0	30	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	310	0	33	255

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	631	310	0	0	310	0
Stage 1	310	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	445	730	-	-	1250	-
Stage 1	744	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	431	730	-	-	1250	-
Mov Cap-2 Maneuver	431	-	-	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10.1	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	730	1250	-
HCM Lane V/C Ratio	-	-	0.03	0.026	-
HCM Control Delay (s)	-	-	10.1	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	218		336			190
Travel Time (s)	5.0		7.6			4.3

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	4.4
Intersection LOS	A

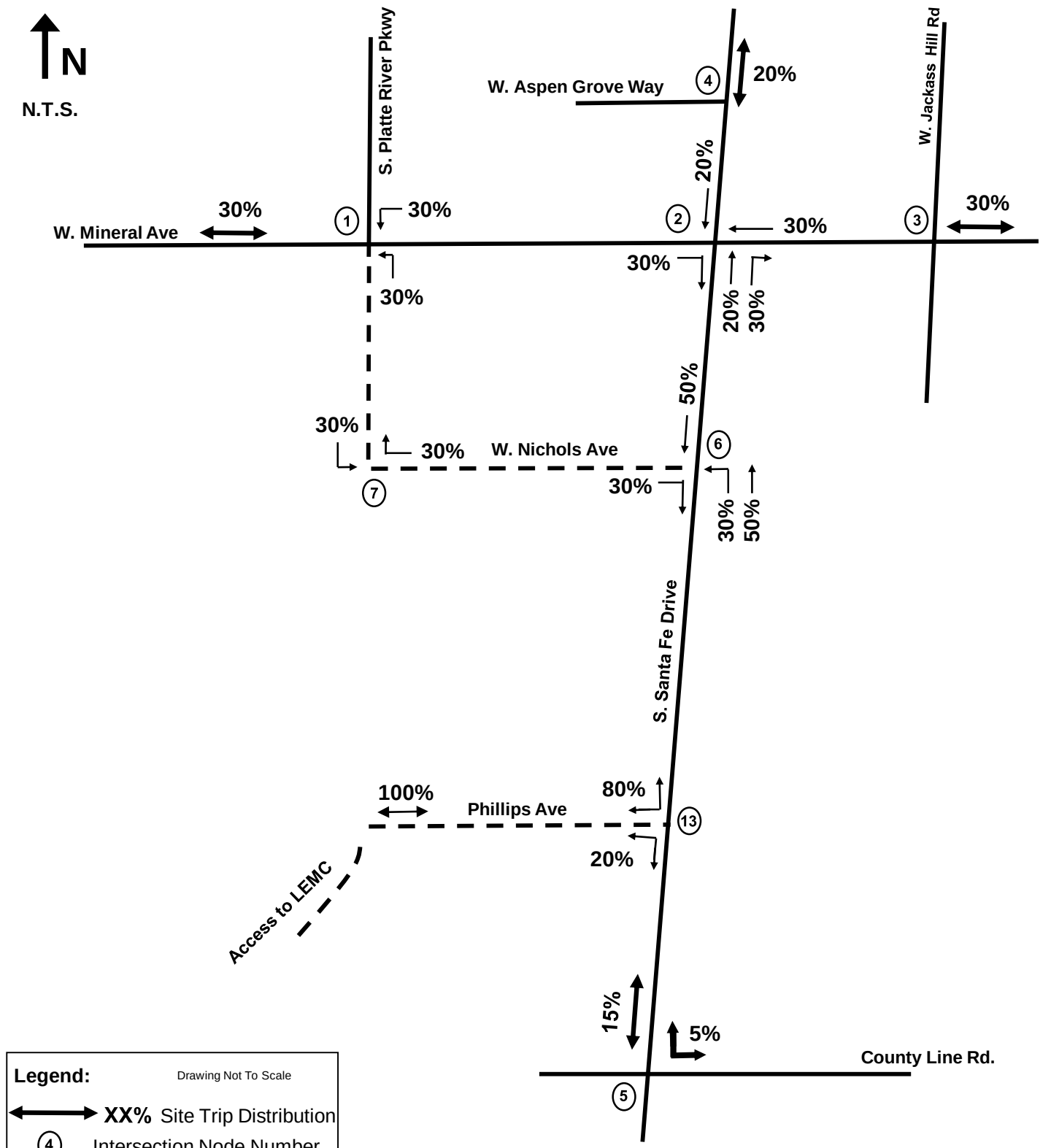
Approach	NB	NE	SW
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	310	255
Demand Flow Rate, veh/h	0	316	260
Vehicles Circulating, veh/h	316	0	0
Vehicles Exiting, veh/h	0	260	316
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.6	4.2
Approach LOS	-	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	0	316	260
Cap Entry Lane, veh/h	1000	1380	1380
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	0	310	255
Cap Entry, veh/h	1000	1353	1353
V/C Ratio	0.000	0.229	0.188
Control Delay, s/veh	3.6	4.6	4.2
LOS	A	A	A
95th %tile Queue, veh	0	1	1

APPENDIX “C”

LITTLETON EQUINE MEDICAL CENTER (LEMC)
SITE TRIP GENERATION,
DISTRIBUTION, & ASSIGNMENT

LEMC Redevelopment Site Generated Trips (Unadjusted)										
Land Use	Intensity		ITE Code	Daily (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					Total	In	Out	Total	In	Out
General Light Industrial	26	TSF	110	157	16	14	2	15	2	13
General Office	91	TSF	710	968	112	96	16	104	17	87
Shopping Center	32	TSF	820	2770	168	104	64	234	112	122
Total			-	**3,895**	**296**	**214**	**82**	**353**	**131**	**222**



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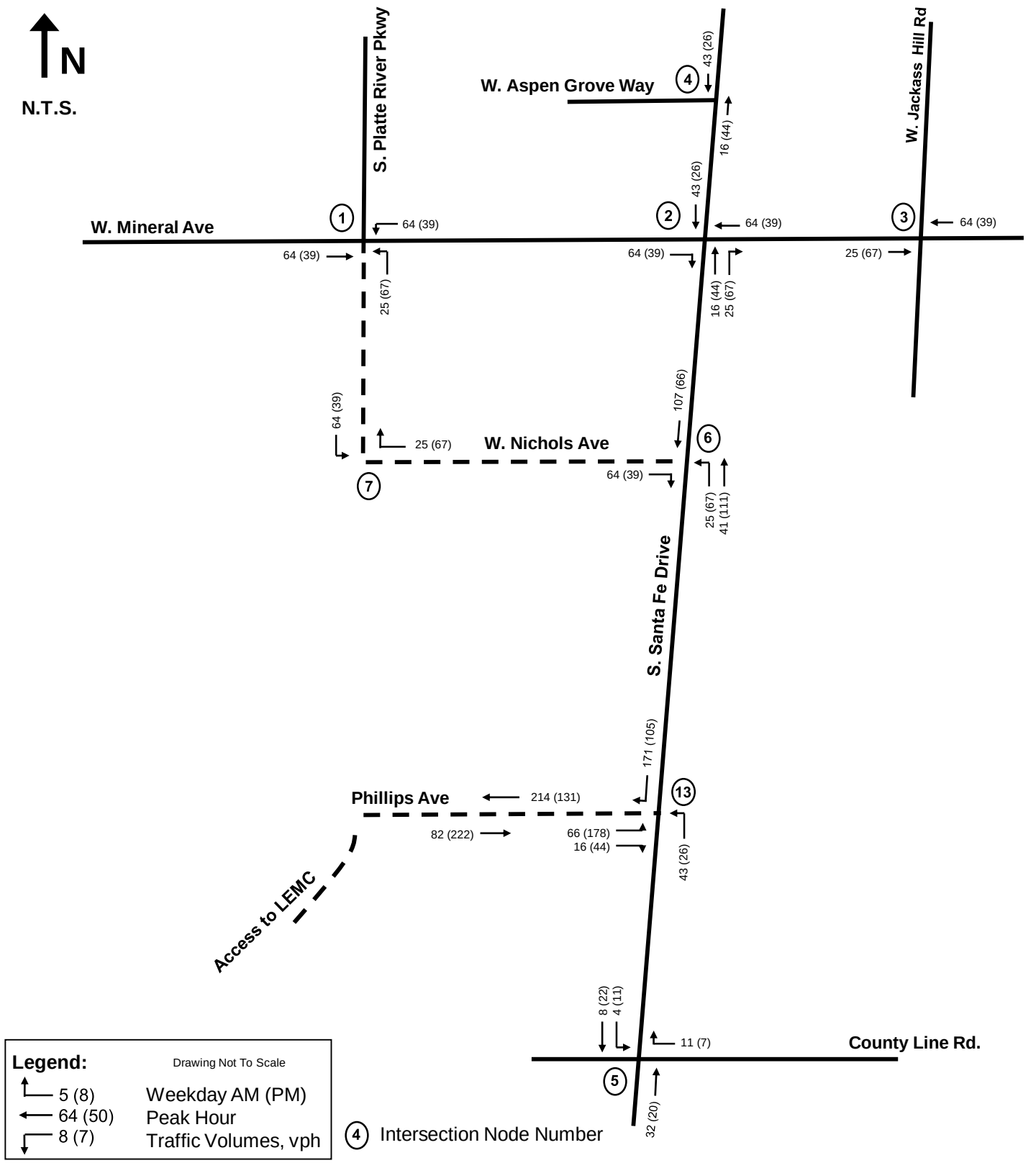
LEMC Site Generated Trip Distribution

Combined RiverPark & Santa Fe Park TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure C-2



LEMC Site Generated Trip Assignment

Combined RiverPark & Santa Fe Park TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure C-3

APPENDIX “D”

TRIP GENERATION & INTERNAL TRIP CAPTURE SPREADSHEETS FOR THE RIVERPARK & SANTA FE PARK DEVELOPMENTS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Combined TIS (HKS Project No. 160605)	**Organization:**	HKS
Project Location:	Littleton, Colorado	**Performed By:**	MEK
Scenario Description:	Build-Out	**Date:**	10/4/2020
Analysis Year:	2025 & 2040	**Checked By:**	MEK
Analysis Period:	**AM Street Peak Hour**	**Date:**	10/4/2020

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	-	-	-	0	0	0
Retail	820	76,980	sf	342	211	131
Restaurant	932, 934	19,600	sf	784	409	375
Cinema/Entertainment	-	-	-	0	0	0
Residential	210, 221	332	du	491	125	366
Hotel	-	-	-	0	0	0
All Other Land Uses[2]	253, 960	168, 4.99	du, tsf	432	216	216
				2,049	961	1,088

