Appendix C

Transportation Impact Analysis

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Diridon Station Area Plan

Traffic Impact Analysis

Prepared for:

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Executive Summary

The purpose of this traffic study is to evaluate the long-term traffic impacts associated with the proposed Diridon Station Area Plan (DSAP). The DSAP is a 35-year land use plan developed by the City of San Jose that focuses on the intensification of land uses in the Diridon Station area and expansion of the Diridon Station to serve as a transit hub for existing and planned transit systems. One objective of the long-term analysis will be to allow for the reallocation of the development levels approved with the *Downtown San Jose Strategy 2000* EIR to reflect the DSAP land use plan. The analysis consists of an evaluation of the effects of the adjustment of the approved *Downtown San Jose Strategy 2000* land use development levels relating to the specific development characteristics of the DSAP.

In addition to the standard weekday peak hour analysis for the proposed buildout of the DSAP, evaluation of the effects of a near-term DSAP 10-Year development plan and peak event period conditions also was completed. Since an actual near-term project is not proposed at this time and the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods, the near-term and peak event period analysis is provided for informational purposes only.

Diridon Station Area Plan

The DSAP consists of a land use plan for the Diridon Station Area that includes a shift in approved development growth from the traditional Downtown core as identified by the approved Strategy 2000 to the Diridon Station Area, west of SR 87. Though the DSAP consists of the reallocation of land uses, the total planned development growth within the Downtown area remains as identified with the approved Strategy 2000 EIR. However, a small amount of retail space and over half of the residential units proposed by the DSAP are outside of the Downtown area, as identified below.

The land use plan for the Diridon Station area is defined by the *Diridon Station Area Plan, Preferred Plan Report, October 2011*. The DSAP area boundary includes areas between Guadalupe River and the Caltrain tracks and extends to the north to approximately Lenzen Avenue and areas to the south to approximately I-280. For this analysis, the "project" consists of the identified level of development within the DSAP boundary and includes the following:

4,963,400 sf of commercial/R&D/Light Industrial space
424,100 of retail/restaurant space
2,588 residential dwelling units
900 hotel guestrooms

The DSAP land use plan and the analysis of this study includes 155 residential units within Subarea E. However, it has since been determined that Subarea E is inadequate for residential land uses. Therefore, the 155 units will be reallocated to, as of yet, undetermined area(s) within the Downtown Core. However, the reallocation of the units will have a minimal effect on the projected traffic conditions of the DSAP development presented within this study since the amount of reallocated units is small when compared with the total DSAP development levels and size of development area.

In addition, a portion of the DSAP development (83,800 s.f. of retail space and 1,398 residential units) will occur outside of the Downtown area boundary. Though the land uses outside the downtown boundary are included as part of the DSAP development levels analyzed within this study, specific development projects outside of the Downtown area boundary will be required to prepare site specific traffic impact analysis (TIA) to address traffic issues within neighborhoods and on the roadway system surrounding the Diridon Station area. The requirement of site-specific TIA for the DSAP development projects outside of the Downtown area boundary is consistent with the City requirement of the completion of TIAs for all development located outside of the Downtown area boundary that meet minimum trip thresholds.

Scope of Work

The analysis includes an evaluation of the DSAP Master Plan buildout compared to existing conditions, in conformance with the requirements of the California Environmental Quality Act (CEQA). However, the primary purpose of this analysis is to compare traffic conditions under the DSAP buildout to traffic conditions that are expected to occur under Strategy 2000, as previously evaluated in the *Downtown San Jose Strategy 2000* EIR. This evaluation is essentially a comparison between the project scenario and "no project" scenario, showing conditions with and without adoption of the DSAP.

The study included level of service analysis of AM and PM peak hour traffic conditions for identified intersections and freeway segments within and surrounding the Diridon/Downtown area. The analysis consisted of the evaluation of a total of 104 intersections and 76 freeway segments. The potential level of service impacts of the planned DSAP development levels were evaluated in accordance with the standards set forth by City of San Jose and the Congestion Management Program (CMP) of Santa Clara County and compared with the approved Strategy 2000 plan EIR analysis.

The study also includes the analysis of two additional scenarios for informational purposes only. The analysis provided within each of the scenarios serves to provide an evaluation of the effects of the project on a near-term basis and during peak event period conditions. Since an actual near-term project is not proposed at this time and the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods, the analysis completed for each of the scenarios does not provide an evaluation of impacts of the project.

Project Impacts and Mitigation Measures

Intersection Impacts and Mitigation Measures

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under Existing Plus DSAP Buildout Conditions and under DSAP Buildout Plus Strategy 2000 project conditions. The analysis of Existing Plus DSAP Buildout Conditions did not identify any significant intersection or freeway impacts.

The results of the evaluation of DSAP Buildout plus Strategy 2000 conditions show that 14 of the study intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions during at least one peak hour. When compared to Strategy 2000 background conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 10 intersections. Seven of the 10 intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

Improvements were investigated for each of the 10 intersections. Some locations were found to have no feasible improvements. The following is a description of the feasible improvements and the intersections that would remain deficient. A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

Downtown Core Intersections

The following downtown core intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. These intersections are located in the downtown core and are therefore exempt from the city's level of service policy. Nonetheless, potential improvements at each of the intersections were investigated to determine whether any improvements, although not required, were feasible. The improvements are provided as recommendations for consideration.

(4) Montgomery Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS B under the PM peak hour with implementation of the Autumn Street improvements.

(6) Montgomery Street and Park Avenue

This intersection is projected to operate below the City LOS standard due to the planned narrowing of Bird Avenue from six to four lanes and Park Avenue from four to two lanes that were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(7) Coleman Avenue and Taylor Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the widening of Coleman Avenue from a four-lane roadway to a six-lane roadway (including the associated improvements of double-left-turn lanes and separate right turn-lanes on Taylor Street) and the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. The Autumn Street extension and Coleman Avenue widening were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The additional left-turn lanes and eastbound right-turn lane on Taylor Street also have been completed. The implementation of the remaining westbound right-turn lane on Taylor Street would improve intersection level of service to LOS D and E under both the AM and PM peak hours, respectively. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR determined that this intersection would operate at LOS D under both peak hours with implementation of the Coleman Avenue and Autumn Street improvements.

(10) Autumn Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan, in addition to providing two westbound left-turn lanes at the intersection. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS E under the PM peak hour with implementation of the Autumn Street improvements. In accordance with CMP conformance standard, this is an acceptable level of service.

(12) Bird Avenue and San Carlos Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified the addition of a second northbound left-turn lane as a potential improvement. The addition of a second northbound left-turn lane on Bird Avenue was also identified as a potential improvement as part of the proposed baseball stadium and therefore, was assumed to be complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The implementation of the second northbound left-turn lane is projected to only improve intersection level of service to LOS E. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection were identified in the Strategy 2000 EIR. Operational problems such as blocked intersections and an imbalance of lane usage along Bird Avenue between San Carlos Street and I-280 are due to large volumes and the close spacing of intersections. As such, signal-timing modifications along Bird Avenue between I-280 and San Carlos Street should also be implemented.

(16) Delmas Avenue and San Fernando Street

There are no further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(26) SR 87 and Julian Street (E)

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street extension from Julian Street to Coleman Avenue as identified in the City's General Plan, addition of second exclusive through and left-turn lanes on the SR 87 northbound off-ramp, addition of exclusive through and right-turn lanes from Notre Dame Street, addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The addition of the second exclusive through and left-turn lanes on the SR 87 northbound off-ramp and addition of exclusive through and right-turn lanes from Notre Dame Street have been completed. The implementation of the remaining addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing would improve intersection level of service to LOS E during the AM peak hour. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection also were identified in the Strategy 2000 EIR as well.

Intersections Outside Core/Expanded Core

The following three intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. The intersections are subject to the city's level of service policy since they are located outside of the Downtown Core boundaries. One of the three intersections, The Alameda and Hedding Street is identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. It is recommended that the remaining two intersections be added to the City of San Jose list of protected intersections.

The City of San Jose Protected Intersection Policy provides an exemption for intersections that serve as gateways to the greater downtown area from the City's level of service policy. The Protected Intersection Policy contends that the intersections serve as gateways to the greater downtown area and experience higher traffic demands resulting in traffic impacts. The Protected Intersection Policy requests that additional capacity not be added to the intersections and they be allowed to operate at capacity (thus, not being required to meet the LOS D standard) with the expectation that alternative routes or modes will be used by drivers when delays become unacceptable.

The policy allows for the addition of intersections to the list of Protected Intersections so long as they are located within designated Special Planning Areas and consistent with the General Plan. The Special Planning Areas may inlcude:

- Transit-Oriented Development Corridors
- Planned Residential/Community Areas
- Neighborhood Business Districts
- Downtown Gateways

(67) Park Avenue and Naglee Avenue

Impact: This intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at Park Avenue and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

(76) The Alameda and Hedding Street

Impact: This CMP intersection would operate at LOS E during the AM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. The intersection of The Alameda and Hedding Street has been identified as a Protected Intersection. The LOS policy specifies that Protected Intersections consist of locations that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon other transportation facilities (such as pedestrian, bicycle, and transit systems). The policy acknowledges that exceptions to the City's LOS policy of maintaining a Level of Service D at local intersections will be made for certain Protected Intersections that have been built to their planned maximum capacity. If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided that enhance pedestrian, bicycle and transit facilities in the community near the Protected Intersection.

This significant unavoidable impact was previously identified in the City of San José's *Modifications to the City of San José's Transportation Impact Policy Final EIR* (September 2005) and therefore, is not a new impact of the proposed project.

(77) The Alameda and Naglee Avenue

Impact: This CMP intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at The Alameda and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of

protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

Freeway Impacts

The results of the freeway segment analysis show that the DSAP will have a significant impact on mixed-flow lanes on 41 directional freeway segments and HOV lanes on five directional freeway segments during at least one peak hour. The DSAP results in an impact to one additional directional freeway segment when compared to Strategy 2000 background conditions.

Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. Since it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way, and no comprehensive project to add through lanes has been developed by Caltrans or VTA for individual projects to contribute to, the significant impacts on the directional freeway segments identified above must be considered significant and unavoidable.

Cumulative Conditions Intersection Levels of Service

The results of the cumulative conditions analysis show that 16 and 18 of the study intersections are projected to operate at LOS E or F during at least one peak hour under Strategy 2000 and DSAP Buildout plus Strategy 2000 cumulative conditions, respectively. When compared to Strategy 2000 cumulative conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 12 intersections. However, traffic associated with the proposed DSAP land use adjustments would contribute to significant cumulative impacts at only four of the 12 intersections that are located outside of the Downtown Core Area boundary:

(67) Park Avenue and Naglee Avenue
(76) The Alameda and Hedding Street*
(77) The Alameda and Naglee Avenue*
(83) Lincoln Avenue and San Carlos Street

As identified under DSAP Buildout plus Strategy 2000 project conditions, there are no feasible improvements that can be implemented at the Park Avenue/Naglee Avenue, The Alameda/Hedding Street, and The Alameda/Naglee Avenue intersections. Similarly, no feasible improvements are possible at the Lincoln Avenue and San Carlos Street intersection. It is recommended that the Lincoln Avenue and San Carlos Street intersection also be added to the list of Protected Intersections because it serves as a gateway to the greater downtown area. The remaining eight intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

1. Introduction

The purpose of this traffic study is to evaluate the long-term traffic impacts associated with the proposed Diridon Station Area Plan (DSAP) in conformance with the requirements of the California Environmental Quality Act (CEQA). The DSAP is a 35-year land use plan developed by the City of San Jose that focuses on the intensification of land uses in the Diridon Station area and expansion of the Diridon Station to serve as a transit hub for existing and planned transit systems. One objective of the long-term analysis will be to allow for the reallocation of the development levels approved with the *Downtown San Jose Strategy 2000* EIR to reflect the DSAP land use plan. The analysis consists of an evaluation of the effects of the adjustment of the approved *Downtown San Jose Strategy 2000* land use development levels relating to the specific development characteristics of the DSAP.

In addition to the standard weekday peak hour analysis for the proposed buildout of the DSAP, evaluation of the effects of a near-term DSAP 10-Year development plan and peak event period conditions also was completed. Since an actual near-term project is not proposed at this time and the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods, the near-term and peak event period analysis is provided for informational purposes only.

Diridon Station Area Plan

The DSAP consists of a land use plan for the Diridon Station Area that includes a shift in approved development growth from the traditional Downtown core as identified by the approved Strategy 2000 to the Diridon Station Area, west of SR 87. Though the DSAP consists of the reallocation of land uses, the total planned development growth within the Downtown area remains as identified with the approved Strategy 2000 EIR. However, a small amount of retail space and over half of the residential units proposed by the DSAP are outside of the Downtown area, as identified below.

The land use plan for the Diridon Station area is defined by the *Diridon Station Area Plan, Preferred Plan Report, October 2011*. The DSAP area boundary includes areas between Guadalupe River and the Caltrain tracks and extends to the north to approximately Lenzen Avenue and areas to the south to approximately I-280 (see Figure 1). For this analysis, the "project" consists of the identified level of development within the DSAP boundary and includes the following:

4,963,400 sf of commercial/R&D/Light Industrial space
424,100 of retail/restaurant space
2,588 residential dwelling units
900 hotel guestrooms

The DSAP land use plan and the analysis of this study includes 155 residential units within Subarea E. However, it has since been determined that Subarea E is inadequate for residential land uses. Therefore, the 155 units will be reallocated to, as of yet, undetermined area(s) within the Downtown Core. However, the reallocation of the units will have a minimal effect on the projected traffic conditions of the DSAP

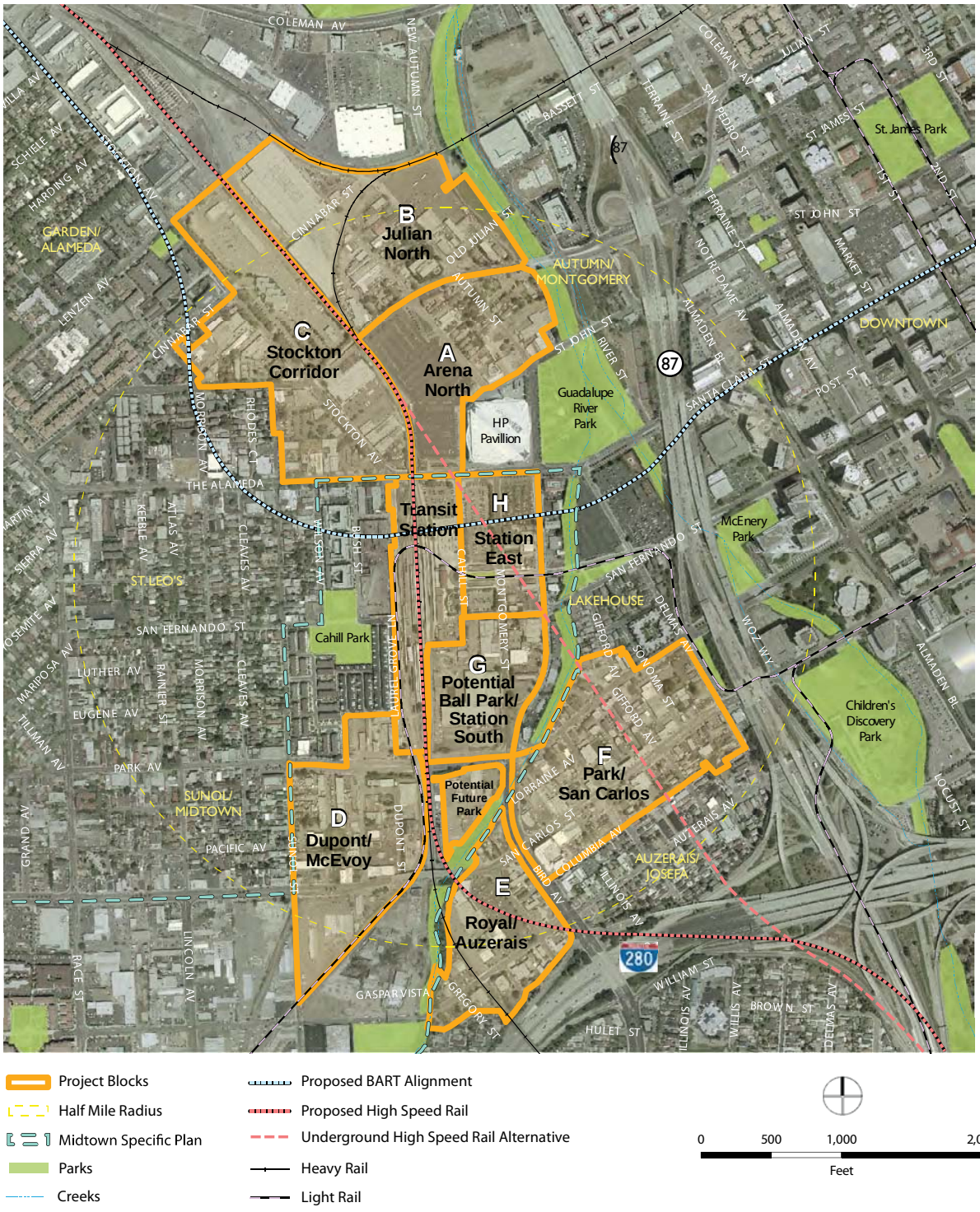


Figure 1
Diridon Station Area Plan Boundary

development presented within this study since the amount of reallocated units is small when compared with the total DSAP development levels and size of development area.

In addition, a portion of the DSAP development (83,800 s.f. of retail space and 1,398 residential units) will occur outside of the Downtown area boundary. Though the land uses outside the downtown boundary are included as part of the DSAP development levels analyzed within this study, specific development projects outside of the Downtown area boundary will be required to prepare site specific traffic impact analysis (TIA) to address traffic issues within neighborhoods and on the roadway system surrounding the Diridon Station area. The requirement of site-specific TIA for the DSAP development projects outside of the Downtown area boundary is consistent with the City requirement of the completion of TIAs for all development located outside of the Downtown area boundary that meet minimum trip thresholds.

Scope of Study

The study determines the traffic impacts of the proposed DSAP on the key intersections and freeway segments in the vicinity of the project area during the weekday AM and PM peak hours. The impacts of the development were evaluated following the standards and methodologies set forth by the City of San Jose and the Congestion Management Program (CMP). Detailed operational analysis including signal warrants and vehicle queuing analysis will be completed at the time of preparation of specific development traffic impact analyses. The key transportation facilities were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing conditions are represented by existing peak-hour traffic volumes on the existing roadway network. For the purpose of this study, traffic counts from approximately the Year 2008 were used for the reporting of existing conditions levels of service. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. Existing traffic volumes were obtained from the City of San Jose.

Scenario 2: *Existing Plus DSAP Buildout Conditions*. Traffic growth factors that reflect forecasted traffic volumes due to the Buildout of the DSAP were developed with the use of the City's CUBE traffic forecasting model. The forecasted traffic volumes consist of DSAP development levels only with no adjustment for approved Strategy 2000 development. The traffic growth factors were applied to Year 2008 existing traffic volumes to produce existing plus DSAP Buildout conditions volumes. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. Existing plus DSAP Buildout conditions are evaluated relative to existing conditions in order to determine potential DSAP Buildout project impacts.

Scenario 3: *Strategy 2000 Background Conditions*. Traffic growth associated with the approved Strategy 2000 development levels as well as other approved projects in the Diridon Station area were estimated using the City's CUBE model. Strategy 2000 Background conditions traffic volumes were produced by developing traffic growth factors and applying the factors to Year 2008 existing traffic volumes. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. Trips associated with the Ballpark were added manually (Ballpark trips were obtained from the *San Jose Ballpark Supplemental Traffic Impact Analysis*, February 10, 2010). Strategy 2000 Background conditions include planned roadway network adjustments.

Scenario 4: *DSAP Buildout Plus Strategy 2000 Conditions.* The City's CUBE model was used to forecast traffic growth associated with the DSAP buildout and adjusted Strategy 2000 development levels. DSAP buildout plus Strategy 2000 condition traffic volumes were produced by developing traffic growth factors and applying the factors to Year 2008 existing traffic volumes. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. DSAP

buildout plus Strategy 2000 conditions is evaluated relative to Strategy 2000 Background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative traffic volumes are estimated by adding to DSAP buildout plus Strategy 2000 conditions volumes the projected volumes associated with pending/reasonably foreseeable projects. The pending projects consist of BART and High Speed Rail (HSR). BART project trips were obtained from its completed traffic study. HSR traffic volumes were estimated based on proposed parking and manual assignment and do not account for changes in traffic patterns as a result of HSR.

The study also includes the analysis of two additional scenarios for informational purposes only. The analysis provided within each of the scenarios serves to provide an evaluation of the effects of the project on a near-term basis and during peak event period conditions. Since an actual near-term project is not proposed at this time and the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods, the analysis completed for each of the scenarios does not provide an evaluation of impacts of the project.

Scenario 6: *DSAP* 10-*Year Development Plan Conditions (Informational).* The DSAP 10-Year development plan provides for the analysis of a near-term development scenario based on current traffic and parking conditions. The DSAP 10-year development plan provides a general estimate of potential development that could occur within a 10-year period. However, there is not an actual development plan identified for the project. Therefore, the DSAP 10-year development plan near-term analysis is presented for informational purposes only.

Scenario 7: *6:00-7:00 PM Event Period Conditions (Informational).* Since the proposed project is located in close proximity to major event venues (SJ Arena and planned Ballpark), which have typical event times staring at or after 7:00 PM, an analysis of the project during the 6:00-7:00 PM period was completed. However, the proposed project would generate the greatest amount of traffic and result in the greatest impact to the roadway system during the standard AM and PM peak hours. In addition, the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods. Therefore, the 6:00-7:00 PM period analysis is presented for informational purposes only.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards. Traffic studies for site-specific development projects typically evaluate the effects of project traffic on a near-term (less than 5-years) basis by manually layering project traffic on to existing traffic data. However, unlike the near-term analysis methodology, this analysis utilizes a traffic-forecasting model to project long-term traffic growth since the DSAP development levels are spread over a large area and will be built over a long period of time. The traffic-forecasting model has the ability to project the diversion of traffic and change in traffic patterns due to roadway/transit system changes as well as large land use changes similar to those proposed by the DSAP and Strategy 2000. The analysis of the DSAP 10-Year development did utilize the standard near-term evaluation methods.

The CUBE Traffic Model

The City's CUBE model reflects the refinements in knowledge and capacity associated with traffic modeling in recent years. Compared to the TRANPLAN model used in the past, the CUBE model is both more powerful and more detailed in the information it can provide. The CUBE model can evaluate conditions during AM and PM one-hour peak periods, and for AM and PM four-hour peak periods, the latter option reflecting the dispersion of traffic during peak commute periods. Transit can be evaluated during peak and off-peak periods.

The City of San José's traffic forecasting model was developed to help the City project peak hour traffic impacts attributable to changes proposed to the City's General Plan. The model uses the CUBE transportation planning software system and is consistent with the structures of the Metropolitan Transportation Commission's (MTC) BAYCAST regional model and VTA's VTP2030 model. The San José model includes the four elements traditionally associated with models of this kind. These elements include:

- Trip Generation,
- Trip Distribution,
- Mode Choice, and
- Traffic Assignment.

The fundamental structure of the model includes a computer readable representation of the street system (roadway network) that defines street segments (links) identified by end points (nodes). Each roadway link is further represented by key characteristics (link attributes) that describe the length, travel speeds, and vehicular capacity of the roadway segment. Small geographic areas (traffic analysis zones, also called TAZs) are used to quantify the planned land use activity throughout the City's planning area. The boundaries of these small geographic areas are typically defined by the modeled street system, as well as natural and man made barriers that have an effect on traffic access to the modeled network. Within the City's planning area, the TAZs are small in size. In outlying areas of the modeled network (such as in distant counties), the TAZs will typically be larger.

Transit systems are represented in the model by transit networks that are also identifiable by links and nodes. Unlike the roadway network, the key link attributes of a transit link are operating speed and headways – elapsed time between successive transit services. Transit stops and "dwelling times" (the time allowed for passengers embarking and disembarking transit vehicles) are described as transit node attributes. Transit networks are further grouped by type of transit (rail versus bus) and operator (VTA bus versus AC Transit bus). Transit accessibility for each TAZ is evaluated by proximity to transit stops or stations, and the connectivity of transit lines to destinations.

The socioeconomic data for each TAZ in the model includes information about the number of households (stratified by household income and structure type), population, average income, age distribution, and employment (stratified by groupings of Standard Industrial Codes). Both the number of workers per household and the auto ownership within a TAZ are calculated based on these factors, as well as the types and densities of residences. The model projects trip generation rates and the traffic attributable to residents and resident workers, categorized by trip purposes, using a set trip generation formula. The trip generation formulae were originally created by the Metropolitan Transportation Commission in 1997 based on 1990 U.S. Census data and 1994 San Francisco Bay Region Travel Survey, and are calibrated to 2000 U.S. Census data to more accurately reflect travel frequency for Bay Area residents.

Travel times within and between TAZs (intra-zonal and inter-zonal, and terminal times) are developed from the network being modeled. Travel times within zones (intra-zonal travel times) are derived for each zone based on half its average travel time to the nearest three adjacent zones. Time to walk to and from the trip maker's car (terminal times) are also added.

The projected daily trips are distributed using a standard gravity model and friction factors calibrated for the modeling region, which presently consists of 13 counties. Shares of transportation modes are then assigned to the daily trip distributions (or trip tables) utilizing a nested-Logit methodology. The City of San José CUBE Model is capable of estimating up to 7 modes of transportation – auto drive alone, auto shared ride 2+ occupants, auto shared ride 3+ occupants, rail transit, bus transit, bicycle, and walk. For school trip purposes, auto driver and auto passenger are assumed for automobile travel. Time-of-day factors and directionality factors are then applied to automobile trips occurring during the AM peak hour, AM 3-hour peak period, PM peak hour, and PM 3-hour peak period before the traffic is assigned to the roadway networks. The assignment of the trip tables to the roadway network uses a route selection procedure based on minimum travel time paths (as opposed to

minimum travel distance paths) between TAZs and is done using a capacity-constrained user equilibrium-seeking process. This capacity-constrained traffic assignment process enables the model to reflect diversion of traffic around congested areas of the overall street system.

Model Forecasts and Traffic Growth Factors

Land use data was prepared and traffic forecasts completed by City of San Jose staff for each of the three development growth scenarios (DSAP Buildout, Strategy 2000, and DSAP Buildout Plus Strategy 2000).

Intersection specific traffic growth factors were developed to factor up the existing traffic counts for all study intersections. The traffic growth for each of the study intersections was calculated by taking the difference between the Base Year forecasts and the Strategy 2000 Background and DSAP Buildout plus Strategy 2000 conditions traffic forecasts for each of the intersections. The land use data, roadway network, and counts used in the model base year reflect April and May 2008 conditions.

The forecasted traffic growth was further refined based on projected traffic volumes used in the traffic analysis for the planned Ballpark (*San Jose Ballpark Supplemental Traffic Analysis*, February 2010). In consultation with City staff, an adjustment procedure was developed to ensure that forecasted volumes in the immediate vicinity of the project area (including the area surrounding the Arena and planned Ballpark) were reasonable in regards to expected growth projected in the Ballpark traffic analysis. The adjustment procedure consisted of a comparison of the forecasted traffic growth for DSAP Buildout Plus Strategy 2000 conditions with those volumes projected with the completion on the planned Ballpark. The comparison of volumes indicated that the application of a minimum growth factor of 16% to the forecasted volumes at each of the 24 intersections studied as part of the Ballpark traffic analysis would provide for a conservative forecast of future traffic volumes. The projected volumes at each of the 24 intersections studied as part of the Ballpark study were also adjusted to ensure that the adjusted forecasted volumes were no less than those projected with the completion of the Ballpark.

The calculated traffic growth was then applied proportionally to existing traffic counts to develop the forecasted DSAP Buildout Plus Strategy 2000 condition volumes. The adjusted intersection volumes along each of the major travel corridors within the project area bound by Coleman Avenue, SR 87, Park Avenue, and Stockton Street were then reviewed and adjusted to ensure that the total approach and departure volumes between adjacent intersections were reasonable.

Signalized Intersection Analysis

Signalized Intersection Level of Service Methodology

Intersections located within the downtown core are exempt from having to meet the city's level of service policy. As such, levels of service for the downtown core intersections are reported for informational purposes only.

All other signalized study intersections are located in the City of San Jose and are subject to the City of San Jose Level of Service standards. The City of San Jose level of service methodology is TRAFFIX, which is based on the 2000 *Highway Capacity Manual* (HCM) method for signalized intersections. TRAFFIX evaluates signalized intersections operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersections level of service methodology, the City of San Jose methodology employs the CMP defaults values for the analysis parameters. The City of San Jose level of service standard for signalized intersections is LOS D or better. The only difference between the San Jose and CMP analyses is that project impacts are determined on the basis of different level of service standards –the CMP level of service standard for signalized intersections is LOS E or better. The correlation between average delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (Sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operation with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual*, (Washington, D.C., 2000)

Study Intersections

The DSAP will result in an intensification of land uses and resulting increase in traffic in the immediate area of the Diridon Station and outside of the downtown core boundary, west of the rail line. As such, the level of service analysis includes intersections that were not studied as part of the Strategy Plan 2000 EIR and that are located outside of the Greater Downtown Core Area. Signalized intersections that are currently operating at LOS D or worse conditions and to which the project would likely add a significant amount of traffic, 10 trips or more per lane, were selected for study. Any intersections operating at LOS C or better outside of the Diridon Station area would not be significantly affected by the project since the project would not add a sufficient amount of traffic to cause the degradation of levels of service at any intersection by two letter grades. The study included the analysis of 104 signalized intersections. Traffic conditions at the selected study intersections were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 7:00 and 9:00 AM, and the PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on an average day. The study area and intersections are shown in Figure 2 and are listed below:

Downtown Core Intersections

1 Stockton Avenue and Taylor Street
2 Stockton Avenue and The Alameda
3 Cahill Street and Santa Clara Street
4 Montgomery Street and Santa Clara Street*
5 Montgomery Street and San Fernando Street
6 Autumn Street and Park Avenue

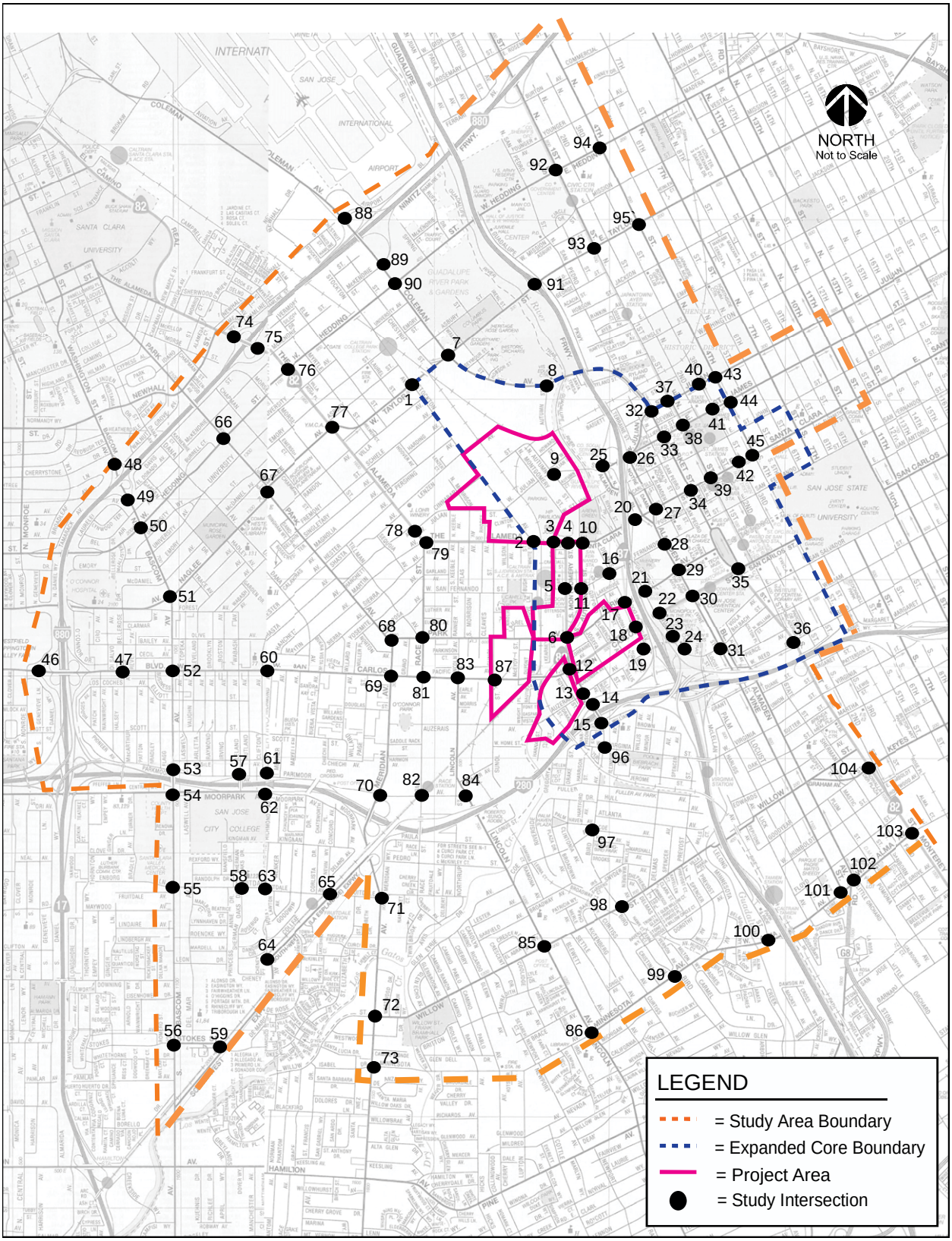


Figure 2
Diridon Station Area Plan Study Area Boundary and Study Intersections

7 Coleman Avenue and Taylor Street
8 Autumn Street and Coleman Avenue
9 Autumn Street and Julian Street
10 Autumn Street and Santa Clara Street*
11 Autumn Street and San Fernando Street
12 Bird Avenue and San Carlos Street*
13 Bird Avenue and Auzerais Avenue
14 Bird Avenue and I-280 (N)*
15 Bird Avenue and I-280 (S)*
16 Delmas Avenue and San Fernando Street
17 Delmas Avenue and Park Avenue
18 Delmas Avenue and San Carlos Street
19 Delmas Avenue and Auzerais Avenue
20 SR 87 and Santa Clara Street*
21 Woz Way and Park Avenue
22 Woz Way and San Carlos Street
23 Woz Way and Auzerais Avenue
24 Woz Way and SR 87
25 SR 87 and Julian Street (W)*
26 SR 87 and Julian Street (E)*
27 Almaden Boulevard and Santa Clara Street (E)
28 Almaden Boulevard and San Fernando Street
29 Almaden Boulevard and Park Avenue
30 Almaden Boulevard and San Carlos Street*
31 Almaden Boulevard and Woz Way
32 Market Street and Julian Street
33 Market Street and Saint James Street
34 Market Street and Santa Clara Street
35 Market Street and San Carlos Street*
36 First Street and Reed Street
37 First Street and Julian Street
38 First Street and Saint James Street
39 First Street and Santa Clara Street
40 Third Street and Julian Street
41 Third Street and Saint James Street
42 Third Street and Santa Clara Street
43 Fourth Street and Julian Street
44 Fourth Street and Saint James Street
45 Fourth Street and Santa Clara Street

Intersections Outside Downtown Core

46 I-880 and Stevens Creek Boulevard*
47 Bellerose Drive and Stevens Creek Boulevard
48 Bascom Avenue and I-880 (N)*
49 Bascom Avenue and I-880 (S)*
50 Bascom Avenue and Hedding Street
51 Bascom Avenue and Naglee Avenue
52 Bascom Avenue and San Carlos Street
53 Bascom Avenue and Parkmoor Avenue
54 Bascom Avenue and Moorpark Avenue*
55 Bascom Avenue and Fruitdale Avenue*
56 Bascom Avenue and Stokes Street*
57 Leland Avenue and Parkmoor Avenue
58 Sherman Oaks Drive and Fruitdale Avenue
59 Southwest Expressway and Stokes Street

60 Leigh Avenue and San Carlos Street
61 Leigh Avenue and Parkmoor Avenue
62 Leigh Avenue and Moorpark Avenue
63 Leigh Avenue and Fruitdale Avenue
64 Leigh Avenue and Southwest Expressway
65 Southwest Expressway and Fruitdale Avenue
66 Park Avenue and Hedding Street
67 Park Avenue and Naglee Avenue
68 Meridian Avenue and Park Avenue
69 Meridian Avenue and San Carlos Street
70 Meridian Avenue and Parkmoor Avenue
71 Meridian Avenue and Fruitdale Avenue
72 Meridian Avenue and Willow Street
73 Meridian Avenue and Minnesota Avenue
74 The Alameda I-880 (N)*
75 The Alameda I-880 (S)*
76 The Alameda and Hedding Street*
77 The Alameda and Naglee Avenue*
78 The Alameda and Julian Street
79 Race Street and The Alameda*
80 Race Street and Park Avenue
81 Race Street and San Carlos Street
82 Race Street and Parkmoor Avenue
83 Lincoln Avenue and San Carlos Street
84 Lincoln Avenue and Parkmoor Avenue
85 Lincoln Avenue and Willow Street
86 Lincoln Avenue and Minnesota Avenue
87 Sunol Street and San Carlos Street
88 Coleman Avenue and I-880 (N)*
89 Coleman Avenue and I-880 (S)*
90 Coleman Avenue and Hedding Street
91 SR 87 and Taylor Street
92 First Street and Hedding Street
93 First Street and Taylor Street
94 Fourth Street and Hedding Street
95 Fourth Street and Taylor Street
96 Bird Avenue and Virginia Street
97 Bird Avenue and Coe Avenue
98 Bird Avenue and Willow Street
99 Bird Avenue and Minnesota Avenue
100 Lelong Street and Alma Avenue
101 Vine Street and Alma Avenue
102 Almaden Avenue and Alma Avenue
103 First Street and Alma Avenue*
104 First Street and Keyes Street*

* Denotes CMP intersection

Significant Intersection Impact Criteria

City of San Jose Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose, not located within the downtown core, if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, or
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four or more seconds and the demand-to-capacity ratio (V/C) to increase by .01 or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e. the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Recognizing that the Downtown area serves as a center for financial and business activities, development within the Downtown area boundary is exempt from the City's level of service policy and traffic mitigation requirements. The City's level of service policy also makes exceptions for "Protected Intersections," which have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon pedestrian, bicycle, and/or transit facilities.

CMP Conformance

The CMP standard for acceptable level of service at a CMP intersection is LOS E or better. However, the City of San Jose LOS D standard and impact criteria is applied to CMP intersections located within City of San Jose limits.

Freeway Segment Analysis

Freeway Segment Level of Service Methodology

As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

D = V / (N*S)
Where:
D= density, in vehicles per mile per lane (vpmpl)
V= peak hour volume, in vehicles per hour (vph)
N= number of travel lanes
S= average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table 2. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Study Freeway Segments

Freeway segments to be included in the analysis were selected based on their proximity to the Diridon area and include 76 segments along SR 87, US 101, I-280, I-680, and I-880. Existing levels of service on each of the freeway study segments were identified based on the 2008 CMP monitoring report.

1 SR 87 northbound between Capitol Expressway and Curtner Avenue
2 SR 87 southbound between Capitol Expressway and Curtner Avenue
3 SR 87 northbound between Curtner Avenue and Almaden Expressway
4 SR 87 southbound between Curtner Avenue and Almaden Expressway
5 SR 87 northbound between Almaden Expressway and Alma Avenue

Table 2
Freeway Level of Service Based on Density

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	0-11
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	>11-18
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	>18-26
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	>26-46
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	>46-58
F	Vehicular flow breakdowns occurs. Large queues form behind breakdown points.	>58

Source: Santa Clara County 2004 CMP (Based on the *Highway Capacity Manual (2000)* , Washington, D.C.).

6 SR 87 southbound between Almaden Expressway and Alma Avenue
7 SR 87 northbound between Alma Avenue and I-280
8 SR 87 southbound between Alma Avenue and I-280
9 SR 87 northbound between I-280 and Julian Street
10 SR 87 southbound between I-280 and Julian Street
11 SR 87 northbound between Julian Street and Coleman Avenue
12 SR 87 southbound between Julian Street and Coleman Avenue
13 SR 87 northbound between Coleman Avenue and Taylor Street
14 SR 87 southbound between Coleman Avenue and Taylor Street
15 SR 87 northbound between Taylor Street and Skyport Drive
16 SR 87 southbound between Taylor Street and Skyport Drive
17 SR 87 northbound between Skyport Drive and US 101
18 SR 87 southbound between Skyport Drive and US 101
19 I-280 eastbound between Saratoga Avenue and Winchester Boulevard
20 I-280 westbound between Saratoga Avenue and Winchester Boulevard
21 I-280 eastbound between Winchester Boulevard and I-880
22 I-280 westbound between Winchester Boulevard and I-880
23 I-280 eastbound between I-880 and Meridian Avenue
24 I-280 westbound between I-880 and Meridian Avenue
25 I-280 eastbound between Meridian Avenue and Bird Avenue
26 I-280 westbound between Meridian Avenue and Bird Avenue
27 I-280 eastbound between Bird Avenue and SR 87
28 I-280 westbound between Bird Avenue and SR 87
29 I-280 eastbound between SR 87 and 10th Street
30 I-280 westbound between SR 87 and 10th Street
31 I-280 eastbound between 10th Street and McLaughlin Avenue

32 I-280 westbound between 10th Street and McLaughlin Avenue
33 I-280 eastbound between McLaughlin Avenue and US 101
34 I-280 westbound between McLaughlin Avenue and US 101
35 I-680 northbound between US 101 and King Road
36 I-680 southbound between US 101 and King Road
37 I-680 northbound between King Road and Capitol Expressway
38 I-680 southbound between King Road and Capitol Expressway
39 I-680 northbound between Capitol Expressway and Alum Rock Avenue
40 I-680 southbound between Capitol Expressway and Alum Rock Avenue
41 I-680 northbound between Alum Rock Avenue and Mckee Road
42 I-680 southbound between Alum Rock Avenue and Mckee Road
43 I-880 northbound between I-280 and Stevens Creek Boulevard
44 I-880 southbound between I-280 and Stevens Creek Boulevard
45 I-880 northbound between Stevens Creek Boulevard and North Bascom Avenue
46 I-880 southbound between Stevens Creek Boulevard and North Bascom Avenue
47 I-880 northbound between North Bascom Avenue and The Alameda
48 I-880 southbound between North Bascom Avenue and The Alameda
49 I-880 northbound between The Alameda and Coleman Avenue
50 I-880 southbound between The Alameda and Coleman Avenue
51 I-880 northbound between Coleman Avenue and SR 87
52 I-880 southbound between Coleman Avenue and SR 87
53 I-880 northbound between SR 87 and North 1st Street
54 I-880 southbound between SR 87 and North 1st Street
55 I-880 northbound between North 1st Street and US 101
56 I-880 southbound between North 1st Street and US 101
57 I-880 northbound between US 101 and East Brokaw Road
58 I-880 southbound between US 101 and East Brokaw Road
59 I-880 northbound between East Brokaw Road and Montague Expressway
60 I-880 southbound between East Brokaw Road and Montague Expressway
61 US 101 northbound between Story Road and I-280
62 US 101 southbound between Story Road and I-280
63 US 101 northbound between I-280 and Santa Clara Street
64 US 101 southbound between I-280 and Santa Clara Street
65 US 101 northbound between Santa Clara Street and McKee Road
66 US 101 southbound between Santa Clara Street and McKee Road
67 US 101 northbound between McKee Road and Oakland Road
68 US 101 southbound between McKee Road and Oakland Road
69 US 101 northbound between Oakland Road and I-880
70 US 101 southbound between Oakland Road and I-880
71 US 101 northbound between I-880 and Old Bayshore Highway
72 US 101 southbound between I-880 and Old Bayshore Highway
73 US 101 northbound between Old Bayshore Highway and North 1st Street
74 US 101 southbound between Old Bayshore Highway and North 1st Street
75 US 101 northbound between North 1st Street and Guadalupe Parkway
76 US 101 southbound between North 1st Street and Guadalupe Parkway

CMP Definition of Significant Freeway Segment Impacts

A project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour:

1. The level of service on the freeway segment is an unacceptable LOS F under project conditions, and
2. The number of project trips on that segment constitutes at least one percent of capacity on that segment.

3. The level of service on the freeway segment degrades from an acceptable LOS under existing conditions to an unacceptable LOS F under project conditions.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to LOS E or better.

Report Organization

The remainder of this report is divided into eight chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, and existing bicycle and pedestrian facilities for the Diridon Station area. Chapter 3 describes the method used to estimate DSAP buildout traffic and the resulting traffic conditions expected under Existing plus DSAP Buildout conditions. Chapter 4 presents Strategy 2000 background traffic conditions with the already approved Strategy 2000 development levels. Chapter 5 presents the method used to estimate traffic associated with the proposed DSAP buildout development and its impacts on the transportation system and mitigation measures. Chapter 6 presents the intersection operations under Cumulative Conditions. Chapters 7 and 8 present the analysis and findings of the DSAP 10-Year development near-term and peak event period informational evaluation, respectively. Chapter 9 presents the conclusions of the analysis.

2. Existing Transportation System

This chapter describes existing conditions for all of the major transportation facilities in the Diridon Station area, including the roadway network, parking, transit service, and bicycle and pedestrian facilities.

Existing Roadway Network

Regional access to the station area is provided via I-880, I-280, and SR-87. These facilities are described below:

Interstate-880 is a 6-lane freeway running north-west of downtown San Jose. South of San Jose it becomes SR 17. Access to the Diridon Station area is provided indirectly via interchanges at I-280, Bascom Avenue, The Alameda and Coleman Avenue.

Interstate-280 connects from US 101 in San Jose to I-80 in San Francisco. It is generally an eight-lane freeway in the vicinity of downtown San Jose. It also has auxiliary lanes between some interchanges. The section of I-280 just north of the Bascom Avenue overcrossing has six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes. I-280 provides access to the Diridon Station area via its interchange at Bird Avenue. Connections are also available indirectly via an interchange with SR 87.

State Route 87 connects from SR 85 in south San Jose to US 101 near the San Jose International Airport. SR 87 provides two mixed-flow lanes and one HOV lane in both directions of travel. Connections from SR 87 to the Diridon Station area are provided via a full interchange at Julian Street and partial interchanges at Park Avenue (ramps to/from north only), at Auzerais Avenue (ramps to/from south only), and at Santa Clara Street (northbound off-ramp only).

Roadways providing local access to the Diridon Station area and their configurations in the area of the station are described below:

Santa Clara Street is a four-lane east-west roadway that provides access from the east and west of the station area. East of US 101, Santa Clara Street becomes Alum Rock Avenue and west of the Caltrain bridge it becomes The Alameda.

The Alameda (State Route 82) is generally a four-lane north-south arterial that runs from Santa Clara University to the Diridon Station area where it becomes Santa Clara Street.

Montgomery Street. Montgomery Street is a two-lane, one-way arterial street (southbound) that provides a connection from Santa Clara Street to Bird Avenue.

Autumn Street. Autumn Street completes a one-way couplet with Montgomery Street. It is a three-lane, one-way arterial street running northbound from Bird Avenue to Santa Clara Street. North of Santa Clara Street, Autumn Street is a two-way street (one lane in each direction). Autumn Street currently ends just past Julian Street, but is planned to extend to Coleman Avenue in the Envision San Jose 2040 General Plan.

Bird Avenue is a four-lane north-south arterial that provides access to I-280 and the Diridon Station area. Bird Avenue runs from the Willow Glen Area of San Jose to Park Avenue, where it transitions into the one-way couplet of Autumn and Montgomery Streets.

Julian Street is an east-west arterial that traverses the north edge of downtown San Jose. It provides access to the station area via an interchange with SR87.

San Fernando Street is a two-lane east-west arterial that runs from 17th Street to Montgomery Street. Outside of the downtown area, specifically west of Almaden Boulevard and east of 10th Street, San Fernando Street is a two-lane roadway. It provides access between downtown San Jose and the Diridon train station, where it ends.

San Carlos Street is a four-lane east-west arterial that runs from 4th Street to Bascom Avenue, just east of I-880, at which point it becomes Stevens Creek Boulevard.

Cahill Street is a short local street that connects the Diridon train station to The Alameda.

Park Avenue is a four-lane local street in the downtown area and then transitions to a two-lane designated arterial to the west. Park Avenue provides a connection between the Diridon Station area and the SR87 interchange with Park Avenue.

Auzerais Avenue is a two-lane collector street. It provides a connection between the Diridon Station area and the SR87 interchange at Woz Way.

Existing Traffic Volumes

For the purpose of this study, traffic counts from approximately the Year 2008 were used for the reporting of existing conditions levels of service. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. A comparison of Year 2008 and latest available counts indicated that traffic volumes were generally greater in the Year 2008. The decrease in volumes since 2008 is due to the economic downturn experienced from 2008 to 2012. Therefore, the use of the Year 2008 volumes presents a conservative reflection of existing traffic conditions. The Year 2008 existing peak-hour traffic volumes were obtained from the City of San Jose TRAFFIX database. The existing peak-hour intersection volumes at each study intersection are included in Appendix A.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were provided by city staff and confirmed by observations in the field. Lane configurations for each of the study intersections can be found within the level of service calculation sheets in Appendix B.

Existing Intersection Levels of Service

The results of the level of service analysis under existing conditions show that all of the study intersections, both local City of San Jose and CMP intersections, currently operate at an acceptable level of service (LOS D or better for local intersections, and LOS E or better for CMP intersections) according to City of San Jose and the CMP level of service standards. Figure 3 presents worst-case peak hour levels of service under existing conditions for all study intersections. A table summarizing the intersection level of service results for all intersections and calculation sheets are included in Appendix B.