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	5%	0%	1.00	5%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		17	0	3	0
Restaurant	0	17		0	6	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	73	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,049	961	1,088
Internal Capture Percentage	12%	12%	11%
External Vehicle-Trips[5]	1,789	835	954
External Transit-Trips[6]	20	6	14
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	15%
Restaurant	22%	6%
Cinema/Entertainment	N/A	N/A
Residential	7%	21%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Combined TIS (HKS Project No. 160605)
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	211	211	1.00	131	131
Restaurant	1.00	409	409	1.00	375	375
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	125	125	1.00	366	366
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	38		17	0	18	0
Restaurant	116	53		0	15	11
Cinema/Entertainment	0	0	0		0	0
Residential	7	4	73	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		68	94	0	0	0
Retail	0		205	0	3	0
Restaurant	0	17		0	6	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	36	82	0		0
Hotel	0	8	25	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	21	190	211	190	0	0
Restaurant	90	319	409	319	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	9	116	125	110	6	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	216	216	216	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	20	111	131	111	0	0
Restaurant	23	352	375	352	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	77	289	366	275	14	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	216	216	216	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Combined TIS (HKS Project No. 160605)	**Organization:**	HKS
Project Location:	Littleton, Colorado	**Performed By:**	MEK
Scenario Description:	Build-Out	**Date:**	10/4/2020
Analysis Year:	2025 & 2040	**Checked By:**	MEK
Analysis Period:	**PM Street Peak Hour**	**Date:**	10/4/2020

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	-	-	-	0	0	0
Retail	820	76,980	sf	514	247	267
Restaurant	932, 934	19,600	sf	677	371	306
Cinema/Entertainment	-	-	-	0	0	0
Residential	210, 221	332	du	641	399	242
Hotel	-	-	-	0	0	0
All Other Land Uses[2]	253, 960	168, 4.99	du, tsf	375	188	187
				2,207	1,205	1,002

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	5%	0%	1.00	5%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0		0	
Retail					1500	
Restaurant					1500	
Cinema/Entertainment					0	
Residential		1500	1500			
Hotel					0	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		77	0	54	0
Restaurant	0	124		0	43	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	15	31	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,207	1,205	1,002
Internal Capture Percentage	31%	29%	34%
External Vehicle-Trips[5]	1,494	846	648
External Transit-Trips[6]	25	15	10
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	56%	49%
Restaurant	29%	55%
Cinema/Entertainment	N/A	N/A
Residential	24%	19%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Combined TIS (HKS Project No. 160605)
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	247	247	1.00	267	267
Restaurant	1.00	371	371	1.00	306	306
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	399	399	1.00	242	242
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	5		77	11	54	13
Restaurant	9	125		24	43	21
Cinema/Entertainment	0	0	0		0	0
Residential	10	62	31	0		7
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	7	0	16	0
Retail	0		108	0	184	0
Restaurant	0	124		0	64	0
Cinema/Entertainment	0	10	11		16	0
Residential	0	15	32	0		0
Hotel	0	5	19	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	139	108	247	108	0	0
Restaurant	108	263	371	263	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	97	302	399	287	15	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	188	188	188	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	131	136	267	136	0	0
Restaurant	167	139	306	139	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	46	196	242	186	10	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	187	187	187	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table 7.1a Adjusted Internal Trip Capture Rates for Trip Origins within a Multi-Use Development			
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Office	0.0%	0.0%
	To Retail	28.0%	20.0%
	To Restaurant	63.0%	4.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	1.0%	2.0%
	To Hotel	0.0%	0.0%
From RETAIL	To Office	29.0%	2.0%
	To Retail	0.0%	0.0%
	To Restaurant	13.0%	29.0%
	To Cinema/Entertainment	0.0%	4.0%
	To Residential	14.0%	20.3%
	To Hotel	0.0%	5.0%
From RESTAURANT	To Office	31.0%	3.0%
	To Retail	14.0%	41.0%
	To Restaurant	0.0%	0.0%
	To Cinema/Entertainment	0.0%	8.0%
	To Residential	4.0%	14.0%
	To Hotel	3.0%	7.0%
From CINEMA/ENTERTAINMENT	To Office	0.0%	2.0%
	To Retail	0.0%	21.0%
	To Restaurant	0.0%	31.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	8.0%
	To Hotel	0.0%	2.0%
From RESIDENTIAL	To Office	2.0%	4.0%
	To Retail	1.0%	25.6%
	To Restaurant	20.0%	12.8%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	0.0%
	To Hotel	0.0%	3.0%
From HOTEL	To Office	75.0%	0.0%
	To Retail	14.0%	16.0%
	To Restaurant	9.0%	68.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	2.0%
	To Hotel	0.0%	0.0%

Table 7.2a Adjusted Internal Trip Capture Rates for Trip Destinations within a Multi-Use Development			
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Office	0.0%	0.0%
	From Retail	4.0%	31.0%
	From Restaurant	14.0%	30.0%
	From Cinema/Entertainment	0.0%	6.0%
	From Residential	3.0%	57.0%
	From Hotel	3.0%	0.0%
To RETAIL	From Office	32.0%	8.0%
	From Retail	0.0%	0.0%
	From Restaurant	8.0%	50.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	17.0%	6.1%
	From Hotel	4.0%	2.0%
To RESTAURANT	From Office	23.0%	2.0%
	From Retail	50.0%	29.0%
	From Restaurant	0.0%	0.0%
	From Cinema/Entertainment	0.0%	3.0%
	From Residential	20.0%	8.5%
	From Hotel	6.0%	5.0%
To CINEMA/ENTERTAINMENT	From Office	0.0%	1.0%
	From Retail	0.0%	26.0%
	From Restaurant	0.0%	32.0%
	From Cinema/Entertainment	0.0%	0.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To RESIDENTIAL	From Office	0.0%	4.0%
	From Retail	2.0%	46.0%
	From Restaurant	5.0%	16.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To HOTEL	From Office	0.0%	0.0%
	From Retail	0.0%	17.0%
	From Restaurant	4.0%	71.0%
	From Cinema/Entertainment	0.0%	1.0%
	From Residential	0.0%	12.0%
	From Hotel	0.0%	0.0%

Combined RiverPark & Santa Fe Park Developments - Site Generated Trips (Unadjusted)														
Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)					P.M. Peak Hour (vph)				
				Total	% In	% Out	In	Out	Total	% In	% Out	In	Out
RiverPark - Commercial/Retail													
Pad "A" - Fast-Food Restaurant w/ Drive-Thru	3.3 TSF	934	1554	133	51%	49%	68	65	108	52%	48%	56	52
Pad "B" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	55%	45%	36	29	64	62%	38%	39	25
Pads "C", "D", "E", "F", "H" - Shopping Center	61.98 TSF	820	4343	183	62%	38%	113	70	381	48%	52%	183	198
Pad "G" - Fast-Food Restaurant w/ Drive-Thru	3.5 TSF	934	1648	141	51%	49%	72	69	114	52%	48%	59	55
Pad "J" - Fast-Food Restaurant w/ Drive-Thru	2 TSF	934	942	80	51%	49%	41	39	65	52%	48%	34	31
Pad "L" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	55%	45%	36	29	64	62%	38%	39	25
RiverPark - Commercial/Retail Total			**9945**	**667**			**366**	**301**	**796**			**410**	**386**
RiverPark - Residential													
Multifamily Housing (Mid-Rise)	270 DU	221	1470	91	26%	74%	24	67	115	61%	39%	70	45
RiverPark - Residential Total			**1470**	**91**			**24**	**67**	**115**			**70**	**45**
Riverpark CCRC													
Congregate Care Facility	168 DU	253	339	11	60%	40%	6	5	29	53%	47%	15	14
Parcel 3 Total			**339**	**11**			**6**	**5**	**29**			15	14
Riverpark C-Store w/ Fueling Stations													
Pad "I" - Super Convenience Market/Gas Station	4.99 TSF	960	4180	421	50%	50%	210	211	346	50%	50%	173	173
Parcel 4 Total			**4180**	**421**			**210**	**211**	**346**			**173**	**173**
Total - RiverPark Development (UNADJUSTED)			**15934**	**1190**			**606**	**584**	**1286**			**668**	**618**
Santa Fe Park - Residential													
Single-Family Attached Housing	399 DU	210	3714	288	25%	75%	72	216	384	63%	37%	242	142
Multi-Family Housing (Mid-Rise) 3-10 floors	336 DU	221	1829	112	26%	74%	29	83	142	61%	39%	87	55
Santa Fe Park - Residential Total			5543	400			101	299	526			329	197
Santa Fe Park - Commercial/Retail													
Shopping Center	15 TSF	820	1655	159	62%	38%	98	61	133	48%	52%	64	69
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	55%	45%	27	23	49	62%	38%	30	19
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	55%	45%	27	23	49	62%	38%	30	19
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51%	49%	51	49	82	52%	48%	42	40
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51%	49%	51	49	82	52%	48%	42	40
Santa Fe Park - Commercial/Retail Total			5131	459			254	205	395			208	187
Total - Santa Fe Park Development (UNADJUSTED)			**10,674**	**859**			**355**	**504**	**921**			**537**	**384**
Total - Combined RiverPark & Santa Fe Park Developments (UNADJUSTED)			**26,608**	**2,049**			**961**	**1,088**	**2,207**			**1,205**	**1,002**

Combined RiverPark & Santa Fe Park Developments - Site Generated Trips (Unadjusted)									
Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
				Total	In	Out	Total	In	Out
RiverPark - Commercial/Retail									
Pad "A" - Fast-Food Restaurant w/ Drive-Thru	3.3 TSF	934	1554	133	68	65	108	56	52
Pad "B" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	36	29	64	39	25
Pads "C", "D", "E", "F", "H" - Shopping Center	61.98 TSF	820	4343	183	113	70	381	183	198
Pad "G" - Fast-Food Restaurant w/ Drive-Thru	3.5 TSF	934	1648	141	72	69	114	59	55
Pad "J" - Fast-Food Restaurant w/ Drive-Thru	2 TSF	934	942	80	41	39	65	34	31
Pad "L" - High-Turnover (Sit-Down) Restaurant	6.5 TSF	932	729	65	36	29	64	39	25
RiverPark - Commercial/Retail Total			**9945**	**667**	**366**	**301**	**796**	**410**	**386**
RiverPark - Residential									
Multifamily Housing (Mid-Rise)	270 DU	221	1470	91	24	67	115	70	45
RiverPark - Residential Total			**1470**	**91**	**24**	**67**	**115**	**70**	**45**
Riverpark CCRC									
Congregate Care Facility	168 DU	253	339	11	6	5	29	15	14
Parcel 3 Total			**339**	**11**	**6**	**5**	**29**	**15**	**14**
Riverpark Super Convenience Market/Gas Station									
Pad "I" - Super Convenience Market/Gas Station	4.99 TSF	960	4180	421	210	211	346	173	173
Parcel 4 Total			**4180**	**421**	**210**	**211**	**346**	**173**	**173**
Total - RiverPark Development (UNADJUSTED)			**15934**	**1190**	**606**	**584**	**1286**	**668**	**618**
Santa Fe Park - Residential									
Single-Family Detached Housing	399 DU	210	3714	288	72	216	384	242	142
Multi-Family Housing (Mid-Rise) 3-10 floors	336 DU	221	1829	112	29	83	142	87	55
Santa Fe Park - Residential Total			5543	400	101	299	526	329	197
Santa Fe Park - Commercial/Retail									
Shopping Center	15 TSF	820	1655	159	98	61	133	64	69
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	27	23	49	30	19
High-Turnover (Sit-Down) Restaurant	5 TSF	932	561	50	27	23	49	30	19
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51	49	82	42	40
Fast-Food Restaurant W/ Drive-Thru Window	2.5 TSF	934	1177	100	51	49	82	42	40
Santa Fe Park - Commercial/Retail Total			5131	459	254	205	395	208	187
Total - Santa Fe Park Development (UNADJUSTED)			**10,674**	**859**	**355**	**504**	**921**	**537**	**384**
Total - Combined RiverPark & Santa Fe Park Developments (UNADJUSTED)			**26,608**	**2,049**	**961**	**1088**	**2,207**	**1,205**	**1,002**

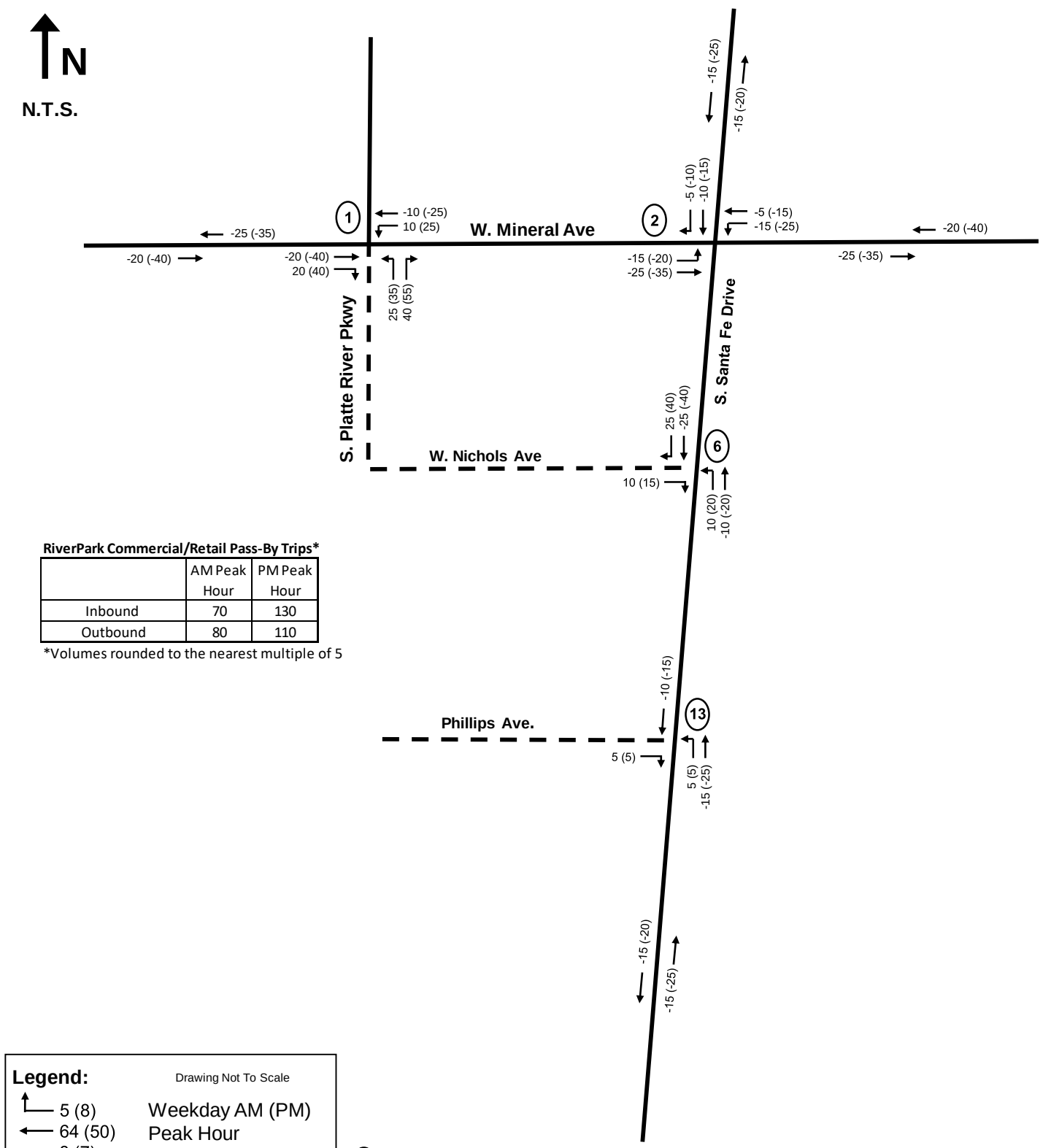
Site Generated AM & PM Peak Hour Trips Adjusted for Internal Trip Capture & Transit Trips - Combined RiverPark & Santa Fe Park Developments									
Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
				Total	In	Out	Total	In	Out
Combined Commercial/Retail									
Combined Shopping Center - Subtotal (Unadjusted)	76.98 TSF		5998	342	211	131	514	247	267
Combined Shopping Center - Internal Trip Capture %					10%	15%		19%	16%
Combined Shopping Center - Internal Trip Capture				41	21	20	90	47	43
Combined Shopping Center - External Trips				301	190	111	424	200	224
Combined Restaurants - Subtotal (Unadjusted)	36.8 TSF		9078	784	409	375	677	371	306
Combined Restaurants - Internal Trip Capture %					22%	6%		10%	18%
Combined Restaurants - Internal Trip Capture				113	90	23	92	37	55
Combined Restaurants - External Trips				671	319	352	585	334	251
Combined Commercial/Retail - Internal Trip Capture				154	111	43	182	84	98
Combined Commercial/Retail - Adjusted External Trips				**972**	**509**	**463**	**1009**	**534**	**475**
Combined Residential									
Combined Residential - Total (Unadjusted)	1005 DU		7013	491	125	366	641	399	242
Combined Residential - Internal Trip Capture %					7%	21%		8%	6%
Combined Residential - Internal Trip Capture				86	9	77	47	32	15
Combined Residential - External Trips (Adjusted for Internal Trip Capture)				405	116	289	594	367	227
Combined Residential - External Trip Reduction (5% Transit)				20	6	14	29	18	11
Combined Residential - Internal Trip Capture				86	9	77	47	32	15
Combined Residential - Adjusted External Trips (Adjusted for Internal Trip Capture & Transit)				**385**	**110**	**275**	**565**	**349**	**216**
Combined CRCC									
Combined Congregate Care Facility (Unadjusted)	168 DU	253	339	11	6	5	29	15	14
Combined CCRC (No Adjustments Taken)			**339**	**11**	**6**	**5**	**29**	**15**	**14**
Combined Super Convenience Market/Gas Station									
Combined Super Convenience Market/Gas Station (Unadjusted)	4.99 TSF	960	4180	421	210	211	346	173	173
Combined Super Convenience Market/Gas Station (No Adjustments Taken)			**4180**	**421**	**210**	**211**	**346**	**173**	**173**
Combined - Total Transit Trips				**20**	**6**	**14**	**29**	**18**	**11**
Combined - Total Internal Trip Capture				**240**	**120**	**120**	**229**	**116**	**113**
Combined - Total External Trips (Adjusted for Internal Trips & Transit Trips)				**1789**	**835**	**954**	**1949**	**1071**	**878**

Combined RiverPark & Santa Fe Park - A.M. & P.M. Peak Hours Adjusted for Pass-By Trips									
Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
				Total	In	Out	Total	In	Out
Combined Commercial/Retail Pass-By Trips (% Based on Figure E.8 Shopping Center (820) - *ITE Trip Generation Handbook, 3rd Edition* & PM Peak Hour Volume = 4,200vph)									
Total Shopping Center External Trips (Adjusted for Transit & Internal Trip Capture)				301	190	111	424	200	224
Shopping Center - Pass-By Trip %				0%	0%	0%	20%	20%	20%
Shopping Center - Total Pass-By Trips				0	0	0	85	40	45
Shopping Center - Total New External Trips				301	190	111	339	160	179
Combined High-Turnover (Sit-Down) Restaurant Pass-By Trips (% Based on Figure E.16 & Table E.30 - *ITE Trip Generation Handbook, 3rd Edition* & Avg. Floor Area of 5,750 SF)									
Total High Turnover (Sit-Down) Restaurant External Trips (Adjusted for Transit & Internal Trip Capture)				196	98	98	196	124	72
High-Turnover (Sit-Down) Restaurant - Pass-By Trip %				0%	0%	0%	43%	43%	43%
High-Turnover (Sit-Down) Restaurant - Total Pass-By Trips				0	0	0	84	53	31
High-Turnover (Sit-Down) Restaurant - Total New External Trips				196	98	98	112	71	41
Combined Fast-Food Restaurant w/ Drive-Thru Pass-By Trips (% Based on Table E.31 & Table E.32 - *ITE Trip Generation Handbook, 3rd Edition*)									
Total Fast-Food Restaurant w/ Drive Thru External Trips (Adjusted for Transit & Internal Trip Capture)				476	221	255	389	210	179
Fast-Food Restaurant w/ Drive-Thru - Pass-By Trip %				49%	49%	49%	50%	50%	50%
Fast-Food Restaurant w/ Drive-Thru - Total Pass-By Trips				233	108	125	195	105	90
Fast-Food Restaurant w/ Drive-Thru - Total New External Trips				243	113	130	194	105	89
Combined Super Convenience Market/Gas Station Pass-By Trips (% Based on Table E.37 & Table E.38 - ITE Trip Generation Handbook, 3rd Edition)									
Total C-Store w/ Fueling Stations External Trips (Adjusted for Transit & Internal Trip Capture)				421	210	211	346	173	173
C-Store w/ Fueling Stations - Pass-By Trip %				62%	62%	62%	56%	56%	56%
C-Store w/ Fueling Stations - Total Pass-By Trips				261	130	131	194	97	97
C-Store w/ Fueling Stations - Total New External Trips				160	80	80	152	76	76
Combined RiverPark & Santa Fe Park Total Pass-By Trips				**494**	**238**	**256**	**558**	**295**	**263**
Combined RiverPark & Santa Fe Park Total New External Trips				**900**	**481**	**419**	**797**	**412**	**385**