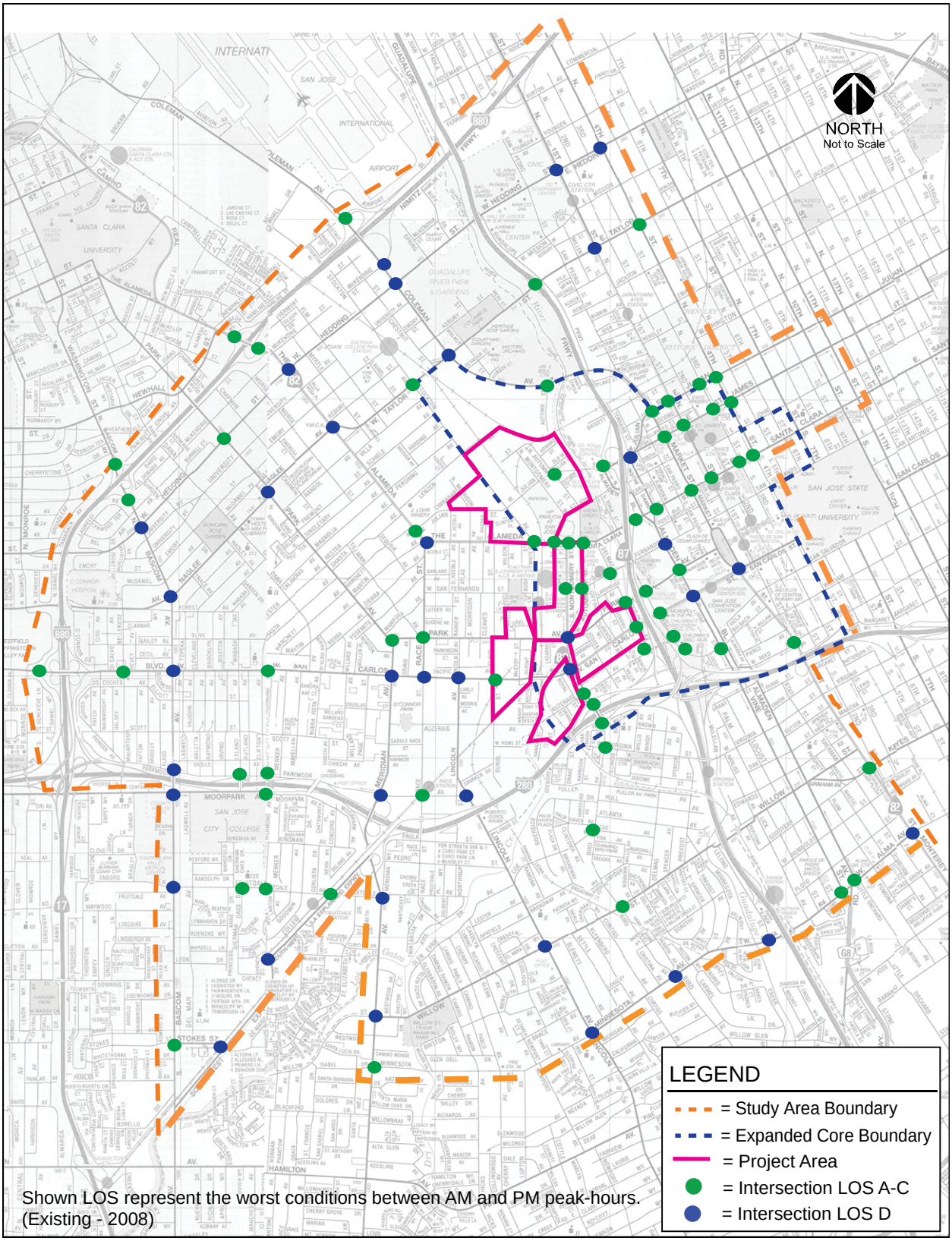


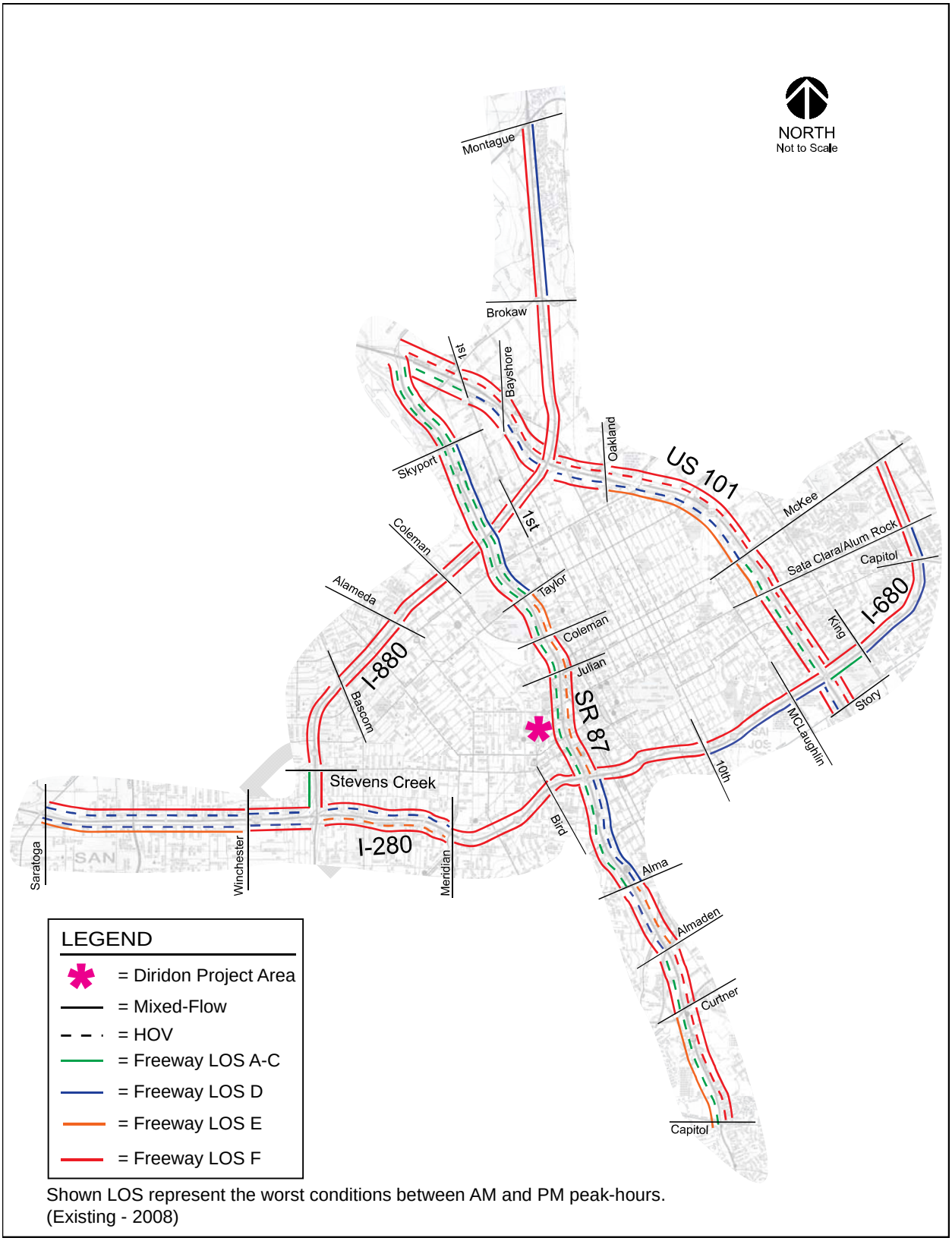
Figure 3
Existing Intersection Levels of Service

Existing Freeway Segment Levels of Service

Traffic volumes and levels of service for the subject freeway segments were taken from the 2008 CMP Annual Monitoring Report. Based on the monitoring report, the mixed-flow lanes on 62 of the 76 directional freeway segments analyzed currently operate at an unacceptable LOS F during at least one of the peak hours. In addition, the HOV lanes on 10 directional freeway segments studied also are operating at LOS F during at least one of the peak hours. Those segments operating at LOS F conditions during at least one peak hour are identified in Figure 4. Summary tables of the freeway segment analysis are presented in Appendix C.

Nearly all peak direction freeway segments in the downtown area are currently operating under poor traffic conditions. The peak directions of travel are northbound during the AM peak hour and southbound during the PM peak hour. Congested conditions are apparent on I-880, US 101, and SR 87. Congestion occurs on SR 87 between Curtner Avenue and Coleman Avenue during the AM peak hour and Julian Street to Curtner Avenue during the PM peak hour. During the PM peak hour, the congested conditions are due to the I-280 to SB SR 87 ramps. The large volume of traffic merging onto SB SR 87 south of I-280 exceeds the capacity of the freeway. Poor conditions on US 101 and I-880 in both peak directions of travel are due to the inadequate capacity of the freeways. Congestion along I-280/I-680 occurs in both directions during both peak hours due to operational problems such as merge areas and interchanges.

Poor levels of service on the downtown freeway segments are primarily attributable to traffic moving through the downtown area bound for destinations to the north or south. This traffic pattern is evident from intersection level of service calculations. Though the freeway segments are operating poorly, intersections operate, for the most part, at acceptable levels.



Shown LOS represent the worst conditions between AM and PM peak-hours.
(Existing - 2008)

Figure 4
Existing Freeway Segment Levels of Service

Existing Transit Service

The Diridon Station area is a hub for nearly all major transit services. Connections between bus lines, light rail, and Caltrain are provided within the Diridon Station area. The many choices and extensive transit system within downtown make transit an attractive alternative to both employees and residents. Existing transit service within the greater Downtown area is provided by the VTA, ACE, Amtrak, and Caltrain. The transit services are described below and shown on Figure 5.

VTA Bus Service

The Diridon station is served by seven bus routes and the DASH shuttle (see Table 3). In addition, two more bus routes run along The Alameda. Local routes 22, 63, 64, 65, and 68 provide connections throughout Santa Clara County and operate with 10 to 60 minute headways during peak hours. Routes 64 and 68 operate until around midnight, including on weekends, and Route 22 operates 24-hours a day, seven days a week. Route 168 provides express service to the Gilroy Transit Center and operates in the northbound direction during the AM commute period and southbound during the PM commute period, generally on 30-minute headways. Route 181 provides express service to the Fremont BART station and operates weekdays and weekends until midnight, generally on 15-minute headways. The Highway 17 shuttle provides express service to Santa Cruz seven days per week until approximately 10 PM, with varying headways. Route 522 provides express service along the same route as Route 22 weekdays and Saturdays with 15-minute headways until 8 PM. The DASH shuttle provides local service within downtown San Jose on weekdays until 7 PM.

Table 3
Diridon Station Area Existing Bus Service

Location / Route	Description	Commute Hour Headways (minutes)
At Diridon Station		
63	Almaden Valley to San Jose State University	30
64	Almaden LRT Station to McKee/White	30
65	Kooser/Meridian to Diridon Station	60
68	Gilroy Transit Center to Diridon Station	15
168	Gilroy Tansit Center to Diridon Station	30
181	Fremont BART Station to Diridon Station	15
HWY17	Santa Cruz/Scotts Valley to San Jose	Varies
DASH	Downtown Shuttle	10
On The Alameda (two blocks)		
22	Eastridge Transit Center to Palo Alto Transit Center	10
522	Eastridge Transit Center to Palo Alto Transit Center	15

Source: VTA Bus Service Map & Schedule (Januaury 1/20/12)

= Diridon Project Area

Figure 5
Diridon Station Area Existing Transit Service

Light Rail Transit (LRT) Service

Light Rail Transit service is provided in the Diridon Station area by VTA. The Diridon station is served by the Mountain View – Winchester Line. The Mountain View – Winchester Line provides service between downtown Mountain View and Campbell/Los Gatos via downtown San Jose. Riders on the Alum Rock – Santa Teresa LRT Line can transfer to the Mountain View – Winchester Line at the Convention Center station, or they could take the DASH shuttle to Diridon Station from that point. The Mountain View – Winchester Line operates until midnight seven days a week, generally on 30-minute headways, with 15-minute headways during weekday commute hours.

Caltrain

Caltrain operates a commuter rail service seven days a week between San Jose and San Francisco. During weekday commuting hours, Caltrain also serves the south county including Gilroy, San Martin, and Morgan Hill. Caltrain provides shuttle service to businesses in the Silicon Valley and on the Peninsula.

There is an existing Caltrain station located at Diridon Station. The Diridon station provides service to the downtown area via connections with bus lines 63, 64, 65, and 68 described above, express bus routes 168, 180, 181, and Highway 17, in addition to the DASH, LRT, and ACE/Amtrak connections. Caltrain provides service with 5-to-25-minute headways during commute hours. Caltrain provides weekend shuttle service from Diridon Station to Tamien Station.

ACE

The Altamont Commuter Express (ACE) provides commuter rail service between the Central Valley and Silicon Valley. Three trains are in operation during weekday commuting hours. ACE also provides an ACE/Amtrak bus 3911 for late commuters. Shuttle service from the stations to employment centers are provided by various public transit agencies.

Amtrak Capitol Corridor Inner-City Rail

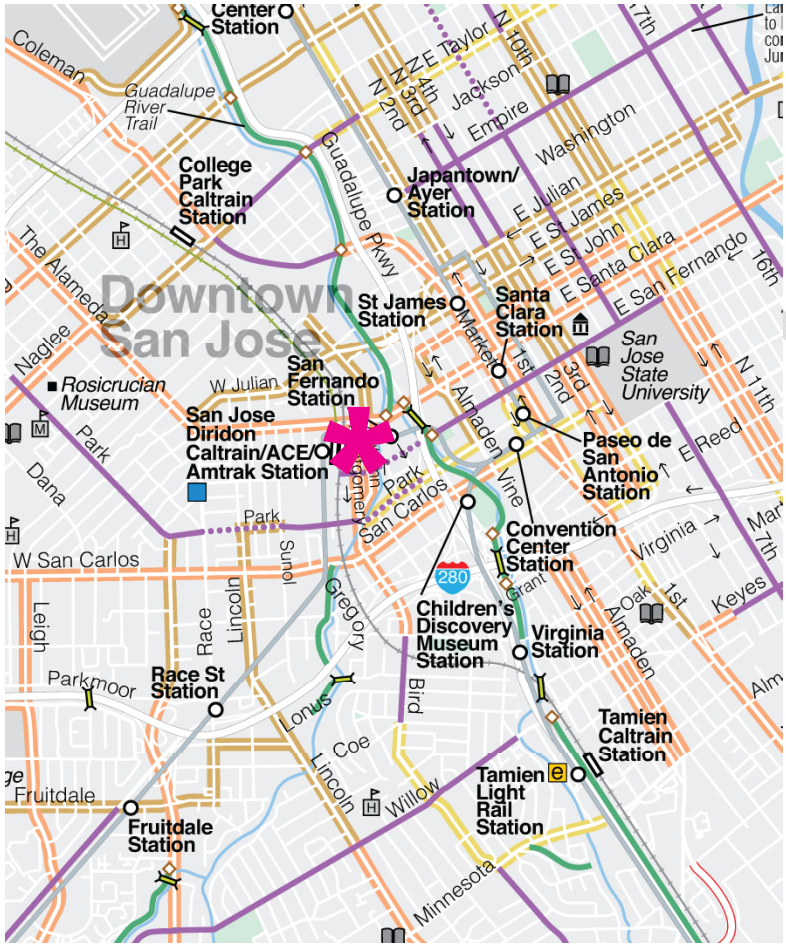
Amtrak provides commuter rail service between Sacramento and San Jose. Four daily round trips are provided between Sacramento and the Caltrain Diridon Station.

Existing Bicycle and Pedestrian Facilities

Pedestrian facilities in the Diridon Station area consist primarily of sidewalks, pedestrian push buttons, and signal heads at intersections. With a few exceptions, sidewalks are found along virtually all previously described local roadways in the study area and along the local residential streets and collectors near the sites.

There are several bicycle facilities in the Diridon Station area. Bicycle facilities include striped bike lanes on roadways, bike paths, which are separated from vehicle traffic and shared with pedestrians, and bicycle corridors, which are identified corridors between jurisdictions where it is desirable to implement bicycle facilities. The bicycle facilities are described below and shown on Figure 6. Within the vicinity of the Diridon Station area, bike lanes are provided on:

San Fernando Street, between SR 87 and 10th Street
Park Avenue, between Naglee Avenue and Race Street
Coleman Avenue, between Taylor Street and SR 87
7th Street, between Saint James Street and Empire Street
7th Street, between Hedding Street and Commercial Street
Commercial Street, between 1st Street and 10th Street
Coleman Avenue, between Newhall Drive an Mc Kendrie Street



= Diridon Project Area

Figure 6
Downtown Area Existing Bicycle Facilities

A bike and pedestrian path is located along the Guadalupe River between I-880 and I-280. There are also two designated cross-county bicycle corridors in the station vicinity:

SR 87/Guadalupe LRT cross-county bicycle corridor runs along the extent of SR 87.

I-880/I-680/SR 17/Vasona Rail/Los Gatos Creek cross-county bicycle corridor runs along San Carlos Street and Santa Clara Street.

3. Existing Plus DSAP Buildout Conditions

This chapter describes existing traffic conditions with the addition of the traffic that would be generated by buildout of the Diridon Station Area Plan (DSAP). Existing plus DSAP Buildout traffic conditions could potentially exist if all development planned as part of the DSAP was constructed and occupied prior to the other approved projects in the area, including the approved Strategy 2000 development. Existing plus DSAP Buildout conditions includes all proposed roadway improvements as part of the DSAP as well as all other planned and funded roadway improvements within the Downtown area. However, it is unlikely that this traffic condition would occur, since other approved projects expected to add traffic to the study area would likely be built and occupied during the approximately 35-year time frame that the DSAP development levels would be built.

Transportation Network Under Existing Plus DSAP Buildout Conditions

It is assumed in this analysis that the transportation network under existing plus DSAP Buildout conditions would include those improvements described under Strategy 2000 background conditions within Chapter 4 of this report.

Existing Plus DSAP Buildout Traffic Volumes

Peak-hour traffic volumes for existing plus DSAP Buildout conditions was produced with the City's traffic model. Traffic growth factors that reflect forecasted traffic volumes due to the Buildout of the DSAP were developed with the use of the City's CUBE traffic forecasting model. The forecasted traffic volumes consist of DSAP development levels only with no adjustment for approved Strategy 2000 development. The traffic growth factors were applied to Year 2008 existing traffic volumes to produce existing plus DSAP Buildout conditions volumes. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. Traffic volumes for existing plus DSAP Buildout conditions are presented in Appendix A.

Existing Plus DSAP Buildout Conditions Intersection Levels of Service

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under existing plus DSAP Buildout conditions. The results show all 104 study intersections are projected to operate at LOS D or better under existing plus DSAP Buildout conditions during both peak hours. Figure 7 presents worst case peak hour intersection level of service under existing plus project for all

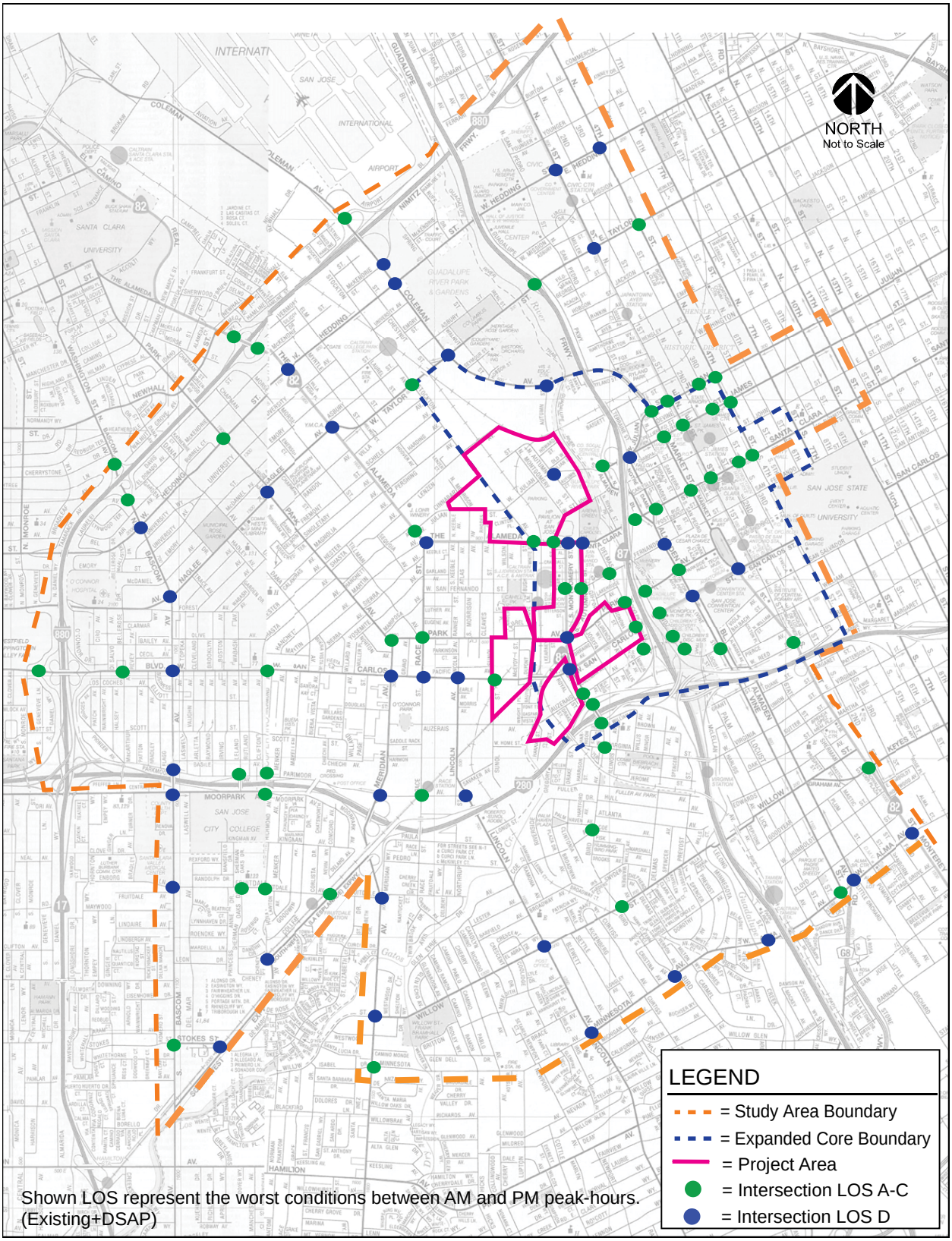


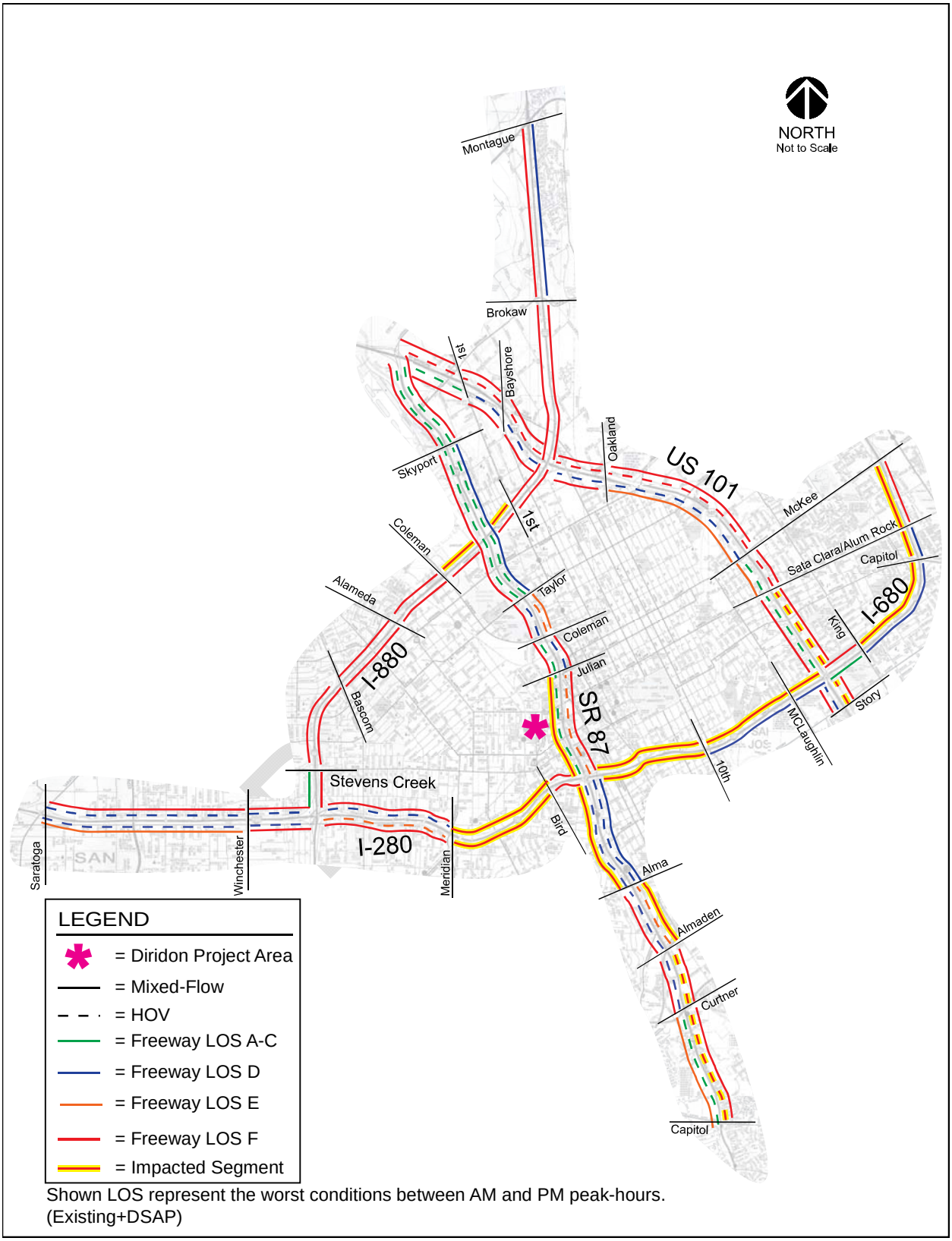
Figure 7
Existing Plus DSAP Buildout Intersection Levels of Service

study intersections. A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

Existing Plus DSAP Buildout Conditions Freeway Segment Levels of Service

Existing plus DSAP Buildout conditions traffic volumes for the study freeway segments were estimated with the use of the traffic model. Ratios of traffic model projections for the Year 2008 and existing plus DSAP Buildout conditions were applied to the Year 2008 CMP traffic volume data. The results show that mixed-flow lanes on 62 of the 76 directional freeway segments analyzed will operate at an unacceptable LOS F during at least one peak hour (see Figure 8). In addition, the HOV lanes on 10 of the segments also are projected to operate at LOS F conditions. Based on the CMP freeway segment criteria, the DSAP will have a significant impact on mixed-flow lanes on 15 directional freeway segments and HOV lanes on four directional freeway segments during at least one peak hour. Summary tables of freeway segment analysis are included in Appendix C.

Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. Since it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way, and no comprehensive project to add through lanes has been developed by Caltrans or VTA for individual projects to contribute to, the significant impacts on the directional freeway segments identified above must be considered significant and unavoidable.



Shown LOS represent the worst conditions between AM and PM peak-hours. (Existing+DSAP)

Figure 8
Existing Plus DSAP Buildout Freeway Segment Levels of Service

4.
Strategy 2000 Background Conditions

This chapter presents projected traffic conditions with the development levels identified as part of the completed and approved Strategy 2000 EIR. For the purposes of this analysis, the approved Strategy 2000 traffic conditions serves as the base by which to determine the effects of the proposed DSAP land use adjustments on the transportation network. This chapter briefly describes the approved Strategy 2000 land uses and the transportation system. It also describes, the procedure used to determine the Strategy 2000 traffic volumes and the resulting traffic conditions for this analysis.

Strategy 2000 Plan Development

The Strategy Plan 2000 EIR identifies a long-range plan for the redevelopment and expansion of the Greater Downtown Core Area. The Strategy 2000 plan extended the boundary of the Downtown Core to include areas around Diridon Station to the west, areas to the north to approximately Taylor Street, areas to the east to San Jose State University (SJSU), and areas to the south to approximately I-280. The objective of the plan is to intensify residential and office development density and provide for supporting retail in downtown. The TIA prepared for the Strategy Plan EIR assumed the development of approximately:

11,200,000 sf of office space
1,400,000 sf of retail space
8,500 residential dwelling units
3,600 hotel guestrooms

This chapter presents traffic conditions associated with the Strategy 2000 development levels utilizing the City's current traffic forecasting model. The TRANPLAN transportation modeling software was utilized for traffic forecasting assignments at the time the Strategy 2000 EIR traffic analysis was completed in 2004-2005. However, the TRANPLAN model software is no longer available for use. The CUBE transportation modeling software, which was used to develop Year 2040 traffic projections for the Envision San Jose 2040 General Plan, has since replaced the TRANPLAN modeling software. Therefore, to evaluate the effects of the proposed DSAP land use adjustments it was necessary to reproduce the projected traffic conditions for the Strategy 2000 using the CUBE traffic modeling software. However, this analysis is not intended to serve as an update to the traffic analysis for the completed and approved EIR. The original Strategy 2000 traffic report included as part of the approved Strategy 2000 EIR should be referenced for additional information regarding the Strategy 2000 traffic analysis.