Summary of Site Generated Trips By Development									
Land Use	Intensity	ITE Code	Daily (vpd)	A.M. Peak Hour (vph)			P.M. Peak Hour (vph)		
				Total	In	Out	Total	In	Out
RiverPark - Shopping Center (ITE Code: 820)									
RiverPark Commercial/Retail - Total (Unadjusted)	61.98 TSF		4343	183	113	70	381	183	198
RiverPark Commercial/Retail - Internal Trip Capture				22	11	11	67	35	32
RiverPark Commercial/Retail - Adjusted External Trips (Adjusted for Internal Trip Capture)				161	102	59	314	148	166
RiverPark Commercial/Retail - Pass-By Trips				0	0	0	63	30	33
RiverPark - Fast-Food Restaurant w/ Drive-Thru (ITE Code: 934)									
RiverPark Fast-Food w/ Drive Thru - Total (Unadjusted)	8.8 TSF		4144	354	181	173	287	149	138
RiverPark Fast-Food w/ Drive Thru - Internal Trip Capture				51	40	11	39	15	24
RiverPark Fast-Food Restaurant w/ Drive Thru - Adjusted External Trips (Adjusted for Internal Trip Capture)				303	141	162	247	134	113
RiverPark Fast-Food w/ Drive Thru - Pass-By Trips				149	69	80	124	67	57
RiverPark - High Turnover (Sit-Down) Restaurant (ITE Code: 932)									
RiverPark High Turnover (Sit-Down) Restaurant - Total (Unadjusted)	13 TSF		1458	130	72	58	128	78	50
RiverPark High Turnover (Sit-Down) Restaurant - Internal Trip Capture				18	15	3	17	8	9
RiverPark High Turnover (Sit-Down) Restaurant - Adjusted External Trips (Adjusted for Internal Trip Capture)				111	56	54	111	70	41
RiverPark High Turnover (Sit-Down) Restaurant - Pass-By Trips				0	0	0	48	30	18
RiverPark - Commercial/Retail Summary (Shopping Center, Fast-Food Restaurant w/ Drive Thru & High Turnover (Sit-Down) Restaurant)									
RiverPark Commercial/Retail Summary - Total (Unadjusted)			9945	667	366	301	796	410	386
RiverPark Commercial/Retail Summary - Internal Trip Capture				91	66	25	123	58	65
RiverPark Commercial/Retail Summary - Adjusted External Trips (Adjusted for Internal Trip Capture)				575	299	275	672	352	320
RiverPark Commercial/Retail Summary - Pass-By Trips				149	69	80	235	127	108
RiverPark - Residential (ITE Code: 221)									
RiverPark Residential - Total (Unadjusted)			1470	91	24	67	115	70	45
RiverPark Residential - Internal Trip Capture				16	2	14	8	6	3
RiverPark Residential - Adjusted External Trips (Adjusted for Internal Trip Capture & Transit)				71	21	50	101	61	40
RiverPark Residential - Pass-By Trips				0	0	0	0	0	0
RiverPark - CCRC (ITE Code: 253)									
RiverPark CRCC - Total (Unadjusted)			339	11	6	5	29	15	14
RiverPark CRCC - Internal Trip Capture				0	0	0	0	0	0
RiverPark CRCC - Adjusted External Trips (Adjusted for Internal Trip Capture & Transit)				11	6	5	29	15	14
RiverPark CRCC - Pass-By Trips				0	0	0	0	0	0
RiverPark - Super C-Store/Gas Station (ITE Code: 960)									
RiverPark Super C-Store/Gas Station - Total (Unadjusted)			4180	421	210	211	346	173	173
RiverPark Super C-Store/Gas Station - Internal Trip Capture				0	0	0	0	0	0
RiverPark Super C-Store/Gas Station - Adjusted External Trips (Adjusted for Internal Trip Capture & Transit)				421	210	211	346	173	173
RiverPark Super C-Store/Gas Station - Pass-By Trips				261	130	131	194	97	97
Santa Fe Park - Commercial/Retail (ITE Code: 820)									
Santa Fe Park Commercial/Retail - Total (Unadjusted)	15 TSF		1655	159	98	61	133	64	69
Santa Fe Park Commercial/Retail - Internal Trip Capture				19	10	9	23	12	11
Santa Fe Park Commercial/Retail - Adjusted External Trips (Adjusted for Internal Trip Capture)				140	88	52	110	52	58
Santa Fe Park Commercial/Retail - Pass-By Trips				0	0	0	22	10	12
Santa Fe Park - Fast-Food Restaurant w/ Drive-Thru (ITE Code: 934)									
Santa Fe Park Fast-Food w/ Drive Thru - Total (Unadjusted)	5 TSF		2354	200	102	98	164	84	80
Santa Fe Park Fast-Food w/ Drive Thru - Internal Trip Capture				28	22	6	22	8	14
Santa Fe Park Fast-Food Restaurant w/ Drive Thru - Adjusted External Trips (Adjusted for Internal Trip Capture)				171	80	92	142	76	66
Santa Fe Park Fast-Food w/ Drive Thru - Pass-By Trips				84	39	45	71	38	33
Santa Fe Park - High Turnover (Sit-Down) Restaurant (ITE Code: 932)									
Santa Fe Park High Turnover (Sit-Down) Restaurant - Total (Unadjusted)	10 TSF		1122	100	54	46	98	60	38
Santa Fe Park High Turnover (Sit-Down) Restaurant - Internal Trip Capture				14	11	3	13	6	7
Santa Fe Park High Turnover (Sit-Down) Restaurant - Adjusted External Trips (Adjusted for Internal Trip Capture)				86	42	43	85	54	31
Santa Fe Park High Turnover (Sit-Down) Restaurant - Pass-By Trips				0	0	0	36	23	13
Santa Fe Park - Commercial/Retail Summary (Shopping Center, Fast-Food Restaurant w/ Drive Thru & High Turnover (Sit-Down) Restaurant)									
Santa Fe Park Commercial/Retail Summary - Total (Unadjusted)			5131	459	254	205	395	208	187
Santa Fe Park Commercial/Retail Summary - Internal Trip Capture				61	43	18	58	26	32
Santa Fe Park Commercial/Retail Summary - Adjusted External Trips (Adjusted for Internal Trip Capture)				397	210	187	337	182	155
Santa Fe Park Commercial/Retail Summary - Pass-By Trips				84	39	45	129	71	58
Santa Fe Park - Residential (ITE Code: 221)									
Santa Fe Park Residential - Total (Unadjusted)			5543	400	101	299	526	329	197
Santa Fe Park Residential - Internal Trip Capture				70	7	63	39	26	12
Santa Fe Park Residential - Adjusted External Trips (Adjusted for Internal Trip Capture & Transit)				314	89	225	464	288	176
Santa Fe Park Residential - Pass-By Trips				0	0	0	0	0	0

APPENDIX “E”

PASS-BY TRIP FIGURES



RiverPark Commercial/Retail Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	70	130
Outbound	80	110

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

5 (8) Weekday AM (PM)
64 (50) Peak Hour
8 (7) Traffic Volumes, vph

16 Intersection Node Number

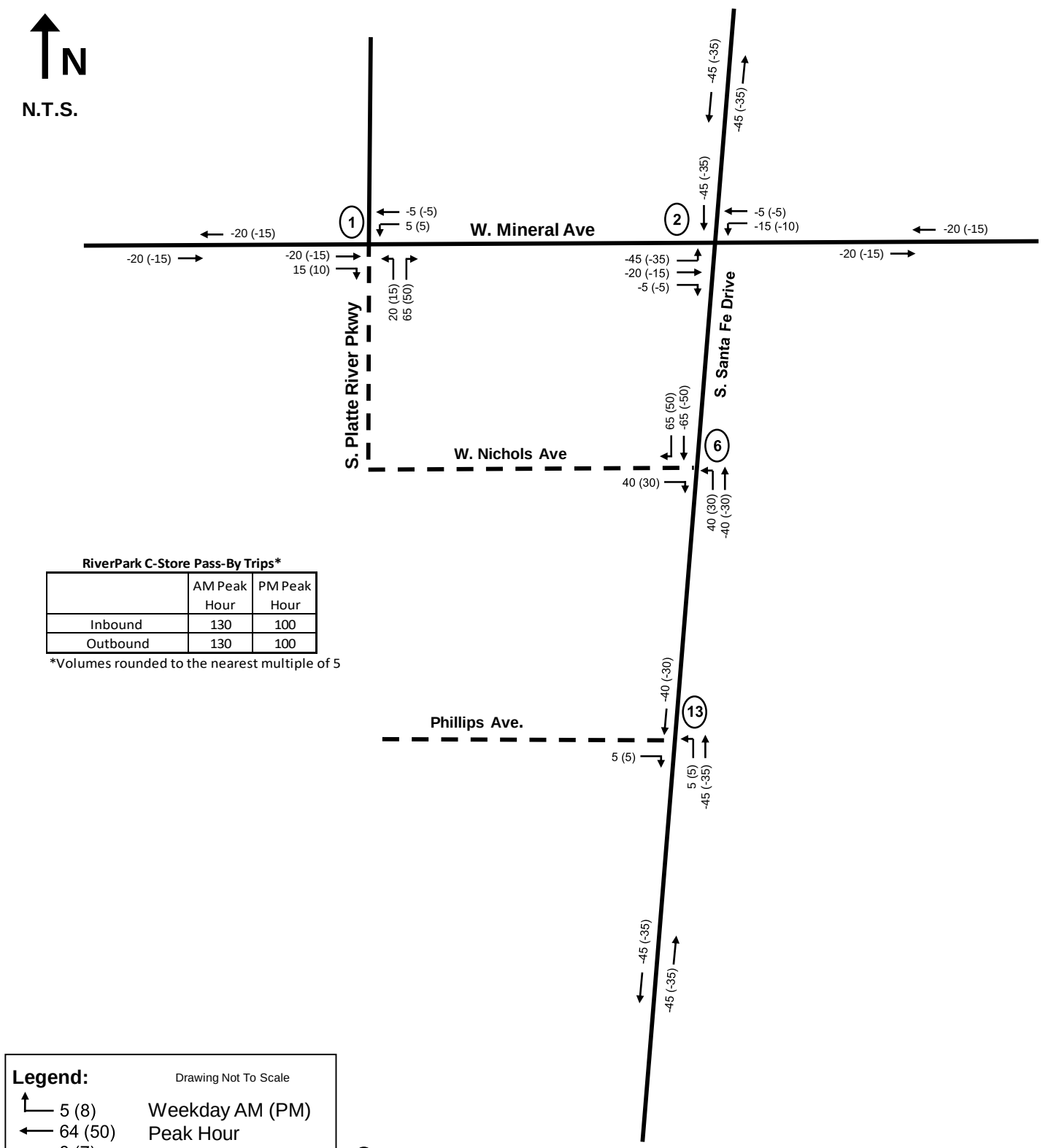
HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