Strategy 2000 Background Transportation Network

Several transportation improvements in and surrounding the Downtown area are planned and are assumed to be operational under Strategy 2000 background conditions. The planned improvements to the roadway network remain the same as described in the original Strategy 2000 traffic analysis. The improvements consist of street widenings, interchange improvements, and street conversions/adjustments. Each of the planned roadway improvements are described below. Though there are other improvements outside of the Downtown area represented in the model, they are not described in detail within this report. There are many planned changes to the roadway network, but only those changes for which funding are available or expected were assumed in the analysis.

- Realign Julian Street between SR 87 and North 1st Street to extend the Downtown urban grid pattern.
- Facilitate access to the Downtown by extending the I-280 ramps at 3rd and 7th streets.
- Complete the Autumn Street realignment and extension between St. John Street and Coleman Avenue.
- Convert Autumn Street between Santa Clara Street and Park Avenue from a one-way (northbound) street to a two-way street.
- Convert Montgomery Street between Santa Clara Street and San Fernando Street from a one-way (northbound) street to a two-way street.
- Create cul-de-sac at southerly end of Montgomery Street, just north of Park Avenue.
- Complete the Coleman Road widening from 4-to-6 lanes between Hedding Street and the Autumn Street connection.
- Convert Tenth and Eleventh Streets from one-way operations to two-way with one-lane in each direction north of Santa Clara Street.
- Convert Second Street from one-way operations to two-way with one-lane in each direction south of San Salvador Street.
- Convert Third Street from one-way operations to two-way with one-lane in each direction in the vicinity of I-280.
- Convert Almaden and Vine Streets from one-way operations to two-way with one-lane in each direction between I-280 and Alma Street.
- Retain the one-way operations of Tenth and Eleventh Streets south of Santa Clara Street, but eliminate one travel lane on each and adding bicycle lanes.

In order to accommodate the Ballpark footprint, the following improvements will be completed as part of the proposed Ballpark:

- Abandonment of Montgomery Street, between San Fernando Street and Park Avenue
- Convert Autumn Street between Santa Clara Street and Park Avenue from a one-way (northbound) street to a two-way street
- Convert Montgomery Street between Santa Clara Street and San Fernando Street from a one-way (northbound) street to a two-way street
- Narrow Park Avenue between McEvoy Street and Josefa Street and reduce the travel lanes in each direction from two lanes to one lane.
- Narrow Bird Avenue between San Carlos Street and Park Avenue and reduce the travel lanes in each direction from three lanes to two lanes.

Strategy 2000 Background Traffic Volumes

Other approved developments in addition to the approved Strategy 2000 development levels were also included under Strategy 2000 Background conditions. Major approved developments include:

- Adobe – San José Water Company Site (PDC02-046): Located on north side of San Fernando Street between Los Gatos Creek and Guadalupe River, this project was approved in 2004 for up to 1,025,000 square feet of commercial space consisting up to 50,000 square

feet of retail space and the balance as office space on the east side of Delmas Avenue. On west side of Delmas Avenue, this project proposes up to 325 residential dwelling units and up to 15,000 of ground-floor retail space.

- Ohlone Mixed Use Project (PDC08-061): Located at southwest corner of West San Carlos Street and Sunol Street, this project was approved in 2010 for up to 800 multi-family attached residential units and up to 30,000 square feet of commercial use. Plaza at Almaden (RH00-005): Located at northwest corner of Woz Way and Almaden Boulevard, this project was approved in 2001 for an approximately 860,000 square-foot office complex and 34,500 square feet of ground floor retail space.
- San Carlos – Meridian Mixed Use (PDC07-096): Located at southwest corner of West San Carlos Street and Meridian Avenue, this project was approved in 2008 for development entitlements of up to 218 multi-family attached units and up to 22,600 square feet of commercial space.
- North San José Area Development Policy (GP04-04-06) Phase 1: This Area Development Policy is covers 1,115.4 acres in area north of I-880 and south of SR-237 generally known as North San José approved in 2005. The Area Development Policy is a large visionary project and consists of 4 development phases. At present time, the Phase 1 is being implemented allowing development of up to 7,000,000 square feet of industrial use and 8,000 residential dwelling units.

In addition, the proposed Major League Baseball Stadium project was included in the Strategy 2000 background scenario. Although the construction and operation of the ballpark has not been approved, the City certified its EIR in 2010. Given the potential for traffic impacts, the City determined that including this proposed project in the DSAP traffic analysis would be prudent.

Peak-hour traffic volumes for Strategy 2000 background conditions and other approved projects in the Diridon Station area were estimated using the City's CUBE model. Strategy 2000 Background conditions traffic volumes were produced by developing traffic growth factors and applying the factors to Year 2008 existing traffic volumes. Year 2008 counts were used to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. Trips associated with the Ballpark were added manually (Ballpark trips were obtained from the *San Jose Ballpark Supplemental Traffic Impact Analysis*, February 10, 2010) because it is a "special generator" for traffic modeling purposes. Traffic volumes for Strategy 2000 background conditions are presented in Appendix A.

Strategy 2000 Background Conditions Intersection Levels of Service

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under Strategy 2000 background conditions. The results show that 11 of the 104 study intersections are projected to operate at LOS E or F under Strategy 2000 background conditions during at least one peak hour (see Table 4). Figure 9 presents a summary of worst-case peak hour intersection level of service for all study intersections. A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

Intersection impacts and mitigation measures were not identified since this analysis is not intended to serve as an update to the original Strategy 2000 traffic analysis and EIR. The original Strategy Plan traffic report included as part of the approved EIR should be referenced for a detailed description of any potential mitigation measures.

Table 4
Strategy 2000 Background Unacceptable Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS	Strategy 2000 Avg. Delay	Strategy 2000 LOS
6	Montgomery Street and Park Avenue	AM	04/29/08	32.8	C	47.3	D
		PM	04/29/08	37.5	D	**66.3**	**E**
7	Coleman Avenue and Taylor Street	AM	02/21/07	39.4	D	42.0	D
		PM	10/02/07	41.2	D	**97.4**	**F**
12	Bird Avenue and San Carlos Street *	AM	09/16/08	29.5	C	30.8	C
		PM	09/16/08	37.9	D	**69.7**	**E**
22	Woz Way and San Carlos Street	AM	02/12/09	31.8	C	36.5	D
		PM	05/20/09	29.9	C	**69.7**	**E**
26	SR 87 and Julian Street (E) *	AM	09/17/08	53.9	D	**61.4**	**E**
		PM	09/17/08	40.5	D	45.9	D
30	Almaden Boulevard and San Carlos Street *	AM	09/30/08	37.5	D	50.9	D
		PM	09/30/08	40.7	D	**63.9**	**E**
67	Park Avenue and Naglee Avenue	AM	03/08/07	31.9	C	33.1	C
		PM	03/08/07	45.3	D	**57.5**	**E**
69	Meridian Avenue and San Carlos Street	AM	06/05/07	42.4	D	45.0	D
		PM	05/21/09	43.6	D	**57.9**	**E**
77	The Alameda and Naglee Avenue *	AM	09/17/08	41.3	D	45.2	D
		PM	09/17/08	40.5	D	**59.2**	**E**
80	Race Street and Park Avenue	AM	02/25/09	13.7	B	**57.1**	**E**
		PM	02/25/09	16.6	B	44.0	D
93	First Street and Taylor Street	AM	02/24/09	44.5	D	46.4	D
		PM	02/24/09	52.1	D	**55.1**	**E**

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
* Denotes CMP Intersections

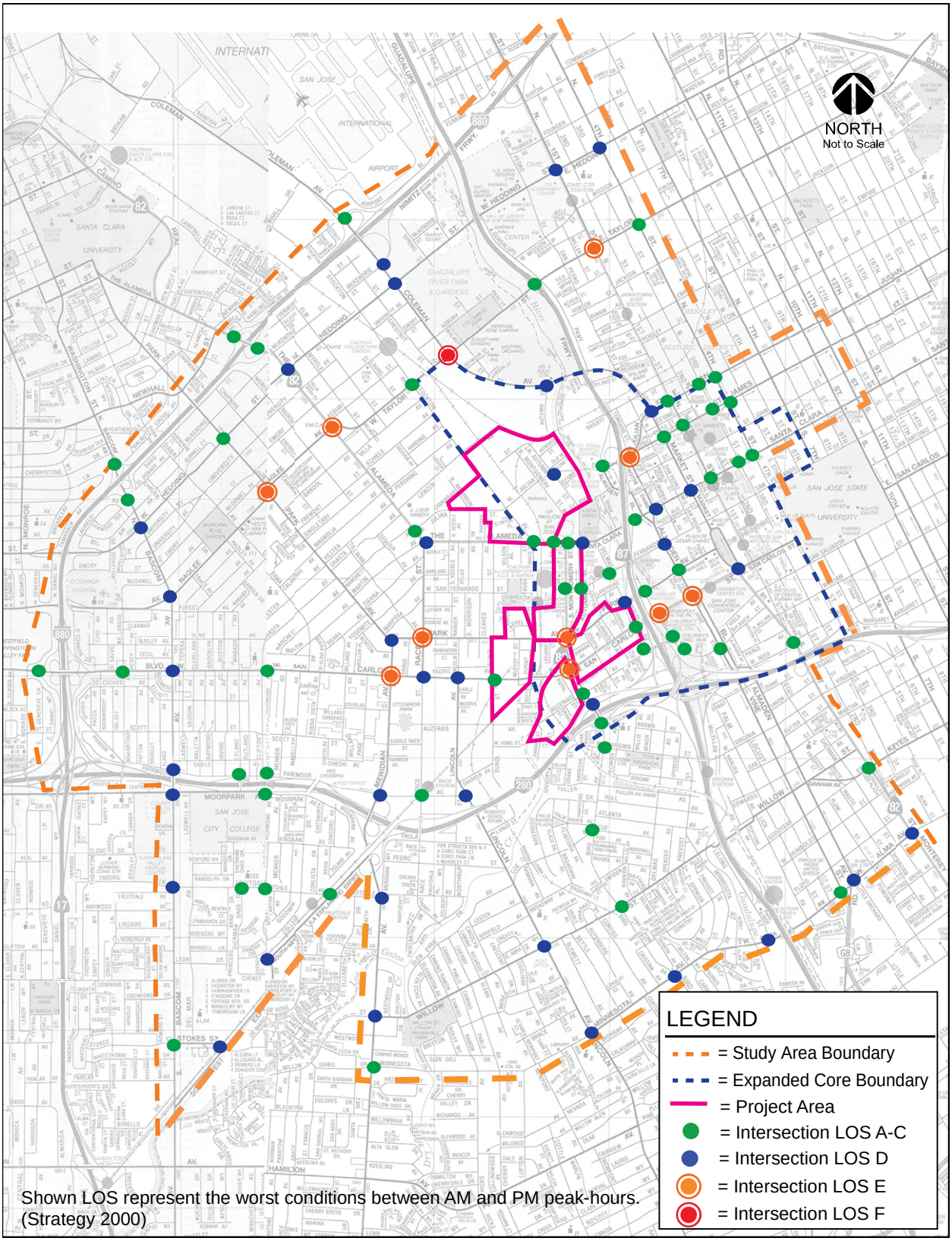
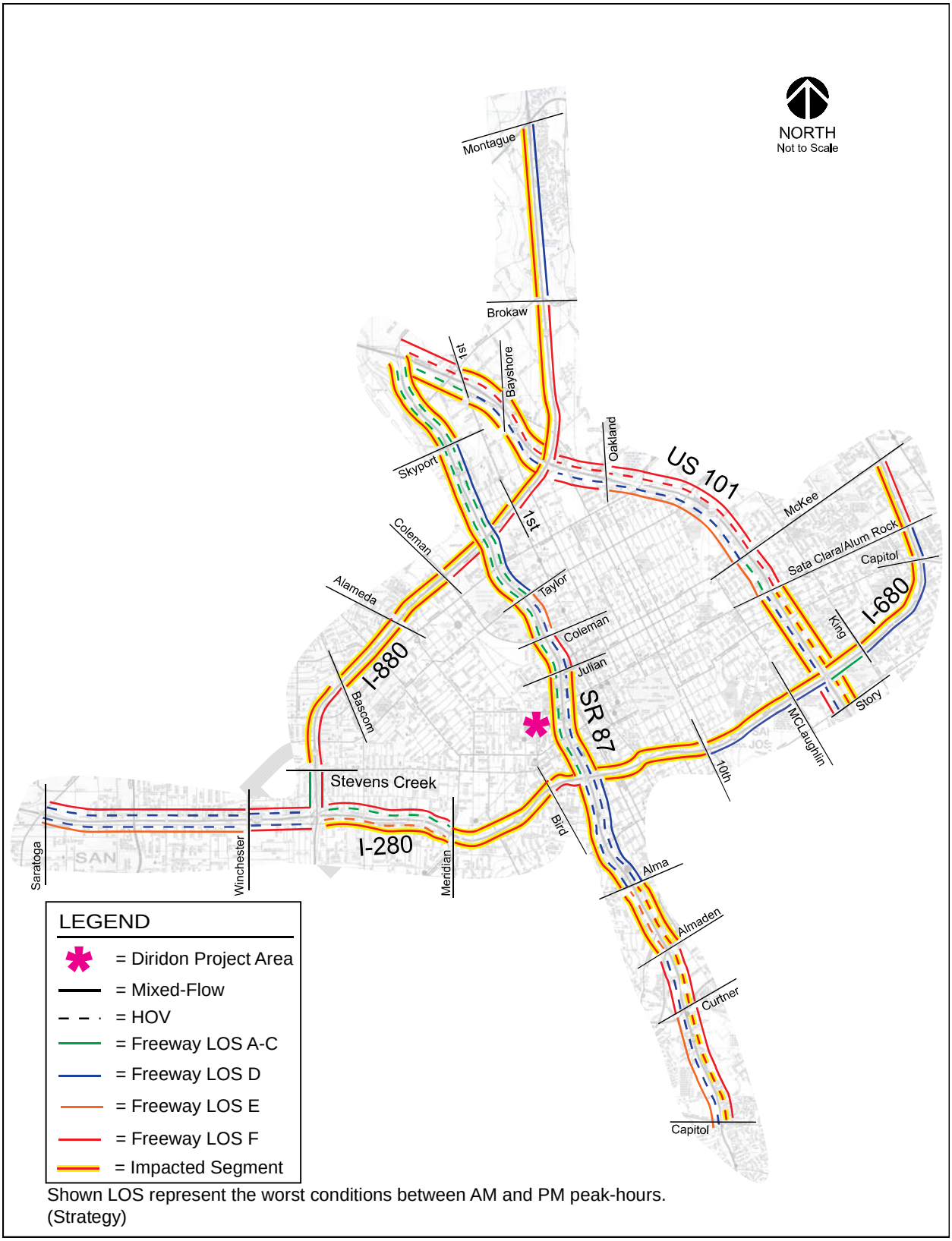


Figure 9
Strategy 2000 Background Intersection Levels of Service

Strategy 2000 Background Conditions Freeway Segment Levels of Service

Strategy 2000 background conditions traffic volumes for the study freeway segments were estimated with the use of the traffic model. Ratios of traffic model projections for the Year 2008 and Strategy 2000 conditions were applied to the Year 2008 CMP traffic volume data. The results show that mixed-flow lanes on 62 of the 76 directional freeway segments analyzed will operate at an unacceptable LOS F during at least one peak hour (see Figure 10). In addition, the HOV lanes on 11 of the segments also are projected to operate at LOS F conditions. Based on the CMP freeway segment criteria, the Strategy Plan will have a significant impact on mixed-flow lanes on 40 directional freeway segments and HOV lanes on five directional freeway segments during at least one peak hour. Summary tables of freeway segment analysis are included in Appendix C.

Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. Since it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way, and no comprehensive project to add through lanes has been developed by Caltrans or VTA for individual projects to contribute to, the significant impacts on the directional freeway segments identified above must be considered significant and unavoidable.



Shown LOS represent the worst conditions between AM and PM peak-hours. (Strategy)

Figure 10
Strategy 2000 Background Freeway Segment Levels of Service

5. DSAP Buildout Plus Strategy 2000 Project Conditions

This chapter describes traffic conditions under DSAP Buildout Plus Strategy 2000 project conditions. DSAP Buildout Plus Strategy 2000 project conditions include the adjustment of the approved Strategy 2000 development levels to include the development levels identified by the DSAP land use diagram. Included is a descriptions of the proposed DSAP 2000 land uses. The analysis evaluates the effects of the proposed DSAP and Strategy 2000 land use adjustments on trip generation, mode-choice, and intersections and freeway segment levels of service.

Diridon Station Area Plan

The DSAP consists of a land use plan for the Diridon Station Area that would modify the location of planned growth in the Downtown area, as identified by the approved Strategy 2000. The Downtown area is generally bounded by Taylor Street/Coleman Avenue to the north, Fourth Street/San Jose State University (SJSU) to the east, I-280 to the south, and the railroad tracks/Stockton Avenue to the west. The Strategy 2000 EIR assumed some high density development in the Diridon/Arena Area, although the majority of new development was assumed to occur in the traditional Downtown center, east of SR 87. The DSAP land use plan would shift some of the planned development growth to the Diridon Station Area, west of SR 87. Though the DSAP consists of the reallocation of land uses, the total planned development growth within the Downtown area remains as identified with the approved Strategy 2000 EIR. In addition, the DSAP also includes a small amount of retail space and residential units outside of the Downtown area as identified below.

The land use plan for the Diridon Station area is defined by the *Diridon Station Area Plan, Preferred Plan Report, October 2011*. The DSAP area boundary includes areas between Guadalupe River and the Caltrain tracks and extends to the north to approximately Lenzen Avenue and areas to the south to approximately I-280 (see Figure 11). For this analysis, the "project" consists of the identified level of development within the DSAP boundary and includes the following:

4,963,400 sf of commercial/R&D/Light Industrial space
424,100 of retail/restaurant space
2,588 residential dwelling units
900 hotel guestrooms

The DSAP land use plan and the analysis of this study includes 155 residential units within Subarea E. However, it has since been determined that Subarea E is inadequate for residential land uses. Therefore, the 155 units will be reallocated to, as of yet, undetermined area(s) within the Downtown Core. However, the reallocation of the units will have a minimal effect on the projected traffic conditions of the DSAP development presented within this study since the amount of reallocated units is small when compared with the total DSAP development levels and size of development area.

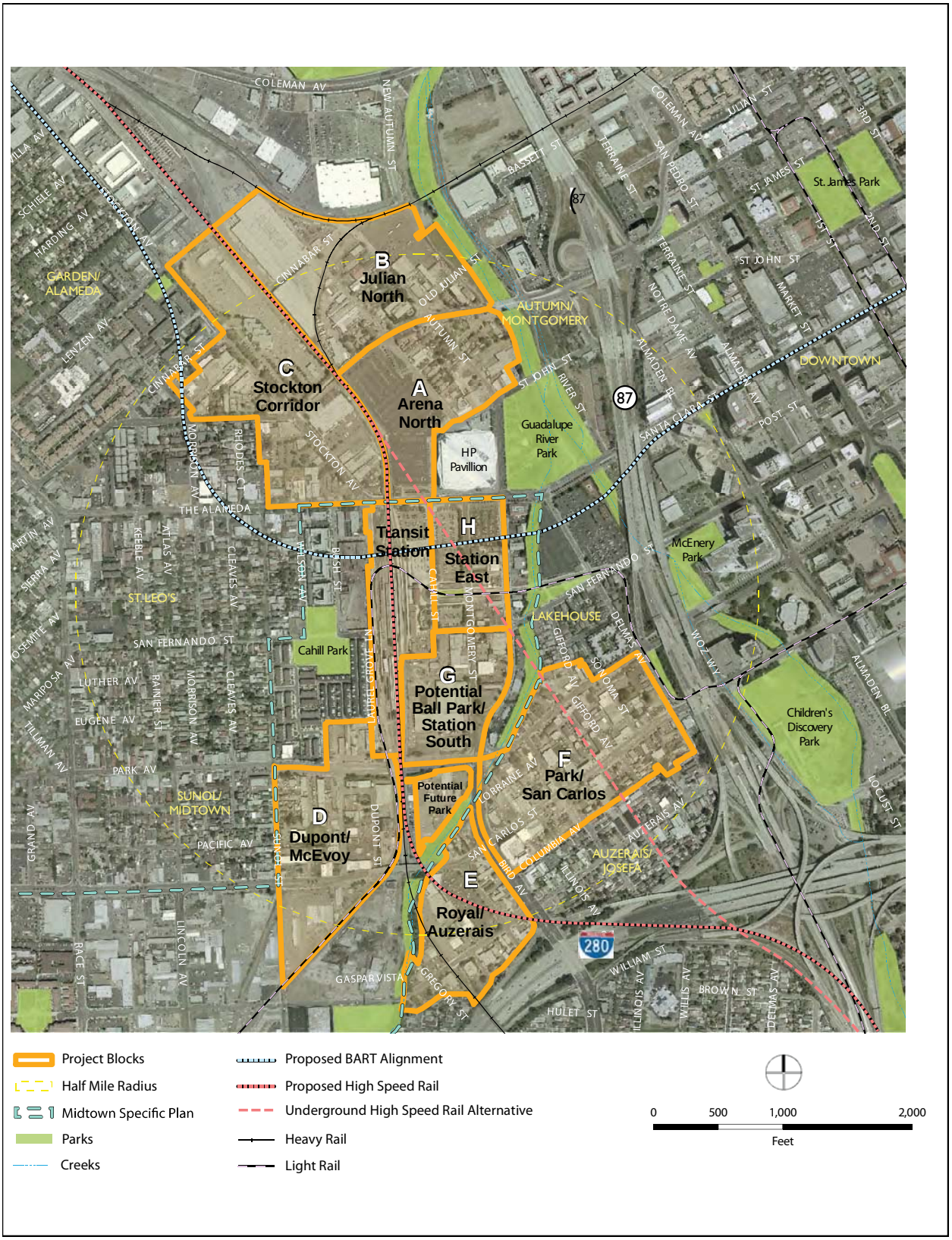


Figure 11
Proposed DSAP Development Locations

In addition, a portion of the DSAP development (83,800 s.f. of retail space and 1,398 residential units) will occur outside of the Downtown area boundary. Though the land uses outside the downtown boundary are included as part of the DSAP development levels analyzed within this study, specific development projects outside of the Downtown area boundary will be required to prepare site specific traffic impact analysis (TIA) to address traffic issues within neighborhoods and on the roadway system surrounding the Diridon Station area. The requirement of site-specific TIA for the DSAP development projects outside of the Downtown area boundary is consistent with the City requirement of the completion of TIAs for all development located outside of the Downtown area boundary that meet minimum trip thresholds.

DSAP Buildout Land Use and Traffic Projections

City of San Jose staff prepared the land use data and completed all model traffic forecasts for this analysis. The DSAP land uses and subsequent land use representation within the City's traffic model for this analysis is based on the *Diridon Station Area Plan Preferred Plan, October 2011* prepared by Field Paoli. The *Diridon Station Area Plan Study Land Use Preparation for CUBE Model*, *City of San Jose, December 16, 2011* included within Appendix D presents a detailed description of the methodology, land use data, and assumptions for the traffic model land use preparation. The proposed DSAP land uses and effects on the approved Strategy 2000 are discussed in the following sections.

DSAP Land Use Estimates

The DSAP provides a detailed description of projected office, retail, housing, and hotel development for each block within the designated DSAP area. Table 5 presents a breakdown of proposed DSAP land uses by block both inside and outside of the Downtown boundary. The identified DSAP land uses were aggregated to traffic zones within the traffic model and converted to employment estimates using the City's standard General Plan employment conversion methodology by City staff.

Table 5
Proposed DSAP Development

	Total				Inside Downtown Boundary				Outside Downtown Boundary			
BLOCK	Retail (s.f.)	Office/R+D (s.f.)	Hotel Rooms	Residential (units)	Retail (s.f.)	Office/R+D (s.f.)	Hotel Rooms	Residential (units)	Retail (s.f.)	Office/R+D (s.f.)	Hotel Rooms	Residential (units)
A	18,500	768,300	0	0	18,500	768,300	0	0	0	0	0	0
B	21,800	1,442,100	0	0	21,800	1,442,100	0	0	0	0	0	0
C	40,800	802,000	0	223	18,000	802,000	0	0	22,800	0	0	223
D	61,000	0	0	1,175	0	0	0	0	61,000	0	0	1,175
E	12,000	805,000	200	155	12,000	805,000	200	155	0	0	0	0
F	130,000	0	450	1,035	130,000	0	450	1,035	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0
H	140,000	1,146,000	250	0	140,000	1,146,000	250	0	0	0	0	0
Total	**424,100**	**4,963,400**	**900**	**2,588**	**340,300**	**4,963,400**	**900**	**1,190**	**83,800**	**0**	**0**	**1,398**

Source:
Diridon Station Area Plan Preferred Plan, October 2011.

The increment of growth between the adopted Strategy 2000 Plan and DSAP Plus Strategy 2000 corresponds to the proposed development levels within the DSAP area but outside of the Downtown Core, which the Strategy 2000 EIR did not previously evaluate. This level of development (83,800 s.f. of retail space and 1,398 residential units) provides the basis for the increment of traffic growth attributable to the DSAP. The 83,800 s.f. of retail space is estimated to generate 210 jobs.

Trip Generation Estimates

The City of San Jose's CUBE-based traffic forecasting procedures produce projections of AM and PM peak hour traffic flows on area roadways. Table 6 provides a summary of the adopted Strategy 2000 Plan and DSAP project conditions trip estimates from the City model, based on the trips that start and/or end in the TAZs that correspond to the DSAP project area and entire Downtown area. The table shows that trips within the DSAP area will increase by 64 and 65 percent during the AM and PM peak hours, respectively. These significant increases are primarily attributable to the large increases in planned employment and households within the DSAP area, whereas the adopted Strategy 2000 focused the majority of future development within the traditional Downtown core. Table 6 also shows that based on the DSAP land use adjustments, overall trips within the Downtown area will increase slightly by approximately 7% during each of the peak hours.

Table 6
Trip Generation Summary

Area/Study Scenario	AM Peak Hour	PM Peak Hour	Daily
DSAP Project Area			
Strategy 2000	4,615	6,717	64,314
DSAP Buildout Conditions	7,587	11,053	102,415
Total Trip (Percent Growth)	64%	65%	59%
Entire Downtown Area			
Strategy 2000	18,547	26,533	249,839
DSAP Buildout Conditions	19,763	28,365	265,905
Total Trip (Percent Growth)	7%	7%	6%

Source:
City of San Jose Department of Transportation. CUBE model forecasts for the DSAP traffic analysis, February 2012.

DSAP Mode Share

The City of San Jose's CUBE-based traffic modeling procedures account for transit usage before vehicle trips are assigned to the area roadways. Table 7 shows that when compared to existing conditions, both the Strategy Plan 2000 and proposed DSAP land use adjustments are expected to result in a reduction of drive share trips and slight increases, less than 6%, in transit and non-auto trips.

The model shows that the proposed DSAP land use adjustments would have little effect on the mode share of trips within the DSAP project area when compared to Strategy 2000. Drive share trips could be approximately 1% higher during the peak hours within the entire Downtown area under DSAP Buildout Conditions when compared with Strategy 2000. The slightly higher percentage of drive trips and lower percentage of walking and transit trips estimated for DSAP Buildout Conditions may be attributed to the addition of development outside of the Downtown Core, which currently provides less pedestrian connectivity between land uses and to transit.

It should be noted that the model does not include adequate detail in regards to transit and pedestrian/ bicycle facilities to accurately reflect the effects of improvements to these facilities on ridership and usage. Specifically in the DSAP area, the model does may not fully account for the effects on auto or transit usage resulting from transit improvements such as the planned BART extension or High Speed Rail at Diridon Station. Therefore, the traffic model provides a conservative projection of auto trips while potentially under estimating transit and non-auto trips.

Table 7
Downtown Related Mode Share Summary

Area/Study Scenario	AM Peak Hour				PM Peak Hour				Daily			
	Drive	Bike	Walk	Transit	Drive	Bike	Walk	Transit	Drive	Bike	Walk	Transit
DSAP Project Area												
Existing Conditions	88.8%	1.4%	5.8%	4.1%	88.4%	1.2%	6.8%	3.5%	88.7%	1.2%	6.8%	3.3%
Strategy 2000	80.2%	1.6%	11.0%	7.2%	80.4%	1.3%	12.7%	5.5%	80.9%	1.3%	12.5%	5.3%
Total Trip (Percent Growth)	-8.6%	0.2%	5.2%	3.1%	-8.0%	0.1%	5.9%	2.0%	-7.8%	0.1%	5.7%	2.0%
DSAP Buildout Conditions	78.8%	1.6%	10.6%	9.0%	79.1%	1.3%	12.6%	7.0%	79.6%	1.3%	12.5%	6.5%
Total Trip (Percent Growth)	-10.0%	0.2%	4.8%	4.9%	-9.3%	0.1%	5.8%	3.5%	-9.1%	0.1%	5.7%	3.2%
Entire Downtown Area												
Existing Conditions	79.1%	1.6%	8.6%	10.7%	79.7%	1.4%	10.0%	8.9%	80.4%	1.4%	9.8%	8.4%
Strategy 2000	70.6%	1.9%	12.4%	15.1%	70.7%	1.6%	15.6%	12.1%	71.9%	1.6%	15.1%	11.5%
Total Trip (Percent Growth)	-8.5%	0.3%	3.8%	4.4%	-9.0%	0.2%	5.6%	3.2%	-8.5%	0.2%	5.3%	3.1%
DSAP Buildout Conditions	71.2%	1.9%	12.4%	14.4%	71.7%	1.6%	15.1%	11.6%	72.7%	1.6%	14.7%	11.0%
Total Trip (Percent Growth)	-7.9%	0.3%	3.8%	3.7%	-8.0%	0.2%	5.1%	2.7%	-7.7%	0.2%	4.9%	2.6%

Source:
City of San Jose Department of Transportation. CUBE model forecasts for the DSAP, February 2012.

Vehicle Miles Traveled

Table 8 presents the projected vehicle miles traveled (VMT) on the roadway facilities within the downtown area. The table shows that the DSAP land use adjustments would result in slight increases of 2% and 1% in vehicle miles traveled at congested conditions (LOS E or F) during the AM and PM peak hours, respectively. The majority of the congested VMT would occur on the freeway system.

Table 8
Downtown Vehicle Miles Traveled Summary

Peak Hour/Facility Type	Adopted Strategy 2000				DSAP Plus Adjusted Strategy 2000			
	A-D	E	F	Total	A-D	E	F	Total
AM Peak Hour								
Freeways	136,619	39,460	18,695	194,774	136,907	39,925	19,592	196,424
Arterials	58,402	13,655	4,275	76,332	58,806	14,005	4,697	77,508
Collectors	8,532	1,340	720	10,591	8,782	1,475	724	10,981
Total	203,553	54,455	23,690	281,698	204,495	55,405	25,013	284,913
Percent of VMT	72%	19%	8%		73%	20%	9%	
PM Peak Hour								
Freeways	126,809	67,978	31,600	226,387	125,594	67,761	34,979	228,334
Arterials	63,469	25,790	6,166	95,425	61,918	26,496	7,992	96,406
Collectors	10,541	2,237	1,371	14,149	10,893	2,411	1,628	14,932
Total	200,819	96,005	39,137	335,961	198,405	96,668	44,599	339,672
Percent of VMT	60%	29%	12%		59%	29%	13%	

Source:
City of San Jose Department of Transportation. CUBE model forecasts for the DSAP, February 2012.
Notes:
1. LOS A-D: Ratio of volume /capacity less than 0.9
2. LOS E: Ratio of volume /capacity between 0.9 and 1.0
3. LOS F: Ratio of volume /capacity greater than 1.0

Project Impacts and Mitigation Measures

This section discusses the DSAP Buildout plus Strategy 2000 project conditions analysis and any impacts associated with the proposed DSAP land use adjustments when compared to Strategy 2000 background conditions. Included are descriptions of project impacts to intersections and freeway segments.

Intersection Impacts and Mitigation Measures

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under DSAP Buildout plus Strategy 2000 project conditions. The results show that 14 of the study intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions during at least one peak hour (see Table 9). Figure 12 presents a summary of worst-case peak hour intersection level of service for all study intersections. When compared to Strategy 2000 background conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 10 intersections. Under Strategy 2000 background conditions, six of the 10 intersections were projected to operate at LOS E or F, while the other four were estimated to operate at LOS D or better.

However, traffic associated with the proposed DSAP land use adjustments would result in significant impacts to only three of the 10 intersections that are located outside of the Downtown Core Area boundary. The remaining seven intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

Improvements were investigated for each of the 10 intersections. Some locations were found to have no feasible improvements. The following is a description of the feasible improvements and the intersections that would remain deficient (see Table 10 and Figure 13). A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

Downtown Core Intersections

The following downtown core intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. They are not impacted by the project since intersections located in the downtown core are exempt from the city's level of service policy. Nonetheless, potential improvements at each of the intersections were investigated to determine whether any improvements were feasible. Since the intersections are not impacted by the project, the identified improvements are not required. The improvements are provided as recommendations for consideration.

(4) Montgomery Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS B under the PM peak hour with implementation of the Autumn Street improvements.

(6) Montgomery Street and Park Avenue

This intersection is projected to operate below the City LOS standard due to the planned narrowing of Bird Avenue from six to four lanes and Park Avenue from four to two lanes that were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

Table 9
DSAP Buildout Plus Strategy 2000 Project Conditions Intersection Level of Service Conditions

Study Number	Intersection	Peak Hour	Strategy 2000 Avg. Delay	Strategy 2000 LOS	DSAP Buildout Plus Strategy 2000 Avg. Delay	DSAP Buildout Plus Strategy 2000 LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
4	Montgomery Street and Santa Clara Street *	AM	25.9	C	27.8	C	4.7	0.157
		PM	29.8	C	**62.2**	**E**	**56.8**	**0.280**
6	Montgomery Street and Park Avenue	AM	47.3	D	43.9	D	-4.5	-0.033
		PM	**66.3**	**E**	**101.4**	**F**	**59.4**	**0.178**
7	Coleman Avenue and Taylor Street	AM	42.0	D	42.2	D	0.2	0.008
		PM	**97.4**	**F**	**106.7**	**F**	**14.6**	**0.035**
10	Autumn Street and Santa Clara Street *	AM	44.2	D	**56.8**	**E**	**23.2**	**0.121**
		PM	52.8	D	**70.8**	**E**	**28.3**	**0.100**
12	Bird Avenue and San Carlos Street *	AM	30.8	C	31.1	C	0.4	0.014
		PM	**69.7**	**E**	**77.2**	**E**	**13.6**	**0.036**
16	Delmas Avenue and San Fernando Street	AM	13.8	B	13.3	B	-0.7	-0.053
		PM	15.7	B	**96.1**	**F**	**76.7**	**0.574**
22	Woz Way and San Carlos Street	AM	36.5	D	37.0	D	0.6	0.021
		PM	**69.7**	**E**	**60.3**	**E**	**-12.3**	**-0.035**
26	SR 87 and Julian Street (E) *	AM	**61.4**	**E**	**61.6**	**E**	**4.8**	**0.024**
		PM	45.9	D	50.7	D	5.0	0.109
30	Almaden Boulevard and San Carlos Street *	AM	50.9	D	50.3	D	-0.7	-0.006
		PM	**63.9**	**E**	**59.6**	**E**	**-6.3**	**-0.026**
67	Park Avenue and Naglee Avenue	AM	33.1	C	33.5	C	0.7	0.022
		PM	**57.5**	**E**	**64.1**	**E**	**9.5**	**0.058**
69	Meridian Avenue and San Carlos Street	AM	45.0	D	45.3	D	0.3	0.013
		PM	**57.9**	**E**	**57.3**	**E**	**-1.1**	**-0.006**
76	The Alameda and Hedding Street *	AM	54.4	D	**60.0**	**E**	**9.6**	**0.037**
		PM	34.1	C	36.8	D	3.7	0.099
77	The Alameda and Naglee Avenue *	AM	45.2	D	46.3	D	1.6	0.030
		PM	**59.2**	**E**	**67.6**	**E**	**14.4**	**0.054**
93	First Street and Taylor Street	AM	46.4	D	46.4	D	0.0	0.000
		PM	**55.1**	**E**	**56.0**	**E**	**1.1**	**0.008**

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
Entries denoted in **bold** and boxed indicate deficiency.
* Denotes CMP Intersections

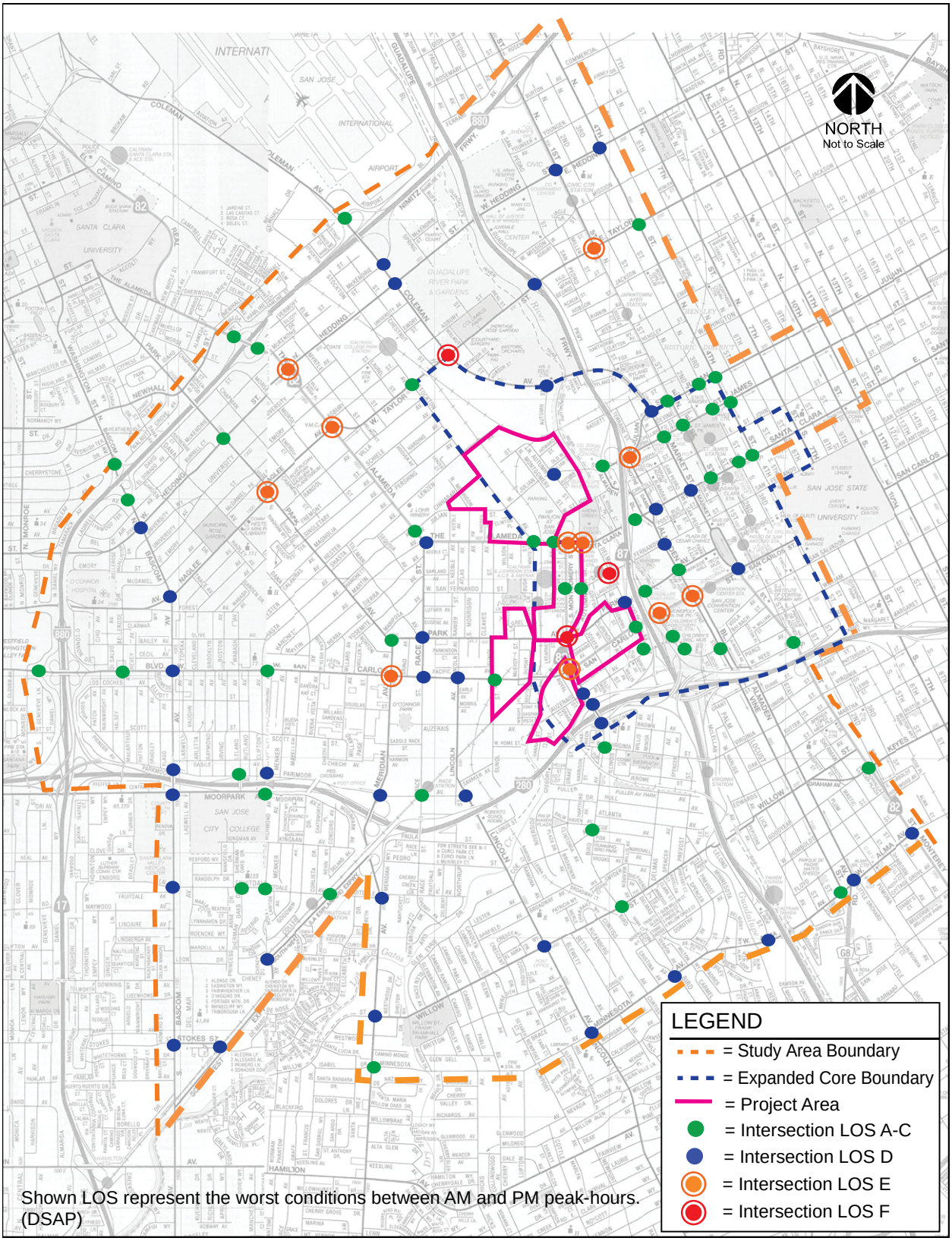


Figure 12
DSAP Buildout Plus Strategy 2000 Intersection Levels of Service Conditions

Table 10
DSAP Buildout Plus Strategy 2000 Project Conditions Intersection Level of Service Conditions (With Improvements)

Study Number	Intersection	Peak Hour	DSAP Buildout Plus Strategy 2000 Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Mitigated Avg. Delay	LOS
4	Montgomery Street and Santa Clara Street *	AM	27.8	C	4.7	0.157		
		PM	**62.2**	**E**	**56.8**	**0.280**	[1]	
6	Montgomery Street and Park Avenue	AM	43.9	D	-4.5	-0.033		
		PM	**101.4**	**F**	**59.4**	**0.178**	[1]	
7	Coleman Avenue and Taylor Street	AM	42.2	D	0.2	0.008	41.6	D
		PM	**106.7**	**F**	**14.6**	**0.035**	**76.7**	**E**
10	Autumn Street and Santa Clara Street *	AM	**56.8**	**E**	**23.2**	**0.121**	[1]	
		PM	**70.8**	**E**	**28.3**	**0.100**	[1]	
12	Bird Avenue and San Carlos Street *	AM	31.1	C	0.4	0.014		
		PM	**77.2**	**E**	**13.6**	**0.036**	[1]	
16	Delmas Avenue and San Fernando Street	AM	13.3	B	-0.7	-0.053		
		PM	**96.1**	**F**	**76.7**	**0.574**	[1]	
22	Woz Way and San Carlos Street	AM	37.0	D	0.6	0.021		
		PM	**60.3**	**E**	**-12.3**	**-0.035**		
26	SR 87 and Julian Street (E) *	AM	**61.6**	**E**	**4.8**	**0.024**	**59.2**	**E**
		PM	50.7	D	5.0	0.109	48.6	D
30	Almaden Boulevard and San Carlos Street *	AM	50.3	D	-0.7	-0.006		
		PM	**59.6**	**E**	**-6.3**	**-0.026**		
67	Park Avenue and Naglee Avenue	AM	33.5	C	0.7	0.022		
		PM	**64.1**	**E**	**9.5**	**0.058**	[3]	
69	Meridian Avenue and San Carlos Street	AM	45.3	D	0.3	0.013		
		PM	**57.3**	**E**	**-1.1**	**-0.006**		
76	The Alameda and Hedding Street *	AM	**60.0**	**E**	**9.6**	**0.037**	[2]	
		PM	36.8	D	3.7	0.099		
77	The Alameda and Naglee Avenue *	AM	46.3	D	1.6	0.030		
		PM	**67.6**	**E**	**14.4**	**0.054**	[3]	
93	First Street and Taylor Street	AM	46.4	D	0.0	0.000		
		PM	**56.0**	**E**	**1.1**	**0.008**		

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
Entries denoted in **bold** and boxed indicate deficiency.
* Denotes CMP Intersections
[1] - No feasible improvements.
[2] - Protected intersection, no further feasible improvements possible.
[3] - Proposed addition to protected intersection list.

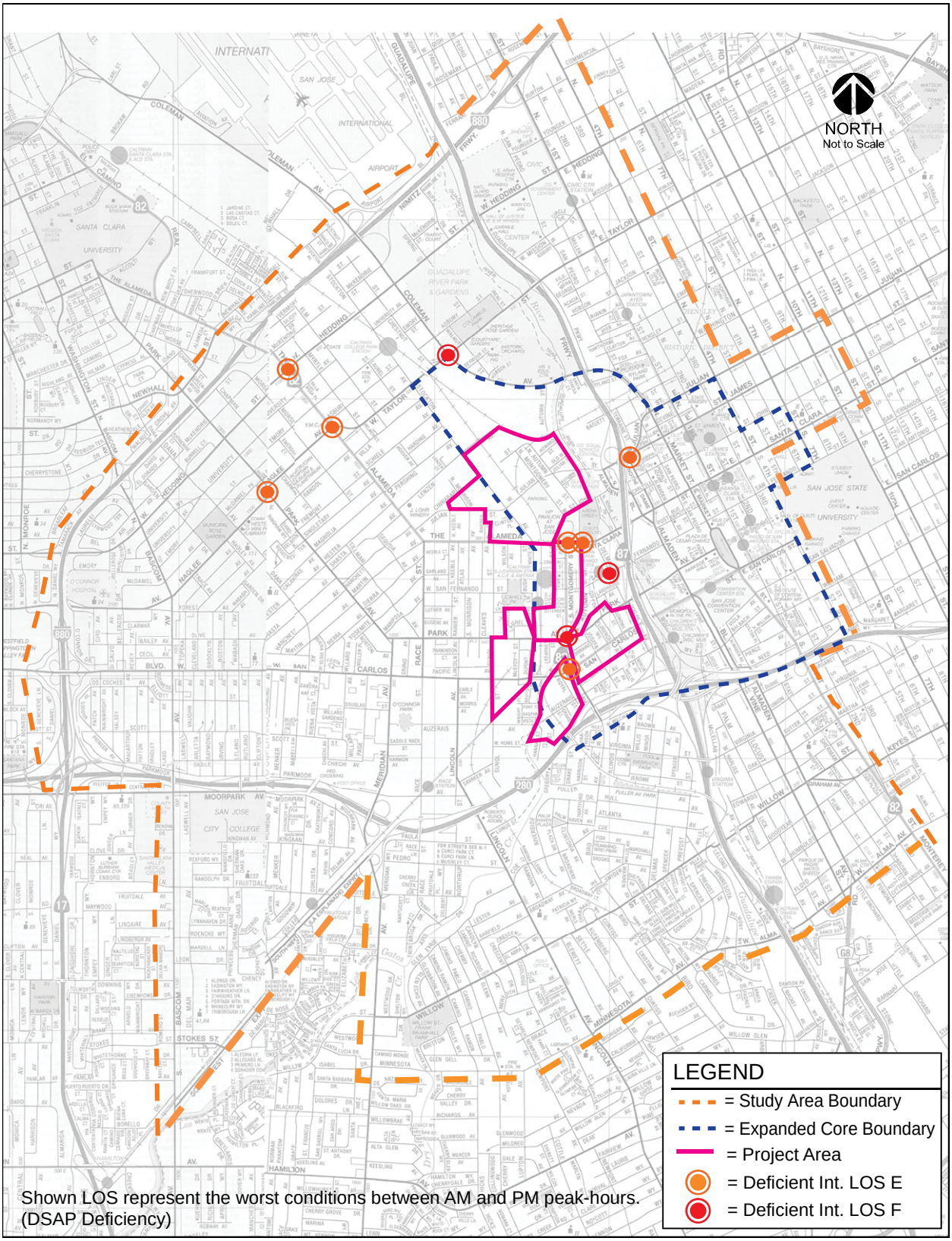


Figure 13
DSAP Buildout Plus Strategy 2000 Deficient Intersection Levels of Service Conditions

(7) Coleman Avenue and Taylor Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the widening of Coleman Avenue from a four-lane roadway to a six-lane roadway (including the associated improvements of double-left-turn lanes and separate right turn-lanes on Taylor Street) and the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. As stated previously, the Autumn Street extension and Coleman Avenue widening were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The additional left-turn lanes and eastbound right-turn lane on Taylor Street also have been completed. The implementation of the remaining westbound right-turn lane on Taylor Street would improve intersection level of service to LOS D and E under both the AM and PM peak hours, respectively. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR determined that this intersection would operate at LOS D under both peak hours with implementation of the Coleman Avenue and Autumn Street improvements.

(10) Autumn Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan, in addition to providing two westbound left-turn lanes at the intersection. As stated previously, the Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS E under the PM peak hour with implementation of the Autumn Street improvements.

(12) Bird Avenue and San Carlos Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified the addition of a second northbound left-turn lane as a potential improvement. The addition of a second northbound left-turn lane on Bird Avenue was also identified as a potential improvement as part of the proposed baseball stadium and therefore, was assumed to be complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The implementation of the second northbound left-turn lane is projected to only improve intersection level of service to LOS E. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection were identified in the Strategy 2000 EIR. Operational problems such as blocked intersections and an imbalance of lane usage along Bird Avenue between San Carlos Street and I-280 are due to large volumes and the close spacing of intersections. As such, signal-timing modifications along Bird Avenue between I-280 and San Carlos Street should also be implemented.

(16) Delmas Avenue and San Fernando Street

There are no further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(26) SR 87 and Julian Street (E)

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street extension from Julian Street to Coleman Avenue as identified in the City's General Plan, addition of second exclusive through and left-turn lanes on the SR 87 northbound off-ramp, addition of exclusive through and right-turn lanes from Notre Dame Street, addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing. As stated previously, the Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The addition of the second exclusive through and left-turn lanes on the SR 87

northbound off-ramp and addition of exclusive through and right-turn lanes from Notre Dame Street have been completed. The implementation of the remaining addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing would improve intersection level of service to LOS E during the AM peak hour. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection also were identified in the Strategy 2000 EIR as well.

Intersections Outside Core/Expanded Core

The following three intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. The intersections are subject to the city's level of service policy since they are located outside of the Downtown Core boundaries. One of the three intersections, The Alameda and Hedding Street is identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. It is recommended that the remaining two intersections be added to the City of San Jose list of protected intersections.

The City of San Jose Protected Intersection Policy provides an exemption for intersections that serve as gateways to the greater downtown area from the City's level of service policy. The Protected Intersection Policy contends that the intersections serve as gateways to the greater downtown area and experience higher traffic demands resulting in traffic impacts. The Protected Intersection Policy requests that additional capacity not be added to the intersections and they be allowed to operate at capacity (thus, not being required to meet the LOS D standard) with the expectation that alternative routes or modes will be used by drivers when delays become unacceptable.

The policy allows for the addition of intersections to the list of Protected Intersections so long as they are located within designated Special Planning Areas and consistent with the General Plan. The Special Planning Areas may inlcude:

- Transit-Oriented Development Corridors
- Planned Residential/Community Areas
- Neighborhood Business Districts
- Downtown Gateways

(67) Park Avenue and Naglee Avenue

Impact: This intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at Park Avenue and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

(76) The Alameda and Hedding Street

Impact: This CMP intersection would operate at an acceptable LOS D during the AM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the intersection operations to degrade to LOS E. Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. The intersection of The Alameda and Hedding Street has been identified as a Protected Intersection. The LOS policy specifies that Protected Intersections consist of locations that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon other transportation facilities (such as pedestrian, bicycle, and transit systems). The policy acknowledges that exceptions to the City's LOS policy of maintaining a Level of Service D at local intersections will be made for certain Protected Intersections that have been built to their planned maximum capacity. If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided that enhance pedestrian, bicycle and transit facilities in the community near the Protected Intersection. This significant unavoidable impact was previously identified in the City of San José's *Modifications to the City of San José's Transportation Impact Policy Final EIR* (September 2005) and therefore, is not a new impact of the proposed project.

(77) The Alameda and Naglee Avenue

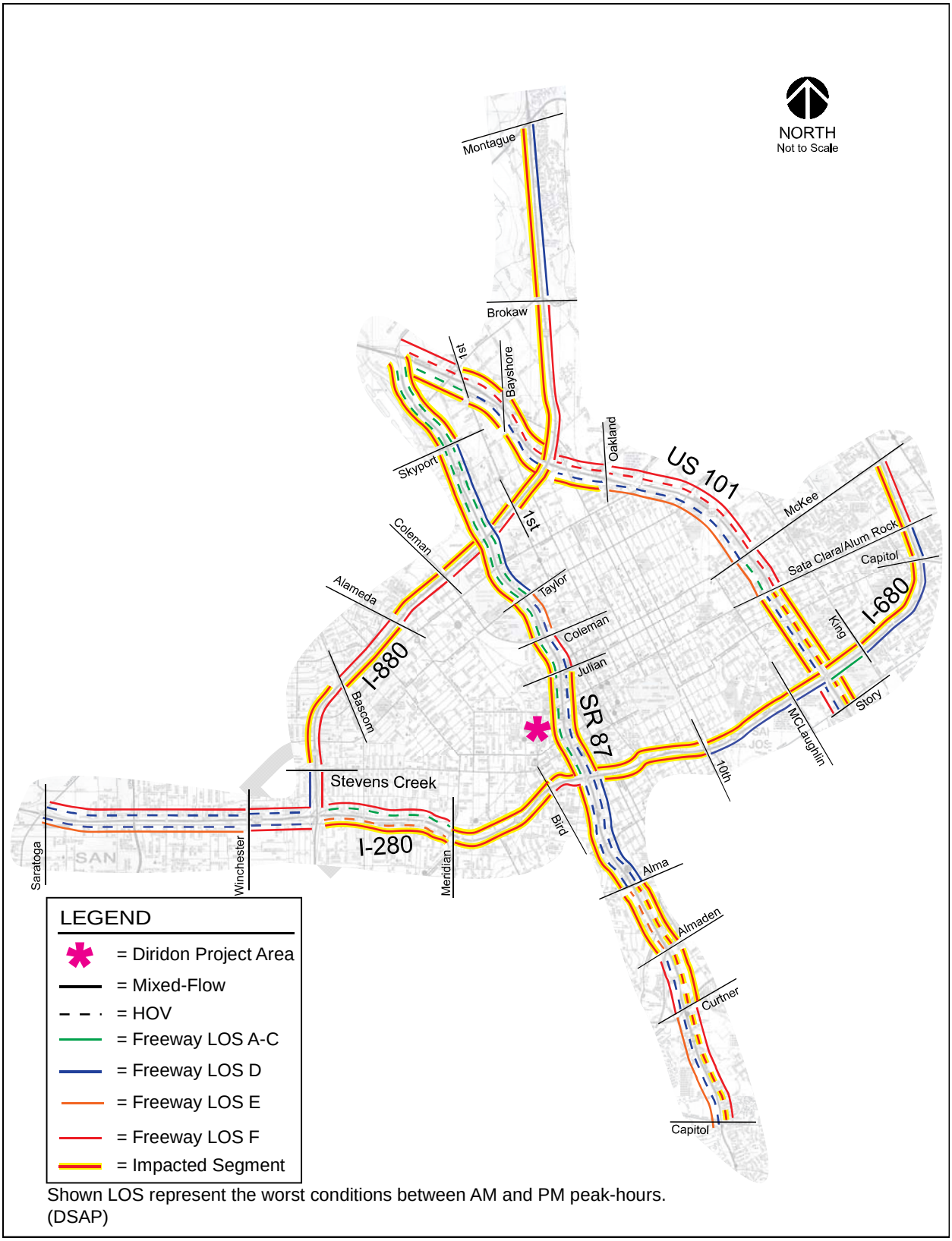
Impact: This CMP intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at The Alameda and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

Freeway Segment Levels of Service

DSAP plus Strategy 2000 project conditions traffic volumes for the subject freeway segments were estimated with the use of the traffic model. Ratios of traffic model projections for the Years 2008 and DSAP plus Strategy 2000 project conditions were applied to the Year 2008 CMP traffic volume data. The results show that mixed-flow lanes on 62 of the 76 directional freeway segments analyzed will operate at an unacceptable LOS F during at least one peak hour (see Figure 14). In addition, the HOV lanes on 11 of the segments also are projected to operate at LOS F conditions. Based on the CMP freeway segment criteria, the DSAP will have a significant impact on mixed-flow lanes on 41 directional freeway segments and HOV lanes on five directional freeway segments during at least one peak hour. The DSAP results in an impact to one additional directional freeway segment when compared to Strategy 2000 background conditions. Summary tables of freeway segment analysis are included in Appendix C.

Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. Since it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way, and no comprehensive project to add through lanes has been developed by Caltrans or VTA for individual projects to contribute to, the significant impacts on the directional freeway segments identified above must be considered significant and unavoidable.



Shown LOS represent the worst conditions between AM and PM peak-hours. (DSAP)

Figure 14
DSAP Buildout Plus Strategy 2000 Freeway Segment Levels of Service Conditions

6. Cumulative Conditions

This chapter presents a summary of the cumulative traffic conditions that would occur with implementation of the proposed DSAP project plus other potential development in the area. Cumulative development typically includes projects that are in the pipeline (pending projects) but are not yet approved. This traffic scenario is evaluated in order to fulfill California Environmental Quality Act (CEQA) requirements.

Though the original traffic study completed for Strategy 2000 included a cumulative conditions analysis, it did not include intersection levels of service analysis. The original cumulative analysis was based upon long-term traffic model forecasts and evaluated traffic conditions on only the major arterials and freeway system serving the Downtown area.

Since the completion of the original Strategy 2000 EIR, the planned extension of the Bay Area Rapid Transit (BART) to San Jose and the High Speed Rail (HSR) project have advanced in their respective planning stages. Therefore, it was deemed necessary that both the BART extension and HSR projects be included as part of this cumulative analysis. Since both the BART extension and HSR projects are regional serving transit projects it is difficult to accurately represent their effects on the roadway system with the use of a traffic forecasting model. Therefore, the analysis presented within this chapter includes the evaluation of intersections and freeway segments under cumulative conditions with the addition of traffic estimated to be generated by the BART extension and HSR projects based on the same methodology used to analyze existing, background and project conditions.

Cumulative Traffic Volumes

Cumulative conditions without and with the proposed DSAP development levels and land use adjustments were analyzed. Cumulative conditions without the DSAP development levels consist of traffic conditions associated with the approved Strategy 2000, presented in Chapter 4, with the addition of traffic associated with the BART extension and HSR projects. Cumulative conditions with the proposed DSAP development levels and land use adjustments were estimated by adding to DSAP Buildout Plus Strategy 2000 volumes, presented in Chapter 5, the trips associated with the BART extension and HSR projects.

The BART extension project has completed its environmental study and specific traffic volume data was available in its traffic study for use in this analysis. The High Speed Rail (HSR) project is currently in its environmental review process and the necessary environmental studies for the HSR project are only in the preliminary stages of preparation. Therefore, it was necessary to make assumptions regarding the potential HSR ridership, trip generation, and station and parking facility locations to include the HSR project under cumulative conditions. Trips for the BART extension were taken from the traffic study completed for the proposed Diridon Station, dated December 23, 2008. Traffic volumes for cumulative conditions are presented in Appendix A.

Cumulative Conditions Intersection Levels of Service

Intersection Levels of Service

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under cumulative conditions. The results show that 16 and 18 of the study intersections are projected to operate at LOS E or F during at least one peak hour under Strategy 2000 and DSAP Buildout plus Strategy 2000 cumulative conditions, respectively (see Table 11). Figures 15 and 16 present a summary of worst-case peak hour intersection level of service for all study intersections under each of the cumulative condition scenarios. A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

When compared to Strategy 2000 cumulative conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 12 intersections (see Figure 17). However, traffic associated with the proposed DSAP land use adjustments would contribute to significant cumulative impacts at only four of the 12 intersections that are located outside of the Downtown Core Area boundary:

(67) Park Avenue and Naglee Avenue
(76) The Alameda and Hedding Street*
(77) The Alameda and Naglee Avenue*
(83) Lincoln Avenue and San Carlos Street

As identified under DSAP Buildout plus Strategy 2000 project conditions, there are no feasible improvements that can be implemented at the Park Avenue/Naglee Avenue, The Alameda/Hedding Street, and The Alameda/Naglee Avenue intersections. Similarly, no feasible improvements are possible at the Lincoln Avenue and San Carlos Street intersection. It is recommended that the Lincoln Avenue and San Carlos Street intersection also be added to the list of Protected Intersections because it serves as a gateway to the greater downtown area. The remaining eight intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

Table 11
Cumulative Conditions Intersection Level of Service Conditions

Study Number	Intersection	Peak Hour	Cumulative-Strategy 2000 Avg. Delay	Cumulative-Strategy 2000 LOS	Cumulative - DSAP+Strategy 2000 Avg. Delay	Cumulative - DSAP+Strategy 2000 LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
4	Montgomery Street and Santa Clara Street *	AM	47.6	D	**94.6**	**F**	**71.9**	**0.157**
		PM	**59.5**	**E**	**120.9**	**F**	**106.5**	**0.280**
6	Montgomery Street and Park Avenue	AM	**88.5**	**F**	**78.6**	**E**	**-14.4**	**-0.033**
		PM	**108.3**	**F**	**151.1**	**F**	**73.6**	**0.178**
7	Coleman Avenue and Taylor Street	AM	41.8	D	41.9	D	0.2	0.008
		PM	**98.1**	**F**	**107.4**	**F**	**14.7**	**0.035**
9	Autumn Street and Julian Street	AM	31.9	C	34.6	C	0.5	0.109
		PM	**67.4**	**E**	**76.1**	**E**	**13.3**	**0.039**
10	Autumn Street and Santa Clara Street *	AM	87.5	F	**117.0**	**F**	**49.5**	**0.121**
		PM	**66.2**	**E**	**90.0**	**F**	**48.7**	**0.140**
11	Autumn Street and San Fernando Street	AM	50.4	D	29.6	C	-8.2	-0.047
		PM	**120.4**	**F**	**112.7**	**F**	**-2.0**	**-0.003**
12	Bird Avenue and San Carlos Street *	AM	51.7	D	53.9	D	3.6	0.014
		PM	**102.4**	**F**	**110.4**	**F**	**14.8**	**0.036**
16	Delmas Avenue and San Fernando Street	AM	16.0	B	15.3	B	-1.0	-0.053
		PM	16.5	B	**113.3**	**F**	**99.6**	**0.601**
17	Delmas Avenue and Park Avenue	AM	44.7	D	48.7	D	5.8	0.025
		PM	35.4	D	**57.4**	**E**	**29.4**	**0.167**
22	Woz Way and San Carlos Street	AM	37.5	D	38.1	D	0.7	0.021
		PM	**71.2**	**E**	**61.5**	**E**	**-12.5**	**-0.035**
26	SR 87 and Julian Street (E) *	AM	**61.9**	**E**	**62.4**	**E**	**0.5**	**0.013**
		PM	48.1	D	53.7	D	5.9	0.109
30	Almaden Boulevard and San Carlos Street *	AM	52.4	D	51.7	D	-0.9	-0.006
		PM	**65.3**	**E**	**60.9**	**E**	**-6.5**	**-0.026**
67	Park Avenue and Naglee Avenue	AM	33.1	C	33.6	C	0.7	0.022
		PM	**57.7**	**E**	**64.4**	**E**	**9.5**	**0.058**
69	Meridian Avenue and San Carlos Street	AM	45.8	D	46.1	D	0.3	0.013
		PM	**63.9**	**E**	**63.0**	**E**	**-1.6**	**-0.006**
76	The Alameda and Hedding Street *	AM	**56.3**	**E**	**62.3**	**E**	**10.1**	**0.037**
		PM	34.8	C	38.0	D	4.2	0.099
77	The Alameda and Naglee Avenue *	AM	45.5	D	46.8	D	1.9	0.030
		PM	**71.4**	**E**	**82.1**	**F**	**17.9**	**0.053**
80	Race Street and Park Avenue	AM	**62.2**	**E**	45.4	D	-29.3	-0.079
		PM	47.7	D	41.9	D	-10.4	-0.034
83	Lincoln Avenue and San Carlos Street	AM	37.6	D	38.0	D	0.7	0.017
		PM	54.3	D	**55.7**	**E**	**1.9**	**0.015**
93	First Street and Taylor Street	AM	47.1	D	47.1	D	0.0	0.000
		PM	**56.1**	**E**	**57.0**	**E**	**1.1**	**0.008**

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
Entries denoted in **bold** and boxed indicate deficiency.
* Denotes CMP Intersections

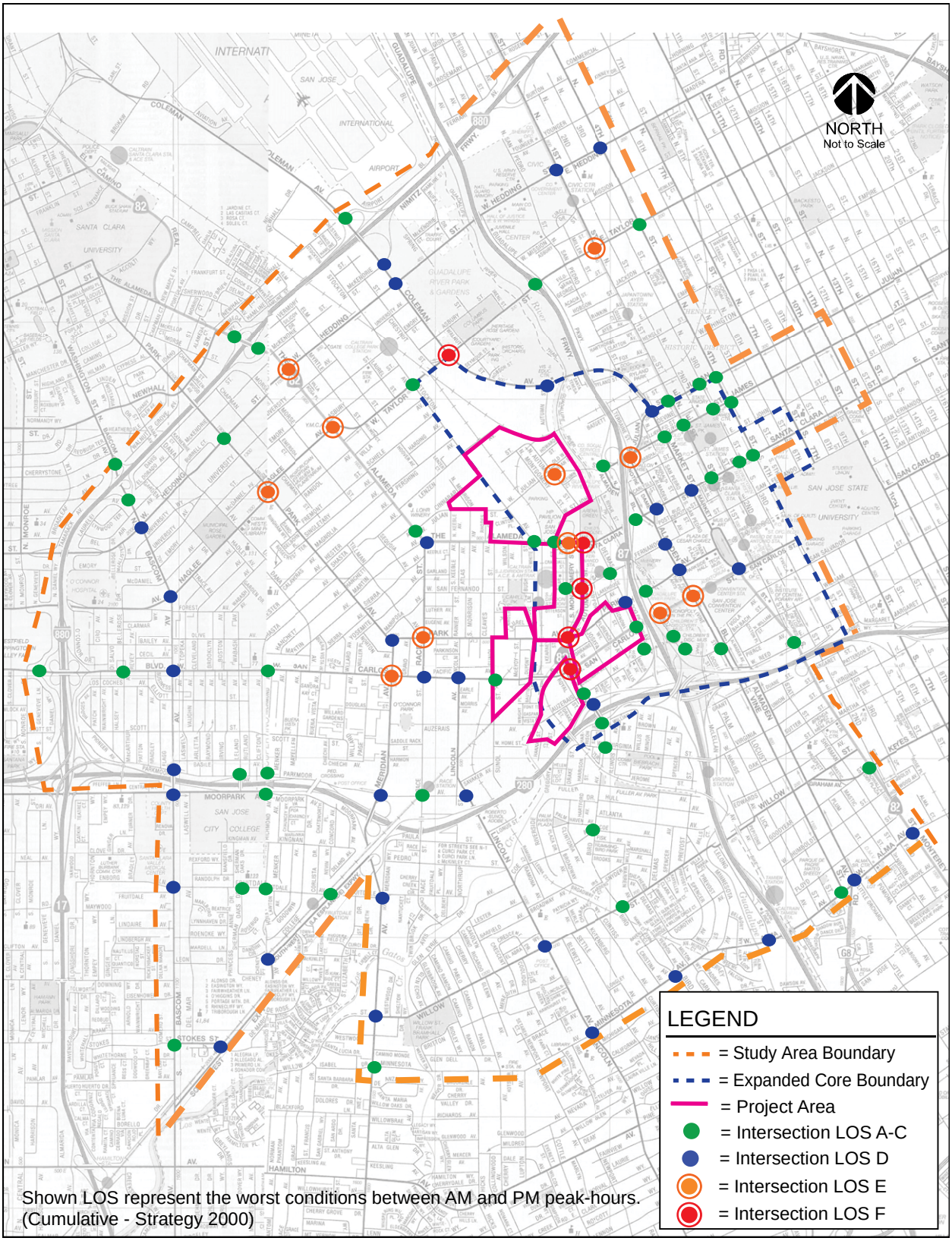


Figure 15
Strategy 2000 Cumulative Conditions Intersection Levels of Service

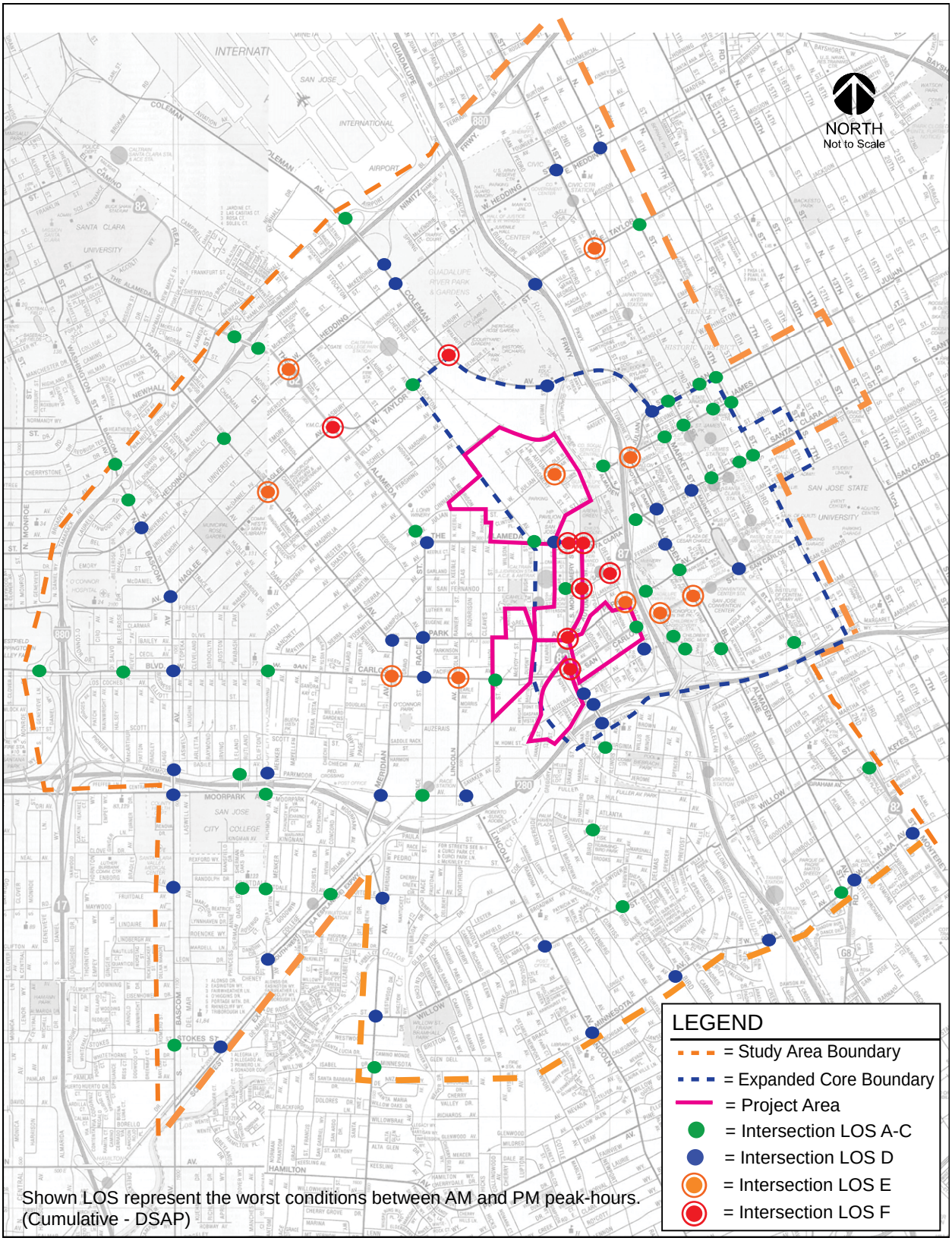


Figure 16
DSAP Plus Strategy 2000 Cumulative Conditions Intersection Levels of Service

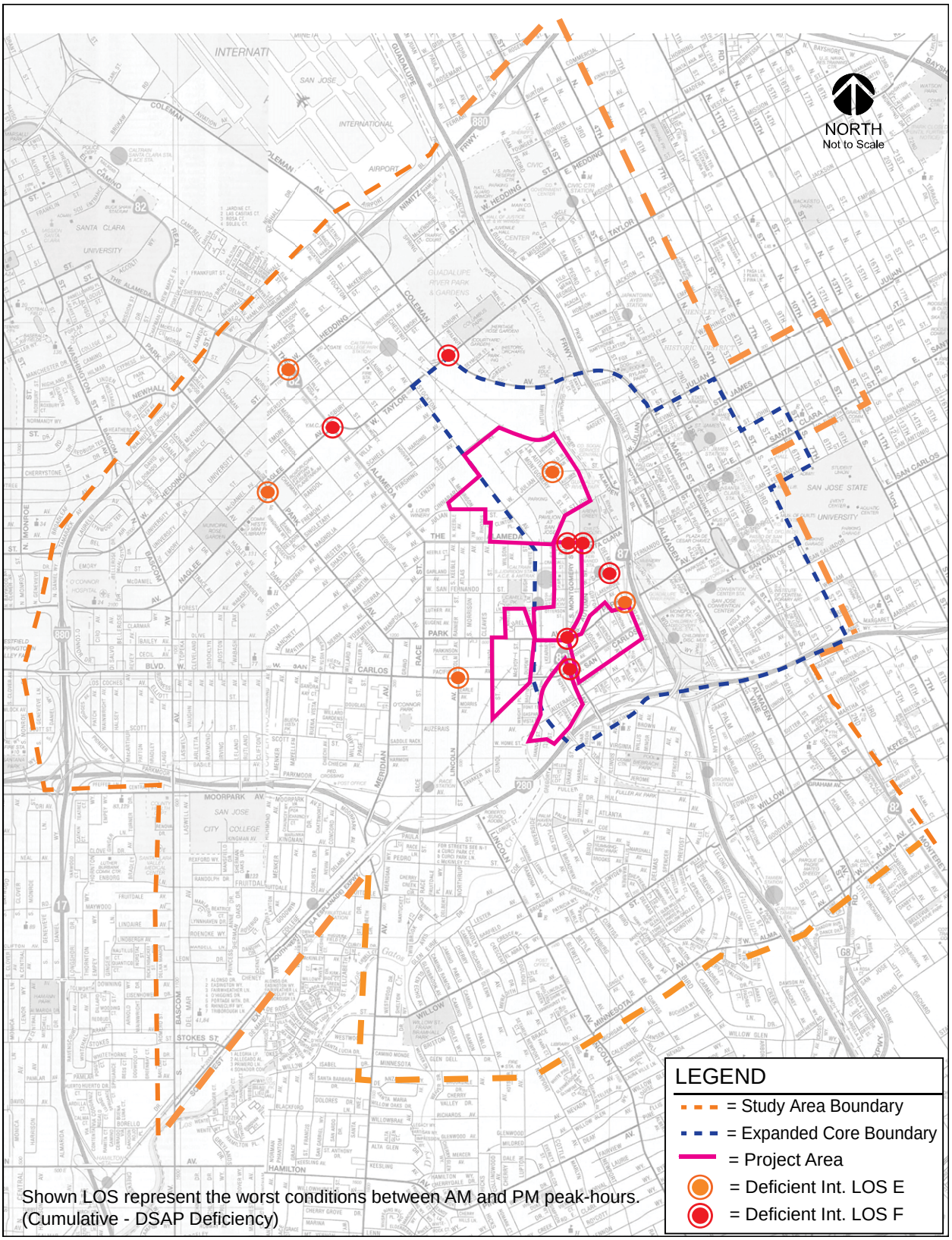


Figure 17
DSAP Plus Strategy 2000 Deficient Cumulative Conditions Intersection Levels of Service

7. DSAP 10-Year Development Plan Conditions (Informational)

This chapter presents projected traffic conditions with the identified near-term (10-Year) DSAP development levels. The DSAP 10-Year development plan provides for the analysis of a near-term development scenario based on current traffic and parking conditions. This chapter briefly describes the DSAP 10-Year development plan land uses and the transportation system. It also describes, the procedure used to determine the near-term traffic volumes and the resulting traffic conditions for this analysis.

The DSAP 10-year plan provides a general estimate of potential development that could occur within a 10-year period. However, there is not an actual development plan identified for the project. Therefore, the DSAP 10-year plan near-term analysis is presented for informational purposes only.

DSAP 10-Year Development Plan Description

The DSAP Master Plan envisions buildout of the DSAP to take as long as 35 years. It is likely that traffic conditions will change over a timeframe of that length. Therefore, an evaluation of the potential development levels that may occur over a shorter time frame of approximately 10 years was completed to provide an estimate of the effects of the DSAP development on a near-term basis. The DSAP 10-year plan was developed by project staff and identifies land use types and sizes that may potentially be developed within a 10-year horizon. The DSAP 10-year development would generally consist of the redevelopment of an identified Core Area (six blocks) between the Arena and the planned Ballpark site and would include:

1,146,000 sf of commercial/R&D/Light Industrial space
140,000 of retail/restaurant space
250 hotel guestrooms

The near-term analysis for the DSAP 10-year development assumes the completion of the planned Ballpark and associated roadways improvements including the extension of Autumn Street to Coleman Avenue. It is anticipated that parking demand for the planned DSAP 10-year development would not only be provided within the Core Area, but also within surrounding parcels located within a quarter mile radius of the Core Area. Project staff identified the potential parking sites for the 10-year development. Each of the potential parking locations that may serve the DSAP 10-year development is presented in Figure 18.

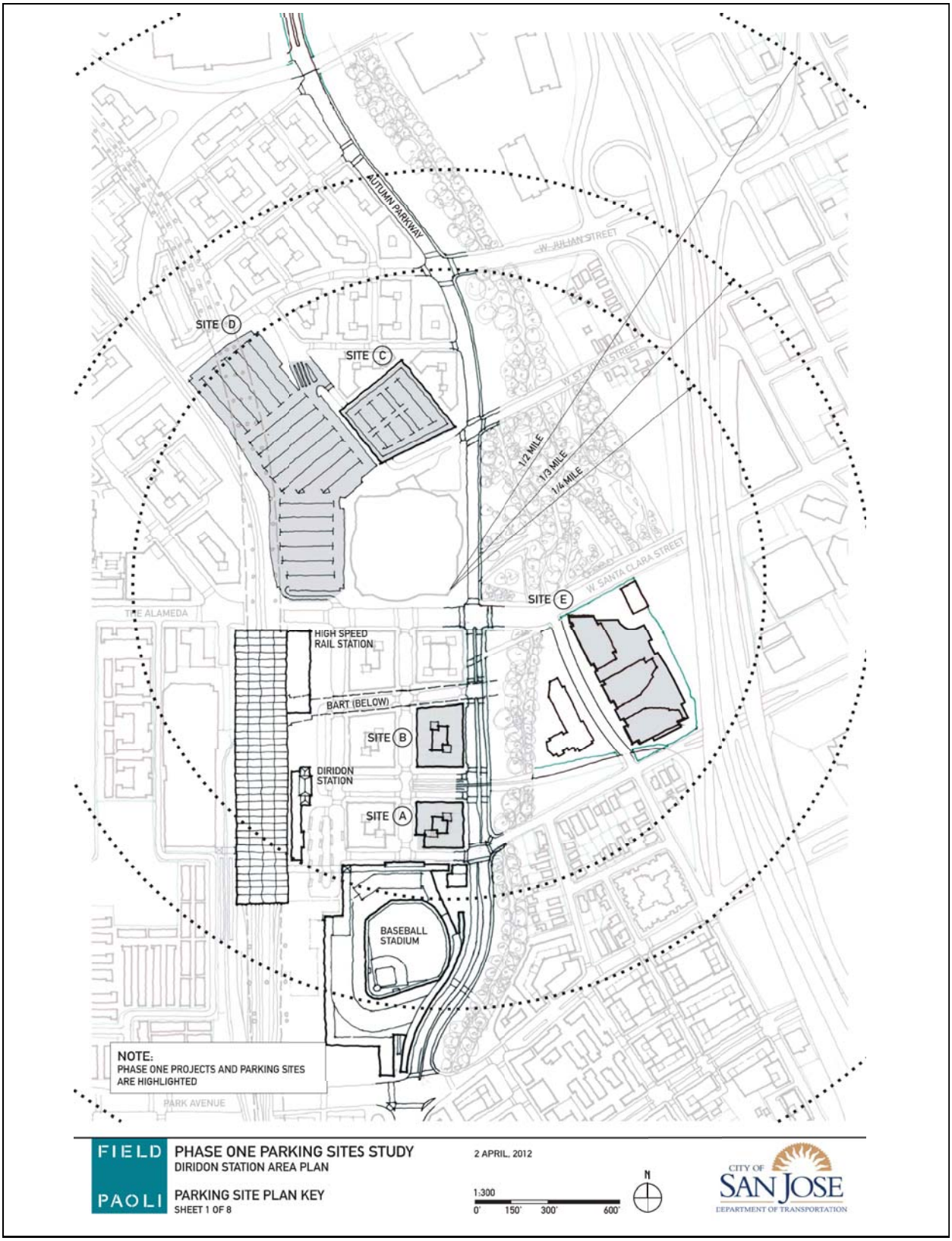


Figure 18
Potential 10-Year DSAP Development Parking Sites

Near-Term Analysis Methodology

The near-term analysis evaluates the effects on traffic conditions of the DSAP 10-year development during the weekday AM and PM peak periods of traffic on the same study intersections and freeways segments as were evaluated and presented for the full buildout of the DSAP within this report. However, unlike the analysis completed for the full buildout of the DSAP, the near-term analysis does not rely on traffic forecasts produced with the use of the City's CUBE model. Rather, the near-term analysis follows the conventional methodology for the evaluation of near-term development as outlined in the *City of San Jose Traffic Impact Analysis Handbook*, 2009.