2025 Commercial/Retail Pass-By Trips: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers
HKS #160605

Figure E-1



RiverPark C-Store Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	130	100
Outbound	130	100

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

5 (8) — Weekday AM (PM)
64 (50) — Peak Hour
8 (7) — Traffic Volumes, vph

16 Intersection Node Number

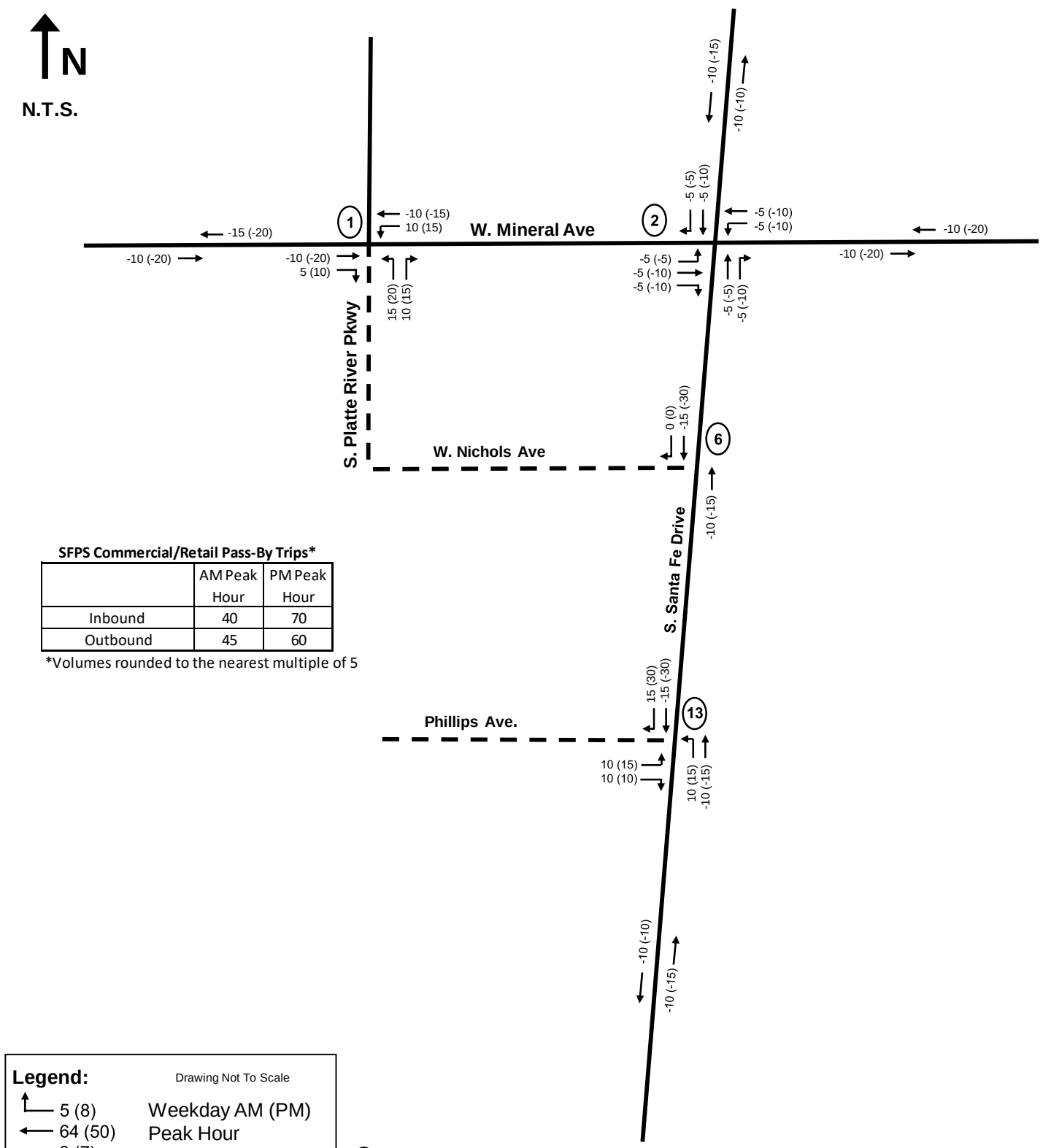
HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

2025 C-Store Pass-By Trips: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers
HKS #160605

Figure E-2



SFPS Commercial/Retail Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	40	70
Outbound	45	60

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

5 (8) — Weekday AM (PM)
64 (50) — Peak Hour
8 (7) — Traffic Volumes, vph

16 Intersection Node Number

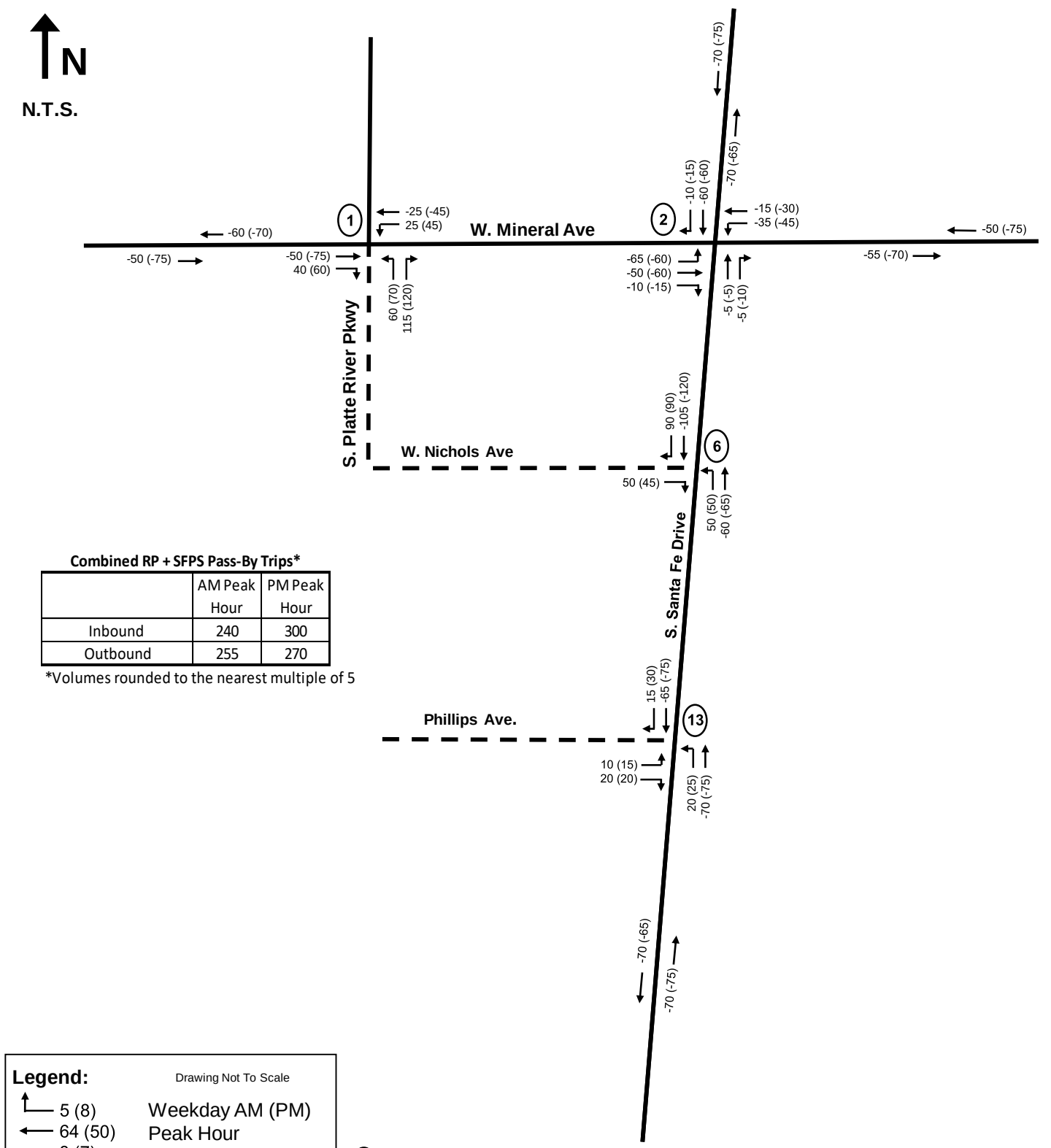
HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

2025 Commercial/Retail Pass-By Trips: Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers
HKS #160605

Figure E-3



Combined RP + SFPS Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	240	300
Outbound	255	270

*Volumes rounded to the nearest multiple of 5

Legend:

Drawing Not To Scale

5 (8) Weekday AM (PM)
64 (50) Peak Hour
8 (7) Traffic Volumes, vph

16 Intersection Node Number

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

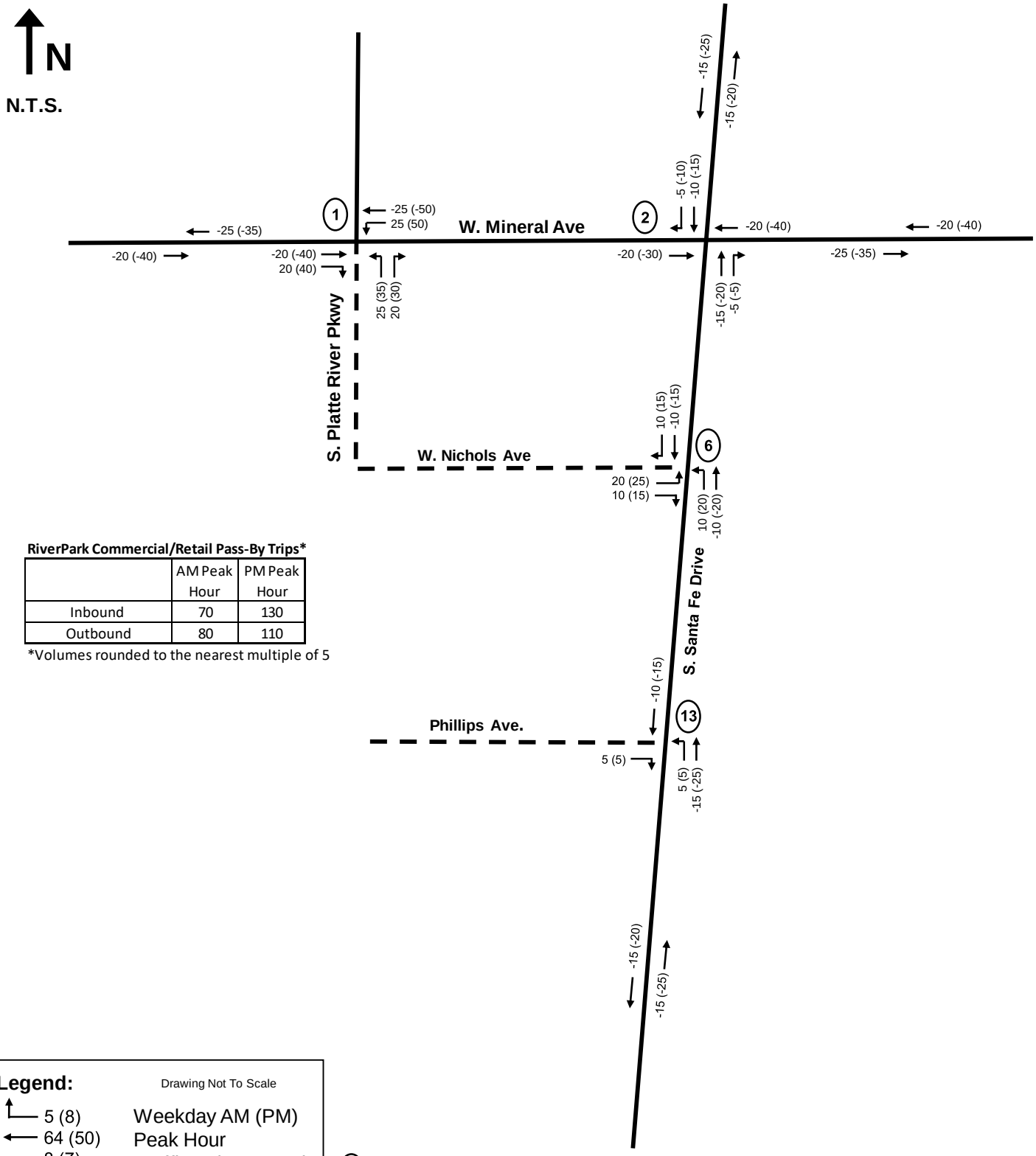
2025 Pass-By Trips: Combined RiverPark + Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure E-4



RiverPark Commercial/Retail Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	70	130
Outbound	80	110

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

5 (8) ← 64 (50) ↓ 8 (7) — Weekday AM (PM) Peak Hour Traffic Volumes, vph

(16) Intersection Node Number

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

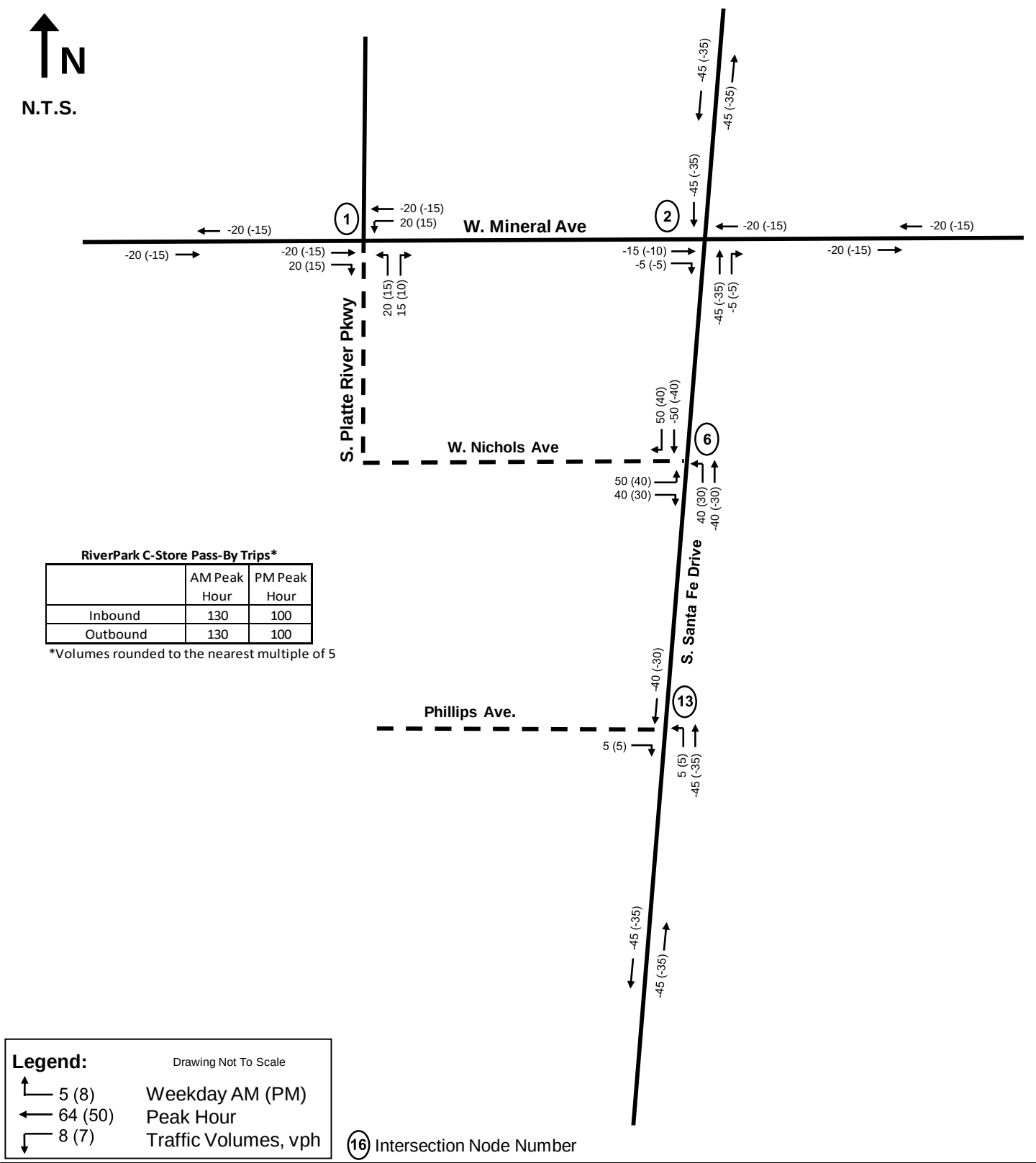
2040 Commercial/Retail Pass-By Trips: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure E-5



RiverPark C-Store Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	130	100
Outbound	130	100

*Volumes rounded to the nearest multiple of 5

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

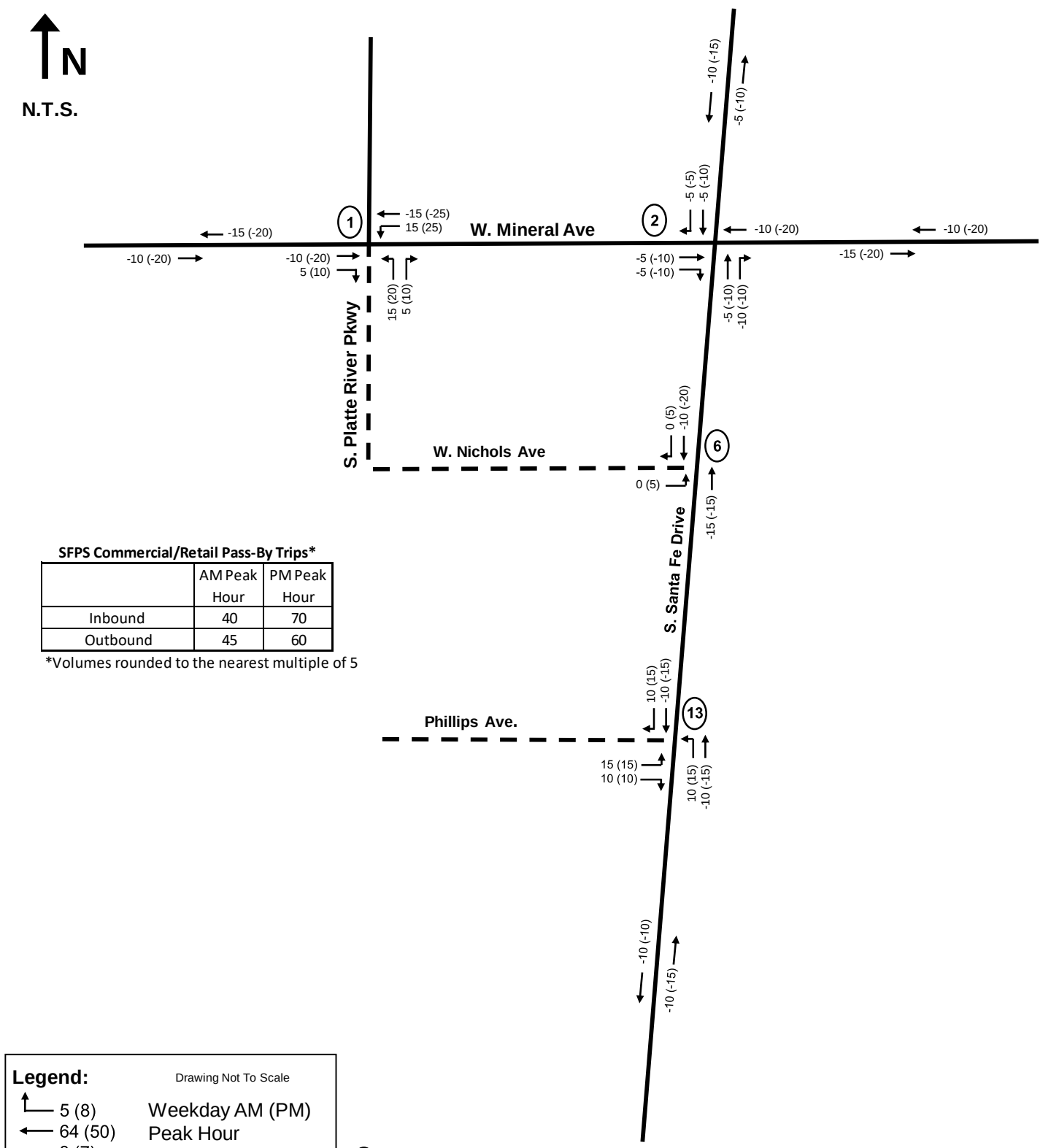
2040 C-Store Pass-By Trips: RiverPark

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure E-6



SFPS Commercial/Retail Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	40	70
Outbound	45	60