Study Scenarios

The study facilities were evaluated for the following study scenarios as part of the near-term analysis:

Existing Conditions: Existing traffic volumes obtained from the latest traffic counts available at each of the study intersections.

Existing Plus DSAP 10-year Development Plan Conditions: Existing traffic volumes plus the addition of the DSAP 10-year development project trips.

Background Conditions: Existing traffic volumes plus traffic associated with other approved developments as contained in the City's Approved Trip Inventory (ATI).

Background Plus DSAP 10-year Development Plan Conditions: Existing traffic volumes plus approved project traffic plus the DSAP 10-year development project trips.

Existing and Background Condition Traffic Volumes

It should be noted that existing conditions reported within this near-term analysis differs slightly from that reported within Chapter 2. The near-term existing conditions is based upon existing traffic volumes obtained from the latest traffic counts available at each of the study intersections which were generally collected in 2007-2010. The existing conditions reported in Chapter 2 are based on Year 2008 existing counts to maintain consistency with the City's CUBE traffic forecasting model that uses the Year 2008 as its base year. The existing peak-hour traffic volumes used in the near-term analysis were obtained from the City of San Jose.

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San Jose's Approved Trips Inventory (ATI) database.

The existing and background peak-hour intersection volumes at each study intersection are included in Appendix A.

DSAP 10-Year Development Plan Traffic Volumes

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections.

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation

rates that can be applied to help predict the future traffic increases that would result from a new development. Trips to be generated by the DSAP 10-year development were estimated using the vehicular trip generation rates recommended by the City of San Jose in the *Traffic Impact Analysis Handbook*, 2009.

Mixed-use reductions to account for the interaction of the proposed land uses were applied to the estimated trips. The reductions are based on the assumption that vehicle trips to each of the proposed land uses of the site would be reduced due to internal circulation (i.e. residents patronizing the proposed retail space). Reductions for internalization of trips associated with each of the land uses were applied as recommended by the VTA's *Transportation Impact Analysis Guidelines*, January 2009. In addition, trip generation for retail uses is typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). A pass-by trip reduction of 25% was applied to the retail/commercial component of the proposed project as recommended by VTA.

Based on the trip generation rates recommended by the City of San Jose and the reductions described above, it is estimated that the DSAP 10-year development would generate 30,390 daily trips, with 2,254 trips occurring during the AM peak hour and 2,660 trips during the PM peak hour. Using the specified inbound/outbound splits, the development would produce 1,862 inbound trips and 392 outbound trips during the AM peak hour and 903 inbound trips and 1,757 outbound trips during the PM peak hour. The project trip generation estimates for the DSAP 10-year development are presented in Table 12.

Trip Distribution and Assignment

The trip distribution pattern for project-generated traffic was estimated based on a select-zone analysis using the City's CUBE model. The select zone analysis provides a forecast of project trips form which macro-trip distribution can be developed. The trip distribution pattern for the proposed project was further refined based on traffic patterns on the surrounding roadway system and on the locations of complementary land uses. The project trip distribution pattern is shown graphically on Figure 19.

The project trips generated by the DSAP 10-year development were assigned to the roadway system in accordance with the trip distribution patterns discussed above and the location and size of the identified potential parking locations. The assignment of project traffic to each of the potential parking sites was based on a simple proportion method based on the identified number of parking spaces provided at each site and the estimated DSAP 10-year development trip generation estimates. A tabular summary of project traffic at each study intersection is contained in Appendix A.

Background Plus 10-Year Development Plan Traffic Volumes

The project trips were added to background traffic volumes to obtain background plus DSAP 10-Year development traffic volumes. Traffic volumes for all components of traffic are tabulated in Appendix A.

Intersection Level of Service Analysis

Intersection level of service analysis was used to evaluate traffic operations at the study intersections. The results of the near-term DSAP 10-year development plan level of service analysis indicate that all of the study intersections, both local City of San Jose and CMP intersections, currently operate and are projected to operate at an acceptable level of service (LOS D or better for local intersections, and LOS E or better for CMP intersections) under existing and existing plus DSAP 10-year development plan conditions. Figure 20 presents a summary of worst-case peak hour intersection level of service for all study intersections under DSAP 10-Year development plus existing conditions.

Table 12
DSAP 10-Year Development Trip Generation Estimates

Land Use	% Reduction	Size	Daily Trip Rates	Daily Trips	AM Peak Hour Rate/ Factor	AM Splits In	AM Splits Out	AM Trips In	AM Trips Out	AM Trips Total	PM Peak Hour Rate/ Factor	PM Splits In	PM Splits Out	PM Trips In	PM Trips Out	PM Trips Total
General Office Building		1,146,000 s.f.	11.00	12,606	14.0%	88%	12%	1,553	212	1,765	14.0%	17%	83%	300	1,465	1,765
3% trip reduction for employment and employee-serving retail [2]	3%			-378				-47	-6	-53				-9	-44	-53
3% trip reduction for employment near LRT or Caltrain Station [3]	3%			-378				-47	-6	-53				-9	-44	-53
Hotel		250 rooms	9.00	2,250	8.0%	60%	40%	108	72	180	9.0%	60%	40%	122	81	203
10% trip reduction for hotel and retail components [1]	10%			-225				-11	-7	-18				-12	-8	-20
Specialty Retail/Strip Commercial		20,000 s.f.	40.00	800	3.0%	70%	30%	17	7	24	9.0%	50%	50%	36	36	72
Fast Food (w/o drive-thru)		10,000 s.f.	786.0	7,860	5.0%	57%	43%	224	169	393	5.0%	53%	47%	208	185	393
Quality Sit Down Restaurant [4]		90,000 s.f.	97.0	8,730	1.0%	90%	10%	78	9	87	8.0%	70%	30%	489	209	698
Nightclub (40 ksf included in restaurant) [4]		60,000 s.f.	--	--				--	--	--				--	--	--
Total Retail Project Trips				17,390				319	185	504				733	430	1,163
10% trip reduction for hotel and retail components [1]	10%			-225				-7	-11	-18				-8	-12	-20
3% trip reduction for employment and employee-serving retail [2]	3%			-378				-6	-47	-53				-44	-9	-53
25% trip reduction for retail pass-by [5]	25%			-272										-170	-102	-272
Net Project Trips at Site Driveways[6]				**30,662**				**1,862**	**392**	**2,254**				**1,073**	**1,859**	**2,932**
Net New Project Trips				**30,390**				**1,862**	**392**	**2,254**				**903**	**1,757**	**2,660**

Source: San Jose Impact Analysis Handbook, August 2009.

[1] As prescribed by the Transportation Impact Analysis Guidelines from VTA (Jan 2009), the maximum trip reduction for mixed-use development project with hotel and retail components is equal to 10% off the smaller trip generator. (Hotel component generates less trips then the retail component)

[2] As prescribed by the Transportation Impact Analysis Guidelines from VTA (Jan 2009), the maximum trip reduction for mixed-use development project with employment and employee-serving retail is equal to 3% off the employment component.

[3] As prescribed by the Transportation Impact Analysis Guidelines from VTA (Jan 2009), the maximum trip reduction for employment located within 2,000-foot walk of transit facility is equal to 3% off the employment component. (The employment component of the project will be located within 2,000-foot walk of Diridon Station)

[4] 40 ksf of nightclub are included in the restaurant land use for trip generation calculations. The remaining 20 ksf of nightclub is assumed not to generate any traffic during the peak hours.

[5] A pass-by reduction of 25% is typically applied to retail development within Santa Clara County.

[6] Trips do not include the pass-by trip reduction for retail.

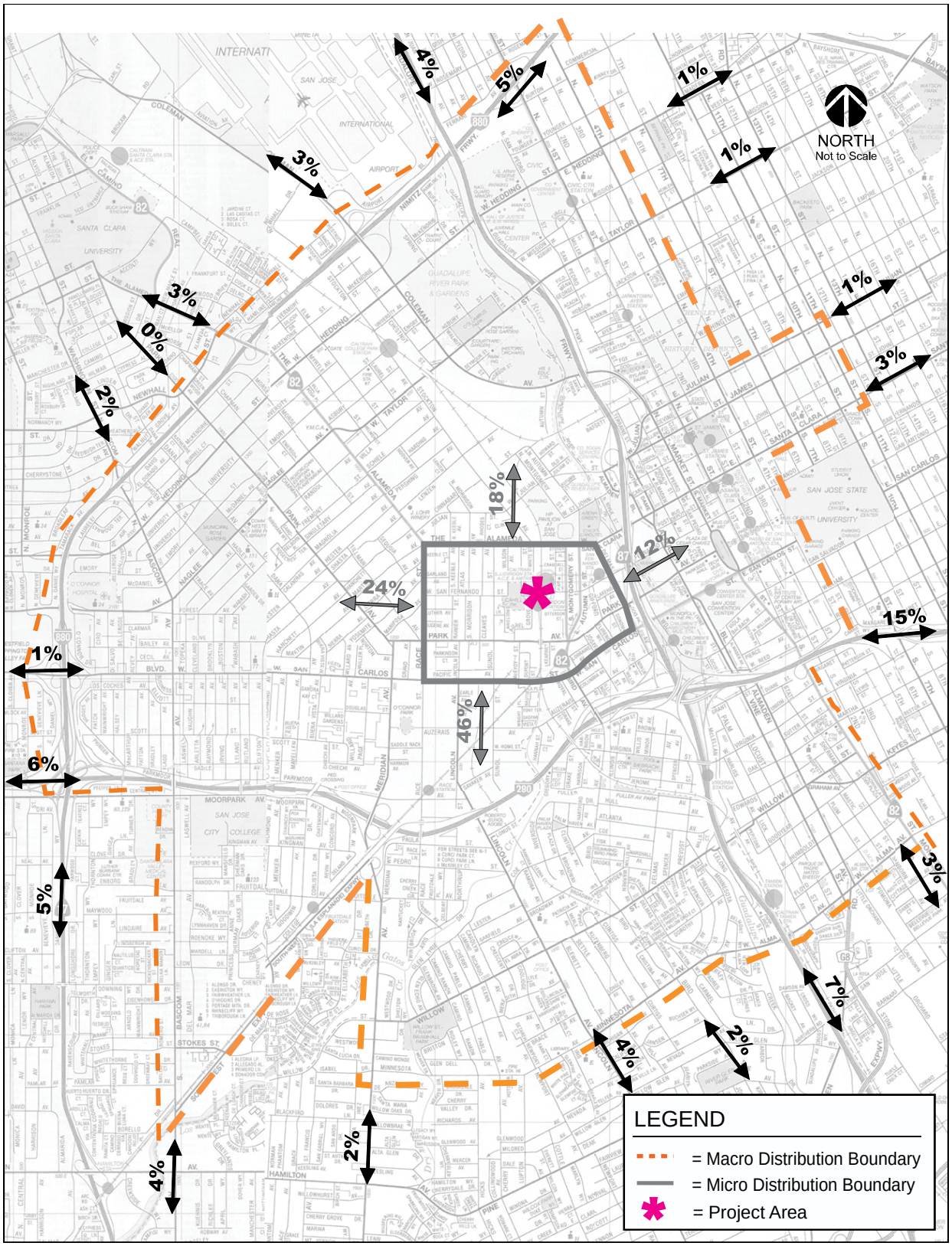


Figure 19
DSAP 10-Year Development Trip Distribution

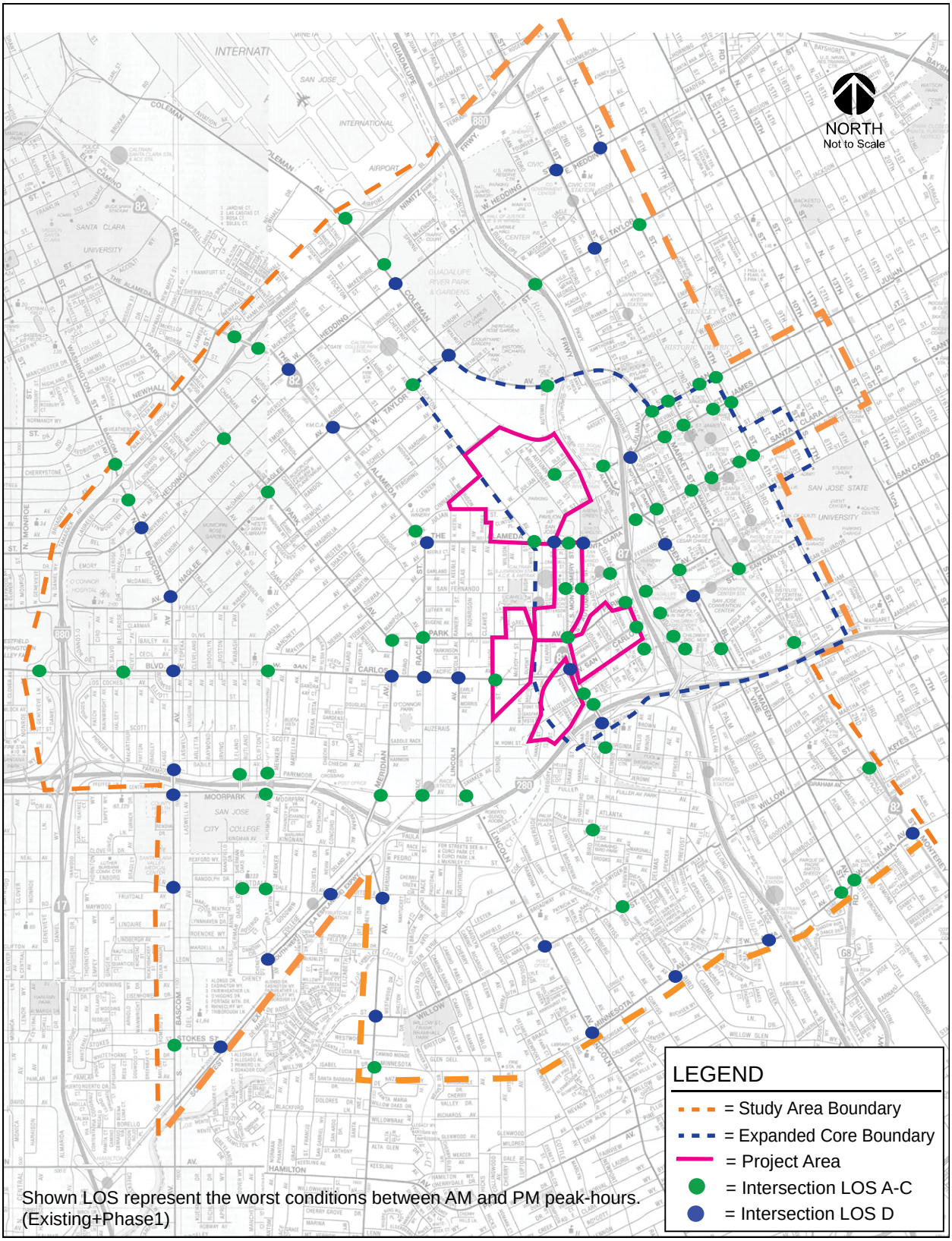


Figure 20
DSAP 10-Year Development plus Existing Conditions Intersection Levels of Service Conditions

The results also show that six of the study intersections are projected to operate at LOS E or F under DSAP 10-year development plus background conditions during at least one peak hour (see Table 13). Figure 21 presents a summary of worst-case peak hour intersection level of service for all study intersections under DSAP 10-Year development plus background conditions. When compared to background conditions, the addition of traffic associated with the DSAP 10-year development would result in the degradation of levels of service at three intersections. Under background conditions, two of the three intersections were projected to operate at LOS E or F, while the remaining intersection (Meridian Avenue and Fruitdale Avenue) was projected to operate at LOS D. Improvements were investigated for each of the three intersections. Some locations were found to have no feasible improvements.

Downtown Core Intersections

The following two downtown core intersections are projected to operate at LOS F under DSAP 10-year development plus background conditions. They are not impacted by the project since intersections located in the downtown core are exempt from the city's level of service policy. Nonetheless, potential improvements at each of the intersections were investigated to determine whether any improvements were feasible. Since the intersections are not impacted by the project, the identified improvements are not required. The improvements are provided as recommendations for consideration.

(6) Montgomery Street and Park Avenue

This intersection is projected to operate at LOS E during the PM hour under background conditions and the addition of DSAP 10-year development traffic would degrade intersection operations to LOS F. The Montgomery Street and Park Avenue intersection is projected to operate at LOS F due to the planned narrowing of Bird Avenue from six to four lanes and Park Avenue from four to two lanes, which were assumed complete as, part of the evaluation of background conditions as well as DSAP 10-year development plus background conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(16) Delmas Avenue and San Fernando Street

This intersection is projected to operate at LOS F during the PM hour under background conditions and the addition of DSAP 10-year development traffic would contribute to the intersection deficiency under DSAP 10-year development plus background conditions. There are no further feasible improvements that can be implemented to improve intersection level of service to acceptable levels.

Intersections Outside Core/Expanded Core

The following intersection is projected to operate at LOS E under DSAP 10-year development plus background conditions. The intersection is subject to the city's level of service policy since it is located outside of the Downtown Core boundaries. An improvement is presented and described below. However, as stated previously, the improvement is provided for informational purposes only. The project is not proposing to fund or implement a funding plan for the recommended improvement.

(71) Meridian Avenue and Fruitdale Avenue

This intersection would operate at LOS D during the AM peak hour under background conditions, and the added trips as a result of the DSAP 10-year development would cause the intersection operations to degrade to LOS E. Possible improvements include the addition of a second eastbound left-turn lane at the intersection which would improve intersection operating levels to LOS D.

Table 13
DSAP 10-Year Conditions Intersection Level of Service Conditions

Study Number	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS	Existing Plus DSAP 10-Yr Avg. Delay	Existing Plus DSAP 10-Yr LOS	Existing Plus DSAP 10-Yr Incr. In Crit. Delay	Existing Plus DSAP 10-Yr Incr. In Crit. V/C	Background Avg. Delay	Background LOS	Background Plus DSAP 10-Yr Avg. Delay	Background Plus DSAP 10-Yr LOS	Background Plus DSAP 10-Yr Incr. In Crit. Delay	Background Plus DSAP 10-Yr Incr. In Crit. V/C
6	Montgomery Street and Park Avenue	AM	10/27/09	33.9	C	26.6	C	-15.6	0.085	35.3	D	44.9	D	9.4	0.195
		PM	10/27/09	37.0	D	32.8	C	-5.1	0.132	**56.8**	**E**	**100.0**	**F**	**67.8**	**0.224**
16	Delmas Avenue and San Fernando Street	AM	10/27/09	11.2	B	11.2	B	0.0	0.006	11.3	B	11.3	B	0.0	0.006
		PM	05/19/09	15.4	B	14.9	B	-0.5	0.011	**90.8**	**F**	**94.3**	**F**	**4.3**	**0.011**
26	SR 87 and Julian Street (E) *	AM	10/13/10	54.0	D	54.2	D	0.8	0.012	**55.4**	**E**	**55.7**	**E**	**0.7**	**0.012**
		PM	10/13/10	41.1	D	50.9	D	11.2	0.015	46.1	D	47.1	D	1.5	0.023
71	Meridian Avenue and Fruitdale Avenue	AM	10/27/09	39.0	D	40.7	D	2.7	0.039	52.1	D	**56.4**	**E**	**6.9**	**0.039**
		PM	10/27/09	42.9	D	42.7	D	0.0	0.027	53.1	D	54.2	D	2.0	0.030
88	Coleman Avenue and I-880 (N) *	AM	09/16/08	24.2	C	24.3	C	0.0	0.002	**59.7**	**E**	**59.5**	**E**	**0.7**	**0.002**
		PM	10/05/10	11.6	B	12.7	B	2.9	0.004	15.5	B	15.7	B	0.0	0.005
93	First Street and Taylor Street	AM	02/24/09	44.5	D	44.7	D	0.2	0.005	48.0	D	48.2	D	0.2	0.005
		PM	02/24/09	52.1	D	53.0	D	0.9	0.009	**75.2**	**E**	**77.2**	**E**	**1.9**	**0.009**

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
Entries denoted in **bold** and boxed indicate deficiency.
* Denotes CMP Intersections

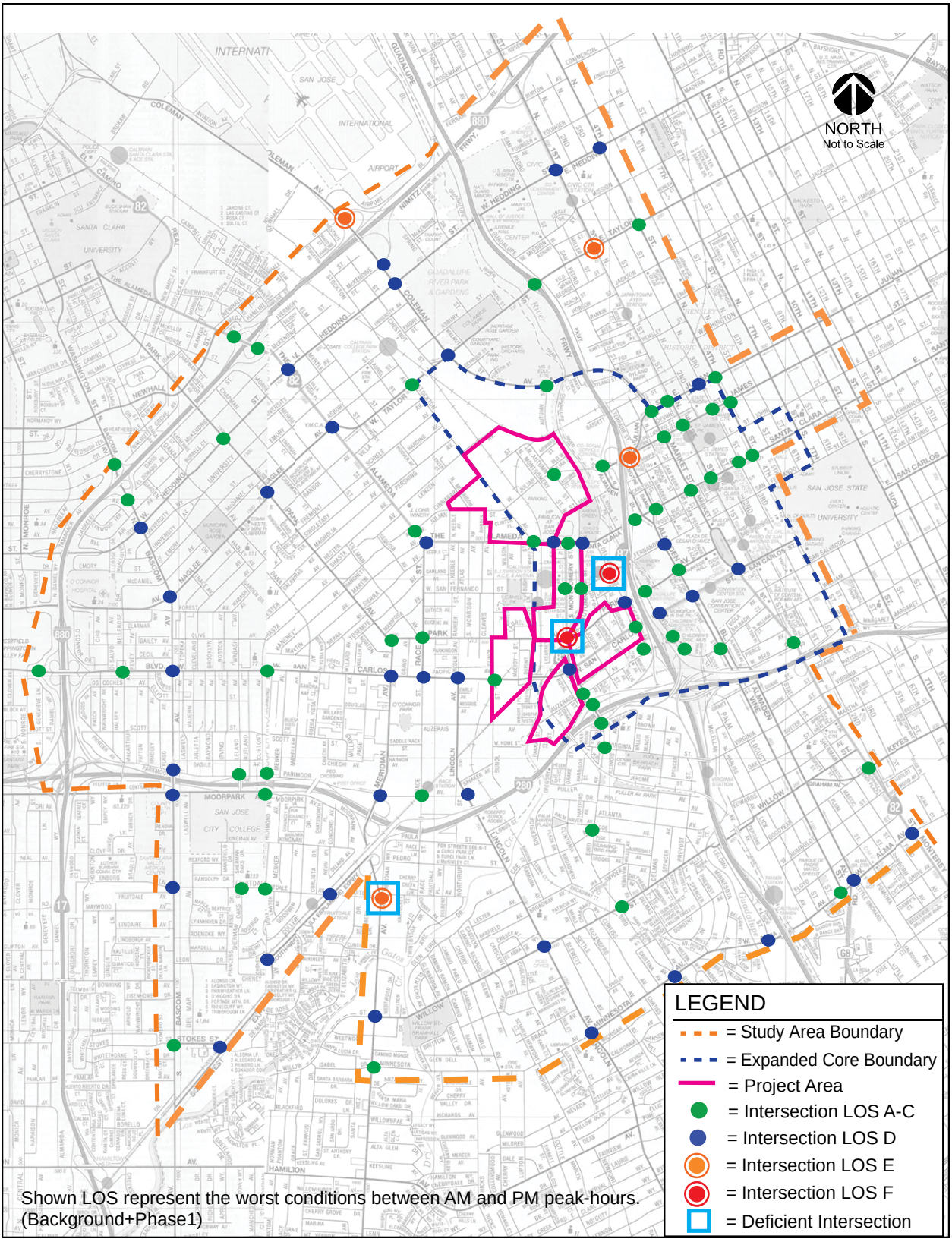


Figure 21
DSAP 10-Year Development plus Background Intersection Levels of Service Conditions

8. 6:00-7:00 PM Event Period Conditions (Informational)

This chapter presents the analysis of each of the study scenarios evaluated for both DSAP Buildout and the DSAP 10-Year development during the 6:00-7:00 PM event period. Since the proposed project is located in close proximity to major event venues (SJ Arena and planned Ballpark), which have typical event times starting at or after 7:00 PM, an analysis of the project during the 6:00-7:00 PM period was completed. There is a possibility of the simultaneous occurrence of a baseball game and an event at the SJ Arena, be it a national hockey league match or a large concert or other event. The 6:00-7:00 PM hour evaluates traffic conditions for each of the study scenarios in conjunction with the occurrence of a weekday evening baseball game with a simultaneous event at the SJ Arena. However, the proposed project would generate the greatest amount of traffic and result in the greatest impact to the roadway system during the standard AM and PM peak hours. In addition, the City's Level of Service Policy is applicable to only the standard weekday AM and PM peak commute periods. Therefore, the 6:00-7:00 PM event period analysis is presented for informational purposes only.

A fundamental objective of the Downtown Strategy 2000 Plan, which was the subject of an EIR and approved by City Council June 21, 2005 with Resolution No. 72767, is to promote the development of a prominent and vital 24-hour downtown that is a catalyst to bring new, investment, residents, and visitors to the center of the City. The Plan envisions Downtown as a regional focus for employment, cultural activities, entertainment, civic uses and retail activity at the hub of an expanding transit network and proximate to existing and planned residential areas. Therefore, it is a desired outcome, addressed in the 2005 Downtown Strategy 2000 Final EIR, for the Downtown to host multiple events, festivals, and cultural activities, some of which will occur concurrently with baseball and/or Pavilion events, reflecting a Downtown that is a major entertainment destination. The operations of multiple concurrent Downtown events would be coordinated by the City and the event operators.