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

- 5 (8) — Weekday AM (PM) Peak Hour Traffic Volumes, vph
- 64 (50)
- 8 (7)

16 Intersection Node Number

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

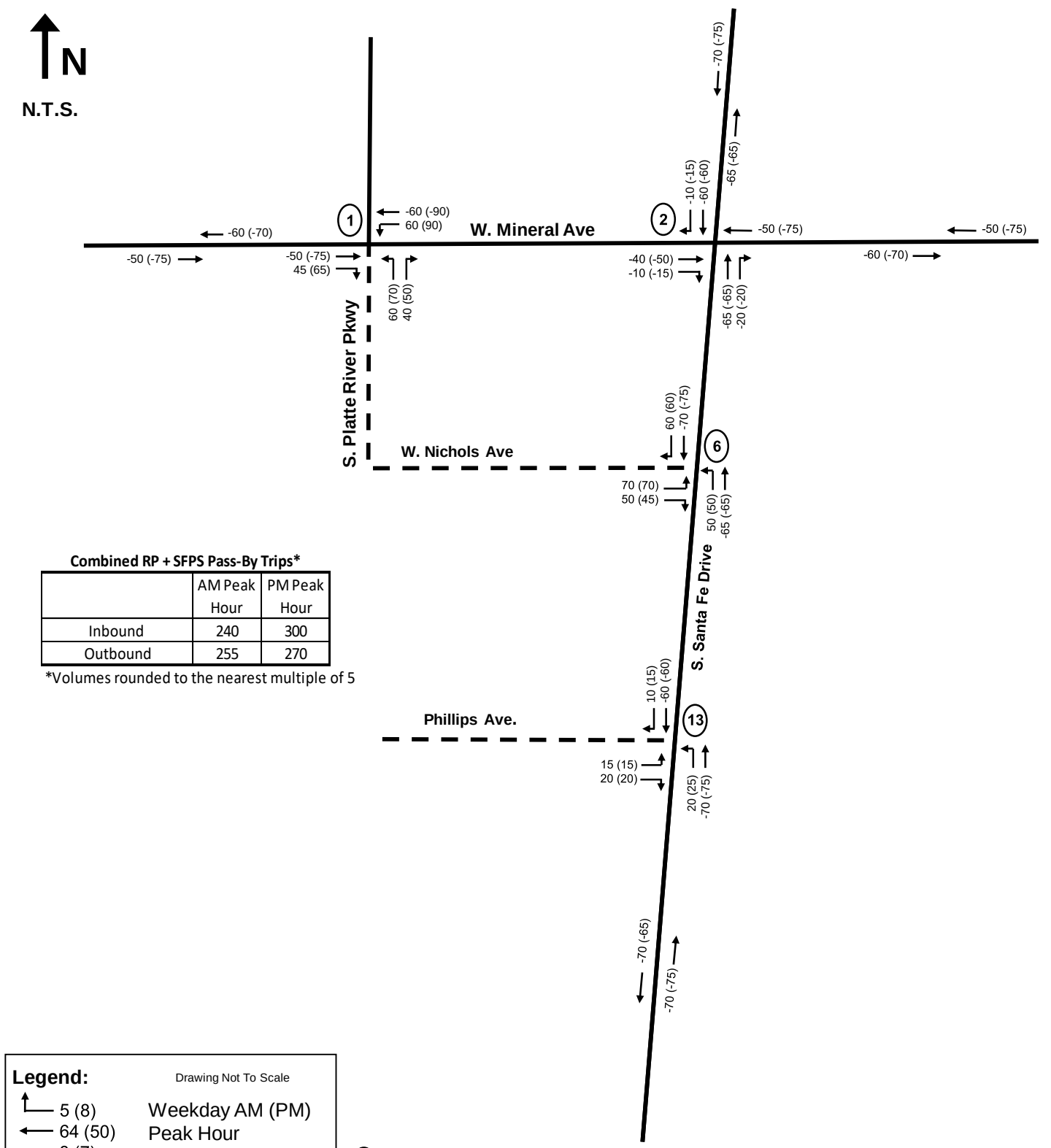
2040 Commercial/Retail Pass-By Trips: Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure E-7



Combined RP + SFPS Pass-By Trips*

	AM Peak Hour	PM Peak Hour
Inbound	240	300
Outbound	255	270

*Volumes rounded to the nearest multiple of 5

Legend: Drawing Not To Scale

5 (8) — Weekday AM (PM)
64 (50) — Peak Hour
8 (7) — Traffic Volumes, vph

16 Intersection Node Number

HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

2040 Pass-By Trips: Combined RiverPark + Santa Fe Park South

Combined RiverPark & Santa Fe Park South TIS

Evergreen Devco/Toll Brothers

HKS #160605

Figure E-8

APPENDIX “F”

MULTIMODAL DESIGN CONSIDERATIONS

THE MULHERN GROUP
ARCHITECTURE PLANNING INTERIORS

RiverPark

Multi-model Design Considerations at RiverPark

The Amended Planned Development Plan (APDP) of RiverPark has incorporated a variety of multi-modal considerations given its proximity to the Mineral Station on the southwest RTD Light-Rail Line. A wide variety of pedestrian, bicycle and vehicular connections have been incorporated into the RiverPark APDP to specifically address multi-modal forms of transportation as identified below.

PLANNING AREAS

RiverPark includes two planning areas including the Harvest District and River District. The Harvest District is commercially oriented for retail uses, restaurants, goods and services provided to the broader community. This Harvest District is expected to bring a higher level of access to the site, whether vehicular, pedestrian or bicycle. The River District is adjacent to the South Platte River corridor and is residentially oriented brining a lower level of access to the site.

Image of "Illustrative Plan" from the APDP

ZONING REQUIREMENTS

AMENDED PLANNED DEVELOPMENT PLAN

The RiverPark development is a small portion of the Santa Fe Park Planned Development Plan, a Planned Development zoning district in the City of Littleton. RiverPark is amending the Planned Development Plan (APDP) and therefore, once approved, will become a zoning document with the requirements stipulated within, including requirements for multi-modal connectivity within RiverPark and to the surrounding adjacent properties or right-of-ways.

RIVERPARK DESIGN STANDARDS

RiverPark Design Standards

November 30, 2020

As a part of the APDP incorporated by reference, Design Standards have been developed to provide a higher level of detailed requirements for all development within RiverPark. These Design Standards related to vehicular, pedestrian or bicycle connections include the following sections:

- Section 1.6: Planning Objectives
- Section 2.1: Site Planning Design Principles
- Section 2.2: Public Street Design
- Section 2.3: Connectivity
- Section 2.4: Parking Areas
- Section 2.5: Bicycle Parking
- Section 2.8: Gathering Areas
- Section 4.1: Multi-Family Site Planning
- Section 5.1: Landscaping
- Section 6.1: Site Lighting
- Section 7.1: Sign Design Criteria

For example, the following is included in Section 2.3 Connectivity:

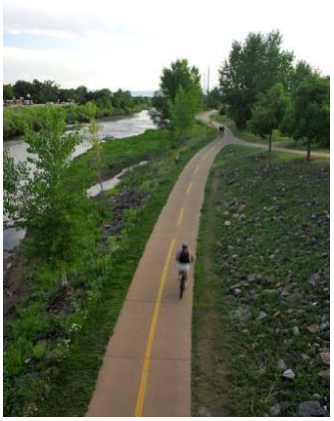
CONNECTIVITY

AREA APPLICABILITY: Applies to both Harvest District and River District.

DESIGN INTENT:

On-Site Connectivity:

Pedestrian connectivity between all parts of RiverPark is a major design component. Each district is to be connected to one another with pedestrian pathways crossing streets and drives at appropriate locations.



Connections to Off-Site Amenities

RiverPark will include pedestrian connections to the edge of the site to allow for access to off-site amenities such as:

1. The SouthPark Neighborhoods to the East via the existing on-grade street crossing at the South Santa Fe Drive and West Mineral Avenue intersection.
2. The Littleton Mineral Station Light Rail Line via the existing on-grade street crossing at the West Mineral Avenue and South Platte River Drive intersection and potential grade-separated bridge crossing.
3. The Mary Carter Greenway Trail via a regional trail connection that extends west to the east side of the South Platte River where it passes under West Mineral Avenue to the existing trail.
4. The property to the south via trail and sidewalks.

DESIGN GUIDELINES

1. Provide sidewalk connections between buildings within any area separated by a public right-of-way.
2. Provide sidewalk connections between buildings adjacent to a right-of-way and the right-of-way sidewalk system with wayfinding signs as may be applicable.

DESIGN STANDARDS

1. *Each major building or building group within each district shall provide pedestrian connectivity to other buildings or building groups within the district to allow cross connectivity within the district.*
2. *Sidewalk connections shall be provided such that there is a continuous and uninterrupted sidewalk system throughout the entire development once it is fully built out to provide pedestrian access to each building, plaza or public amenity, right-of-way sidewalks systems and off-site connections.*

For the sake of brevity for this document, please refer to the RiverPark Design Standards for more information.

ALTERNATIVE MODES OF TRAVEL

Three different types of travel have been addressed throughout RiverPark including pedestrian, bicycle and vehicular travel. This is accomplished through roadway design that was carefully scrutinized for balance between higher speed vehicular traffic and slower bicycle and pedestrian traffic, as follows:

WIDE SIDEWALKS

Sidewalks at RiverPark have been specifically designed according to the anticipated pedestrian traffic to provide comfortable and safe pedestrian pathways and bicycle trails. Accordingly, sidewalks vary in width from a minimum of 6'-0" in width to 10'-0" in width. Bicycle trails are 10'-0" wide and shared-use pathways are 12'-0" wide depending upon location.

Image illustrative of a pedestrian friendly sidewalk at retail storefronts

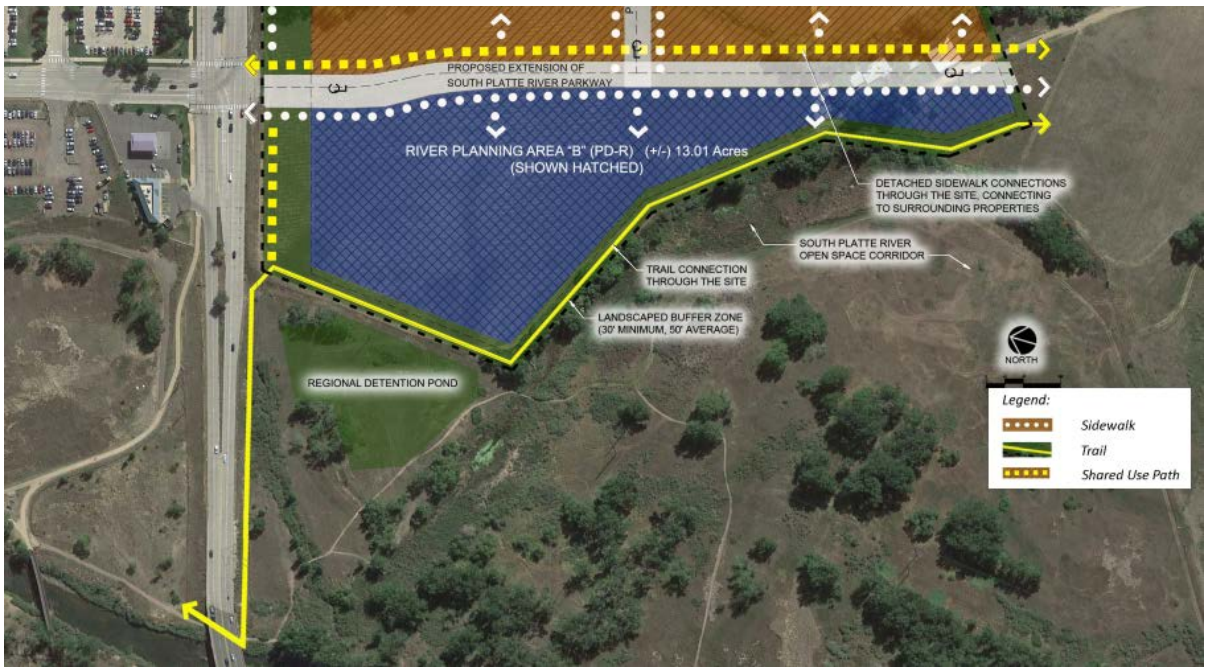
SHARED-USE PATHWAY

In lieu of a typical 6′-0″ wide sidewalk. a detached 12′-0″ wide concrete "Shared-Use" pathway has been provided along the entirety of the South Platte River Parkway through the site. This shared-use path is designed for both pedestrians and bicyclists to traverse the site and have direct access to the Harvest District commercial areas of retail, restaurants, goods and services. The shared use pathway connects to the Mineral Station across West Mineral Avenue at the signalized South Platte River Parkway intersection. At-grade sidewalk connections from the River District to the shared-use pathway are provided at the intersection of South Platte River Parkway and West Nichols Street.

Image illustrative of a share-use pathway

SOUTH PLATTE RIVER REGIONAL TRAIL

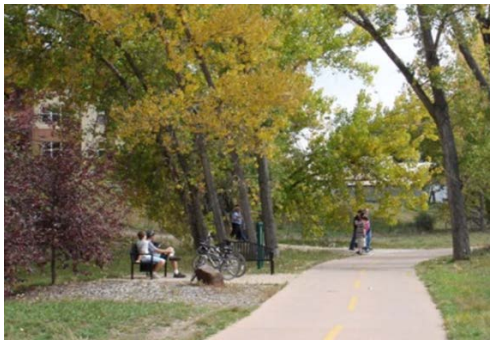
A 10′-0″ wide meandering paved concrete regional trail has been provided within a 50′-0″ average buffer along the entire western edge of the RiverPark property. This allows the trail to be extended to the south by adjacent property owners. The trail will be extended beyond the north end of the RiverPark property through South Platte Park to the west adjacent to the South Platte River and then under West Mineral Avenue until it connects with the existing Mary Carter Greenway Trail. The existing trail on the north side of West Mineral Avenue connects to the existing sidewalk system with a direct connection to Mineral Station. The trail can be used by both pedestrians and bicyclists to connect to Mineral Station without crossing over West Mineral Avenue on surface.



Illustrative of connection from on-site trail to regional trail system on the South Platte River

Bicycle Trails and Connections

In addition to pedestrian connections, north-south bicycle connections across RiverPark are specifically provided by way of the South Platte River Regional Trail and the shared-use pathway. An east-west bicycle connection is provided adjacent to West Mineral Avenue.



Images illustrative of bicycle parking and the Mary Carter Greenway Trail

Sidewalk Buffers

All sidewalks along all publicly dedicated right-of-ways are detached sidewalks with landscaped buffers to separate pedestrians or bicycles from vehicular traffic. The width of the buffer varies increasing width from 4′-0″ to 8′-0″ depending upon the width of the roadway.

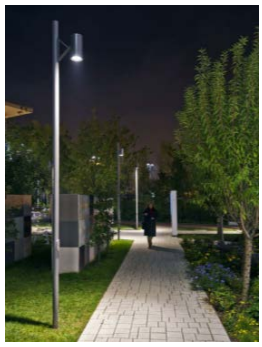
SURFACE CROSSINGS

A network of surface crossings across vehicular roads for access to all areas in and adjacent to RiverPark for pedestrians and bicycles are provided at the following locations:

- North-south connections from RiverPark to the Mineral Station and Aspen Grove on both sides of South Platte River Parkway at the West Mineral Avenue intersection.
- East-west connection on the south side of West Mineral Avenue at the South Platte River Parkway intersection to connect the Harvest and River Districts.
- North-south connections within RiverPark on both sides South Platte River Parkway and the West Nichols Street intersection.
- East west connections within RiverPark between the Harvest and River Districts on both sides of the South Platte River Parkway and West Nichols Street intersection.
- Additional sidewalk connections may be provided at the time of subsequent site plan submittals given the final roadway design approved by the City of Littleton.

INTRA-DISTRICT PEDESTRIAN CONNECTIONS

The APDP requires that sidewalks a minimum of 5'-0" wide be provided within each planning area and that sidewalks will connect all building entrances within each district.



Images illustrative of sidewalks at storefronts & through parking areas

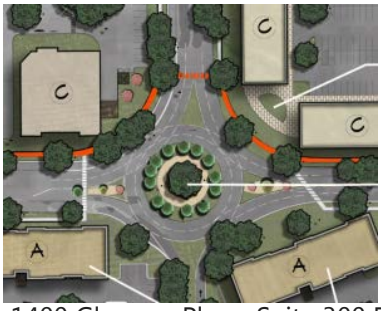
STREET CROSSINGS

Street crossings will be designed per the City of Littleton design requirements. The final street design, yet to be determined, will include nationally accepted design standards for safe pedestrian crossings. Such design considerations include:

- ADA accessible curb ramps.
- Curb ramps with detectable textured surfaces and color differences.
- Painted crosswalk bars.
- Crosswalks uninterrupted by roadway medians.
- Sight distance triangles with low or no landscaping.
- Crossing request buttons for controlling traffic signals.
- Street lighting at intersections and pedestrian crossings.
- Traffic control signage.
- Roadway wayfinding with "Pedestrian Crossing" signage.
- Roadway design with painted stop bars.
- Other design standards as may be applicable.

ROUNDABOUT OPTION

The RiverPark APDP "Illustrative Plan" considers a roundabout at the intersection of South Platte River Parkway and West Nichols Street. The roundabout design, if included in the final street design approved by the City of Littleton, in addition to the items described under "Street Crossings" above, will include:



- Decreased traffic speeds entering the roundabout.
- Bulb-outs at the roundabout approaches.
- Pedestrian crossing wayfinding and street painting.
- Intermediate median island "safe landing" areas.
- Other design considerations as deemed appropriate.

Image of roundabout from APDP Illustrative Plan

GATHERING AREAS

The APDP requires that each planning district include gathering areas that total 16,000 GSF in aggregate with each gathering area a minimum of 2,500 SF in size. These gathering areas, to be determined and submitted with subsequent Site Plan submittals, are to be connected with building entrances and to the connections network by sidewalks. The RiverPark Design Standards establish requirements for pedestrian-friendly spaces complete with decorative paving, benches, trash cans and feature elements such as sculptures, gazebo's, fountains or other amenities.


Images illustrative of Gathering Areas

PARKING LOT DESIGN

The RiverPark Design Standards set forth requirements for maximum parking lot sizes. Parking lots are to be separated from right-of-ways and drive lanes by perimeter landscaping. Internal landscaping and pedestrian connection requirements have also been established to prevent pedestrians from traveling through a sea of parking, making the access across the district, through parking areas and to each building a safe and pleasing experience.


LANDSCAPING

Landscaping will be provided between vehicular streets and bicycle lanes or sidewalks. Street trees will be provided between 30'-0" to 40'-0" on center depending upon the length of the roadway section to define pedestrian walkways, to provide shade and soften the pedestrian experience.

LIGHTING

Street and pedestrian lighting will be provided along all pedestrian pathways as required by the Design Standards.

BUS LINES AND SHUTTLE BUSES

South Platte River parkway is being extended from Mineral Avenue through the RiverPark site to the south to the adjacent Toll Brothers property through a publicly dedicated right-of-way, not a private street or access easement. The long-range plan is for So Platte River Parkway to be a public street that parallels South Santa Fe Drive that extends south to encompass all the property between South Santa Fe Drive on the east, the South Platte River on the west and C470 to the south. This plan allows RTD to incorporate a future bus line that connects the entire area with direct access to Mineral Station without circulating onto South Santa Fe Drive.

REGIONAL TRAIL

COMMUNITY TRAIL

SIDEWALK

LOCAL STREET WITH SIDEWALKS

COLLECTOR STREET AND ACCESS

EMERGENCY ACCESS

FULL MOVEMENT INTERSECTION

SIGNALIZED FULL MOVEMENT INTERSECTION

SINGLE-FAMILY

MULTI-FAMILY

MIXED-USE

COMMUNITY CENTER

PARK

TRAIL CONNECTION

CONTROLLED ACCESS

TO FUTURE DEVELOPMENT

COLLECTOR

SANTA FE DRIVE

MIXED-USE

MIXED-USE

PLATTE RIVER PARKWAY

E. PHILLIPS AVENUE

MIXED-USE

SINGLE-FAMILY (attached)

COMMUNITY CENTER

MIXED-USE

PARK

PLATTE RIVER PARKWAY

MULTI-FAMILY

REGIONAL TRAIL

COMMUNITY TRAIL

EMERGENCY ACCESS

TO FUTURE DEVELOPMENT

LOCAL STREETS

SINGLE-FAMILY (attached)

SANTA FE MULTI-MODAL EXHIBIT

10-13-2020

NOT TO SCALE

www.pcsgroupco.com