The DSAP Master Plan envisions buildout of the DSAP to take as long as 35 years. The projected intersection levels of service and identified improvements are based on traffic projections some 35 years into the future. The necessary improvements to improve operational traffic deficiencies during the 6:00-7:00 PM event period identified within this study will be addressed through a collaborative effort with the Arena and Ballpark staff.

Analysis Methodology

The 6:00-7:00 PM event period analysis employs the same methods of analysis as described in Chapter 1 for the evaluation of the effects of DSAP buildout during the standard AM and PM peak hours. Similarly, the effects of the DSAP 10-Year development were evaluated using the same methodology described in Chapter 7 for the near-term analysis during the standard AM and PM peak hours.

Study Scenarios

The 6:00-7:00 PM event period analysis includes the evaluation of each of the study scenarios evaluated for the standard AM and PM peak hours (included in the previous chapters) and include:

- Existing Conditions
- Existing Plus DSAP 10-Year Development Conditions
- Background Conditions
- Background Plus DSAP 10-Year Development Conditions
- Existing Plus DSAP Buildout Conditions
- Strategy 2000 Conditions
- DSAP Buildout Plus Strategy 2000 Conditions

Study Intersections

The 6:00-7:00 PM event period analysis evaluates the traffic impacts of the DSAP Buildout and 10-year development on a sub-set of the 104 study intersections that were evaluated and presented for the full buildout of the DSAP within this report. A total of 24 of the 104 intersections that are centrally located within the Core Area that surrounds the Arena and planned Ballpark site were selected for evaluation. The same 24 intersections also were studied as part of the traffic analysis completed for the planned Ballpark and include the following:

1 NB SR 87 Ramps and Julian Street*
2 SB SR 87 Ramps and Julian Street*
3 NB SR 87 Ramps and Santa Clara Street*
4 Bird Avenue and NB I 280 Ramps*
5 Bird Avenue and SB I 280 Ramps*
6 Autumn Street and Santa Clara Street*
7 Bird Avenue and San Carlos Street*
8 Woz Way and NB SR 87
9 Autumn Street and San Fernando Street
10 Bird Avenue and Auzerais Avenue
11 Delmas Avenue and Auzerais Avenue
12 Woz Way and Auzerais Avenue
13 Delmas Avenue and Park Avenue
14 Delmas Avenue and San Carlos Street
15 Montgomery Street and Park Avenue
16 Woz Way and Park Avenue
17 Woz Way and San Carlos Street
18 Delmas Avenue and San Fernando Street
19 Montgomery Street and Santa Clara Street*
20 Montgomery Street and San Fernando Street
21 San Carlos Street and Lincoln Avenue
22 San Carlos Street and Meridian Avenue
23 The Alameda and Naglee Avenue*
24 The Alameda and Hedding Street*

* Denotes CMP Designate intersections

Existing and Background Condition Traffic Volumes

Existing traffic volumes during the 6:00-7:00 PM event period were obtained from the traffic study completed for the planned Ballpark (*San Jose Ballpark Supplemental Traffic Analysis*, February 2010). The existing counts 6:00-7:00 PM event period include traffic associated with an event at the Arena (Hockey Game).

A comparison of existing traffic volumes at study intersections indicated that on average traffic volumes in the 6:00-7:00 PM period are 70% of those during the standard PM peak hour. In the absence of definitive data for the 6:00-7:00 PM period, this multiplier was used to factor the standard PM peak hour traffic projections for each of the volume components, including approved project trips, DSAP 10-Year project trips and projected growth for the Strategy 2000 and DSAP Buildout conditions. The factored volumes were used for the 6:00-7:00 PM period analysis. The existing and background peak-hour intersection volumes at each study intersection are included in Appendix A.

Intersection Level of Service Analysis

The intersection level of service analysis during the 6:00-7:00 PM event period indicated that several intersections are projected to operate at unacceptable LOS F conditions. However, none of the identified locations are considered to be impacted by the project since the City's level of service policy is applicable to only the standard weekday AM and PM peak hours and since each of the intersections is located within the downtown core and are exempt from the City's level of service policy. Nonetheless, potential improvements at each of the intersections were investigated to determine whether any improvements were feasible. Since the intersections are not impacted by the project, the identified improvements are not required. The improvements are provided as recommendations for consideration.

DSAP 10-Year Development Plan Analysis

Intersection level of service results for each of the near-term DSAP 10-Year development study scenarios is summarized in Table 14. The results of the near-term DSAP 10-year development plan level of service analysis indicate that all of the study intersections, both local City of San Jose and CMP intersections, currently operate and are projected to operate at an acceptable level of service (LOS D or better for local intersections, and LOS E or better for CMP intersections) under existing and existing plus DSAP 10-year development plan conditions during the 6:00-7:00 PM event period. Figure 22 presents a summary of worst-case peak hour intersection level of service for all study intersections under existing plus DSAP 10-Year development conditions.

The results also show that five of the study intersections are projected to operate at LOS E or F under background and background conditions plus DSAP 10-year development during the 6:00-7:00 PM event period. Figure 23 presents a summary of worst-case peak hour intersection level of service for all study intersections under background conditions plus DSAP 10-year development. When compared to background conditions, the addition of traffic associated with the DSAP 10-year development would result in the degradation of levels of service at the following three intersections.

9 Autumn Street and San Fernando Street
15 Montgomery Street and Park Avenue
17 Woz Way and San Carlos Street

DSAP Buildout Analysis

Intersection level of service results for each of the DSAP Buildout study scenarios is summarized in Table 15. The results of the DSAP Buildout level of service analysis indicate that the following three study intersections are projected to operate at LOS F under existing plus DSAP Buildout during the 6:00-7:00 PM event period.

9 Autumn Street and San Fernando Street
13 Delmas Avenue and Park Avenue
15 Montgomery Street and Park Avenue

Figure 24 presents a summary of worst-case peak hour intersection level of service for all study intersections under DSAP buildout development plus existing conditions.

The results also show that the following four of the study intersections are projected to operate at LOS F under DSAP Buildout plus Strategy 2000 conditions during the 6:00-7:00 PM event period.

13 Delmas Avenue and Park Avenue
15 Montgomery Street and Park Avenue
17 Woz Way and San Carlos Street
18 Delmas Avenue and San Fernando Street

In addition, operational deficiencies (vehicular queuing) were identified at the Autumn Street and Santa Clara Street intersection. Figure 25 presents a summary of worst-case peak hour intersection level of service for all study intersections under DSAP Buildout plus Strategy 2000 conditions.

Preliminary Traffic and Parking Management Plan Measures

The 6:00-7:00 PM event period traffic analysis identified operational deficiencies at a total of five intersections located within the Downtown Core area. Improvements have been identified, based on preliminary Traffic and Parking Management Plan (TPMP) measures developed for the planned Ballpark. The TPMP measures would serve to manage traffic within the immediate area of the Arena and Ballpark site during the peak 6:00-7:00 PM event period. It is believed that operations at each of the five intersections projected to operate at deficient levels during the peak 6:00-7:00 PM event period can be improved with the implementation of identified TPMP measures. The DSAP Master Plan envisions buildout of the DSAP to take as long as 35 years. The projected intersection levels of service and identified improvements are based on traffic projections some 35 years into the future. It is likely that traffic conditions will change over a timeframe of that length. Therefore, the identified operational traffic deficiencies and need for improvements will necessitate further investigation as DSAP development progresses. Staggered start times of special events at the Arena and Ballpark on the same days is one of the most effective ways of mitigating operational deficiencies. The necessary improvements to improve operational traffic deficiencies during the 6:00-7:00 PM event period identified within this study will be addressed through a collaborative effort with the Arena and Ballpark staff. Each of the improvements will be implemented as part of the Traffic, Parking, and Management Plan process, which has successfully been utilized in the past. The TPMP measures for each of the deficient intersections are described below:

(6) Autumn Street and Santa Clara Street

Issues/Measures: Level of service at this intersection is projected to be an acceptable LOS D during the 6:00-7:00 PM event period under each of the studied conditions. However, the intersection is identified to have vehicular queue spill-over from the westbound left turn pocket back into the adjacent through lanes during the 6:00-7:00 PM hour. The westbound left-turn vehicular queue at this intersection could be reduced through demand reduction, lane re-assignment, and signal timing adjustments during the 6:00-7:00 PM hour. The segment of Delmas Avenue between Santa Clara Street and San Fernando Street would temporarily be converted to a one-way operation in the southbound direction providing additional through capacity on Delmas Avenue. A portion of the demand from westbound Santa Clara to southbound Autumn Street would be diverted to Delmas using traffic controls (deployment of staffing, advanced changeable message sign, temporary channelization, and parking information system sign), thus reducing demand on the left turn queue at Santa Clara and Autumn. In addition at the Santa Clara/Autumn intersection, traffic controls would be placed to close the inside left turn lane, retain the second permanent left turn lane, and convert the inside through lane to a left turn only lane, thereby increasing left turn queue storage and capacity. The outside lane would function as a through lane and a right turn lane. A special event signal timing plan could be implemented to pair with the lane re-assignment at the Autumn/Santa Clara intersection to increase green allotment in favor of the westbound left turn movement. With the measures deployed

Table 14
DSAP 10-Year Development Intersection Level of Service Conditions (6:00-7:00 PM)

				Existing		Existing Plus DSAP 10-Yr				Background		Background Plus DSAP 10 Yr				Improved	
Study Number	Intersection	Peak Hour	Count Date	Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS
1	SR 87 and Julian Street (E) *	6-7 PM	05/18/09	41.4	D	42.1	D	1.3	0.016	48.6	D	49.5	D	0.9	0.016		
2	SR 87 and Julian Street (W) *	6-7 PM	05/18/09	19.4	B	20.0	B	0.5	0.108	19.8	B	20.2	C	0.6	0.013		
3	SR 87 and Santa Clara Street *	6-7 PM	05/19/09	16.4	B	17.4	B	1.2	0.080	20.7	C	23.2	C	3.0	0.034		
4	Bird Avenue and I-280 (N) *	6-7 PM	05/21/09	28.1	C	28.4	C	0.6	0.042	27.7	C	27.9	C	2.2	0.054		
5	Bird Avenue and I-280 (S) *	6-7 PM	05/21/09	31.2	C	32.9	C	2.2	0.061	36.0	D	38.6	D	4.1	0.043		
6	Autumn Street and Santa Clara Street *	6-7 PM	05/18/09	25.2	C	38.6	D	18.5	0.322	40.0	D	44.4	D	7.5	0.117		
7	Bird Avenue and San Carlos Street *	6-7 PM	05/21/09	35.5	D	36.4	D	2.4	0.067	40.2	D	46.7	D	11.7	0.096		
8	Woz Way and SR 87	6-7 PM	05/20/09	8.0	A	8.0	A	0.0	0.000	7.0	A	7.0	A	0.0	0.000		
9	Autumn Street and San Fernando Street	6-7 PM	05/19/09	8.5	A	19.0	B	11.1	0.400	**270.7**	**F**	**366.4**	**F**	**95.4**	**0.218**	41.1	D
10	Bird Avenue and Auzerais Avenue	6-7 PM	05/21/09	20.9	C	21.3	C	8.6	0.075	26.6	C	25.7	C	-1.0	0.038		
11	Delmas Avenue and Auzerais Avenue	6-7 PM	05/20/09	16.7	B	16.0	B	-1.0	0.048	16.2	B	16.5	B	0.4	0.048		
12	Woz Way and Auzerais Avenue	6-7 PM	05/20/09	15.4	B	15.4	B	0.0	0.000	12.0	B	12.0	B	0.0	0.000		

Table 14 (continued)
DSAP 10-Year Development Intersection Level of Service Conditions (6:00-7:00 PM)

Study Number	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS	Existing Plus DSAP 10-Yr Avg. Delay	Existing Plus DSAP 10-Yr LOS	Existing Plus DSAP 10-Yr Incr. In Crit. Delay	Existing Plus DSAP 10-Yr Incr. In Crit. V/C	Background Avg. Delay	Background LOS	Background Plus DSAP 10 Yr Avg. Delay	Background Plus DSAP 10 Yr LOS	Background Plus DSAP 10 Yr Incr. In Crit. Delay	Background Plus DSAP 10 Yr Incr. In Crit. V/C	Improved Avg. Delay	Improved LOS
13	Delmas Avenue and Park Avenue	6-7 PM	05/19/09	24.6	C	24.9	C	0.1	0.018	**365.9**	**F**	**363.9**	**F**	**-3.7**	**0.008**	39.8	D
14	Delmas Avenue and San Carlos Street	6-7 PM	05/20/09	17.7	B	17.1	B	-0.6	0.039	24.5	C	24.6	C	0.2	0.039		
15	Montgomery Street and Park Avenue	6-7 PM	05/20/09	34.7	C	32.0	C	0.4	0.113	**1001.7**	**F**	**1458.7**	**F**	**218.3**	**0.491**	40.6	D
16	Woz Way and Park Avenue	6-7 PM	05/19/09	20.1	C	20.1	C	0.0	0.001	21.1	C	21.1	C	0.0	0.001		
17	Woz Way and San Carlos Street	6-7 PM	05/20/09	28.7	C	28.8	C	0.2	0.027	**56.4**	**E**	**61.1**	**E**	**5.3**	**0.027**	--	--
18	Delmas Avenue and San Fernando Street	6-7 PM	05/19/09	16.0	B	15.9	B	0.3	0.020	**73.9**	**E**	**76.3**	**E**	**2.9**	**0.020**		
19	Montgomery Street and Santa Clara Street *	6-7 PM	05/21/09	10.7	B	12.6	B	3.2	0.083	25.8	C	46.2	D	28.2	0.110		
20	Montgomery Street and San Fernando Street	6-7 PM	05/21/09	12.5	B	12.5	B	0.0	0.000	14.5	B	14.5	B	0.0	0.000		
21	Lincoln Avenue and San Carlos Street	6-7 PM	05/21/09	34.7	C	35.0	C	-0.3	0.059	36.2	D	37.9	D	3.4	0.064		
22	Meridian Avenue and San Carlos Street	6-7 PM	05/21/09	41.0	D	41.9	D	1.9	0.051	43.8	D	45.4	D	2.8	0.051		
23	The Alameda and Naglee Avenue *	6-7 PM	05/18/09	34.9	C	34.6	C	0.2	0.017	38.7	D	38.8	D	0.7	0.017		
24	The Alameda and Hedding Street *	6-7 PM	05/18/09	28.4	C	28.1	C	0.0	0.016	31.9	C	31.9	C	0.2	0.017		

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
* Denotes CMP Intersections

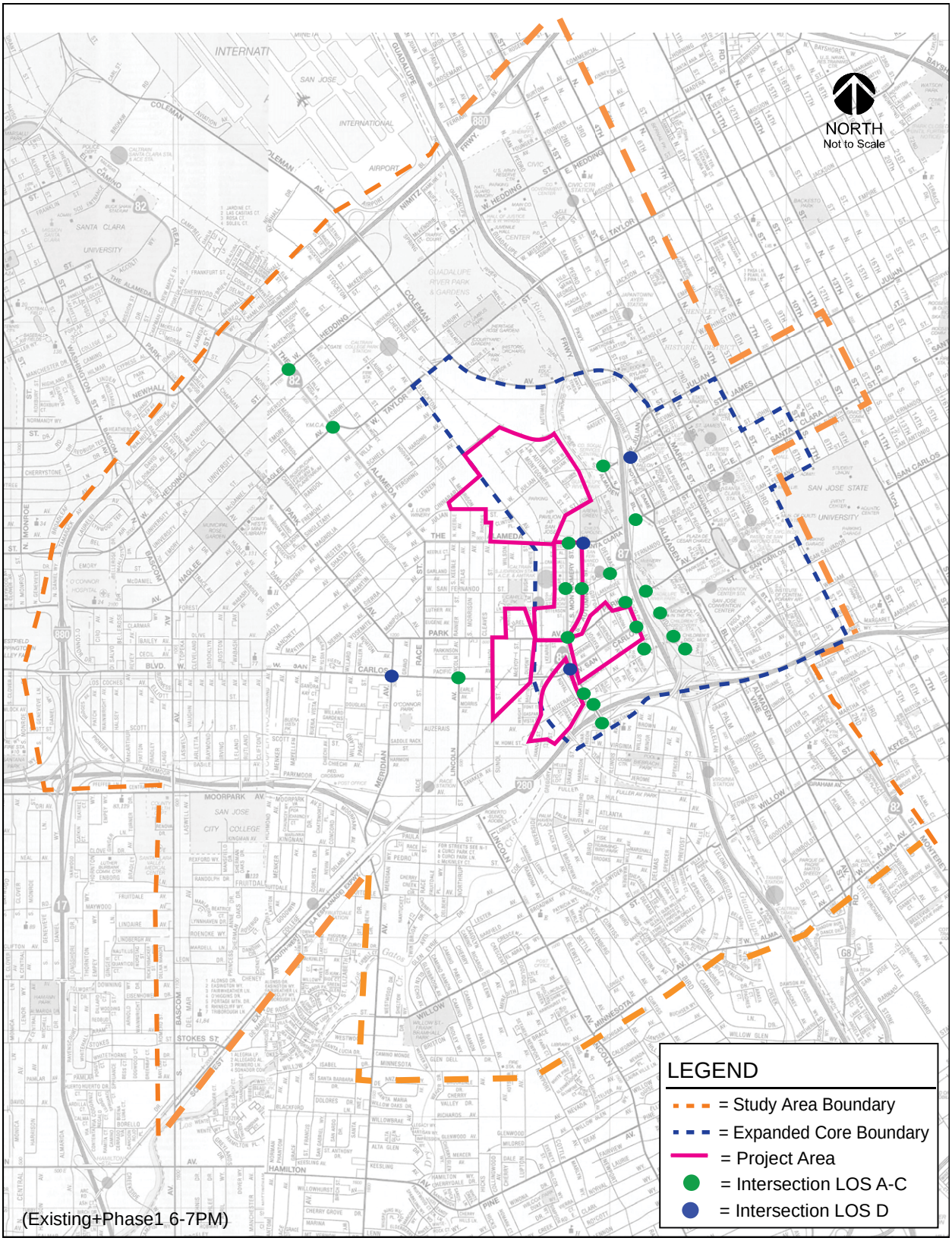


Figure 22
Existing Plus DSAP 10-Year Conditions Intersection Levels of Service (6:00-7:00 PM)

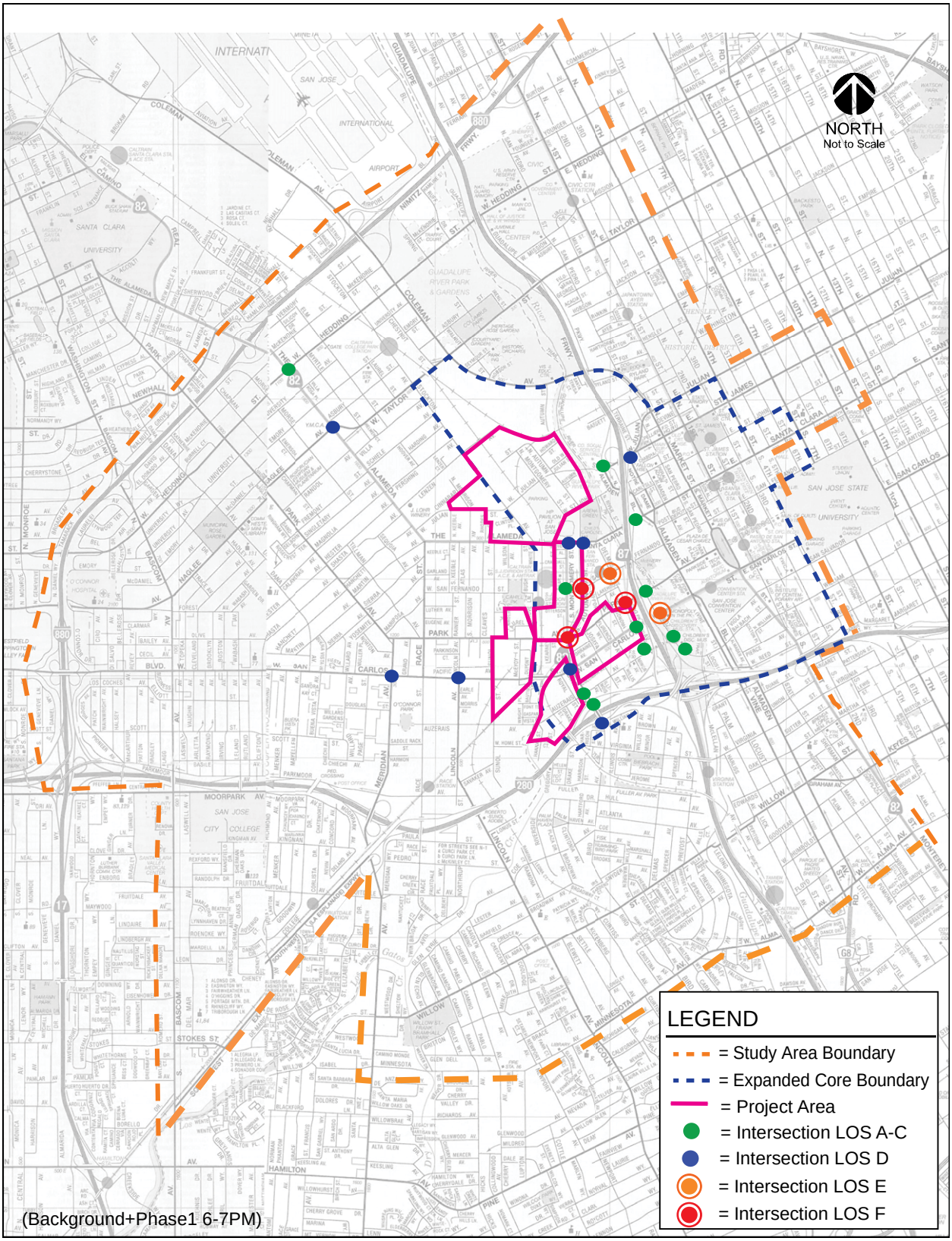


Figure 23
Background Plus DSAP 10-Year Conditions Intersection Levels of Service (6:00-7:00 PM)

Table 15
DSAP Buildout Intersection Level of Service Conditions (6:00-7:00 PM)

Study Number	Intersection	Peak Hour	Existing		Existing Plus DSAP				Improved		Strategy 2000		DSAP Buildout Plus Strategy 2000				Improved	
			Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS
1	SR 87 and Julian Street (E) *	6-7 PM	41.4	D	43.7	D	0.2	0.300			46.7	D	52.0	D	5.5	0.076		
2	SR 87 and Julian Street (W) *	6-7 PM	19.4	B	19.9	B	0.8	0.226			20.4	C	21.8	C	1.9	0.106		
3	SR 87 and Santa Clara Street *	6-7 PM	16.4	B	20.9	C	7.4	0.395			21.7	C	23.1	C	2.3	0.040		
4	Bird Avenue and I-280 (N) *	6-7 PM	28.1	C	29.4	C	2.0	0.096			30.1	C	31.7	C	4.0	0.110		
5	Bird Avenue and I-280 (S) *	6-7 PM	31.2	C	32.6	C	4.4	0.065			33.2	C	38.6	D	12.0	0.115		
6	Autumn Street and Santa Clara Street *	6-7 PM	25.2	C	45.3	D	26.0	0.385			43.7	D	45.8	D	3.9	0.036		
7	Bird Avenue and San Carlos Street *	6-7 PM	35.5	D	38.7	D	7.1	0.338			44.4	D	47.4	D	4.7	0.040		
8	Woz Way and SR 87	6-7 PM	8.0	A	5.2	A	-3.5	0.213			8.9	A	8.7	A	-0.3	-0.008		
9	Autumn Street and San Fernando Street	6-7 PM	8.5	A	**316.5**	**F**	**327.0**	**1.371**	34.6	C	**316.2**	**F**	**319.4**	**F**	**3.0**	**0.007**	36.2	D
10	Bird Avenue and Auzerais Avenue	6-7 PM	20.9	C	22.3	C	10.7	0.160			22.2	C	27.8	C	5.5	0.190		
11	Delmas Avenue and Auzerais Avenue	6-7 PM	16.7	B	17.0	B	0.3	0.095			18.8	B	18.3	B	-0.8	0.095		
12	Woz Way and Auzerais Avenue	6-7 PM	15.4	B	9.2	A	-19.9	0.177			17.2	B	16.9	B	-0.3	-0.004		

Table 15 (continued)
DSAP Buildout Intersection Level of Service Conditions (6:00-7:00 PM)

Study Number	Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Existing Plus DSAP Avg. Delay	Existing Plus DSAP LOS	Existing Plus DSAP Incr. In Crit. Delay	Existing Plus DSAP Incr. In Crit. V/C	Improved Avg. Delay	Improved LOS	Strategy 2000 Avg. Delay	Strategy 2000 LOS	DSAP Buildout Plus Strategy 2000 Avg. Delay	DSAP Buildout Plus Strategy 2000 LOS	DSAP Buildout Plus Strategy 2000 Incr. In Crit. Delay	DSAP Buildout Plus Strategy 2000 Incr. In Crit. V/C	Improved Avg. Delay	Improved LOS
13	Delmas Avenue and Park Avenue	6-7 PM	24.6	C	**365.6**	**F**	**447.3**	**0.086**	29.5	C	**419.9**	**F**	**375.3**	**F**	**-79.3**	**0.108**	37.5	D
14	Delmas Avenue and San Carlos Street	6-7 PM	17.7	B	16.2	B	-1.8	0.162			18.7	B	21.2	C	2.3	0.051		
15	Montgomery Street and Park Avenue	6-7 PM	34.7	C	**895.3**	**F**	**1116.4**	**2.140**	30.4	C	**1064.8**	**F**	**1401.7**	**F**	**246.2**	**0.387**	38.3	D
16	Woz Way and Park Avenue	6-7 PM	20.1	C	19.6	B	0.5	0.321			22.1	C	22.6	C	0.5	0.011		
17	Woz Way and San Carlos Street	6-7 PM	28.7	C	52.6	D	28.7	0.528			**131.2**	**F**	**118.6**	**F**	**-13.7**	**-0.025**		
18	Delmas Avenue and San Fernando Street	6-7 PM	16.0	B	11.3	B	-2.4	0.196			13.7	B	**89.1**	**F**	**89.5**	**0.505**	25.8	C
19	Montgomery Street and Santa Clara Street *	6-7 PM	10.7	B	28.4	C	15.2	0.188			24.2	C	27.3	C	4.7	0.123		
20	Montgomery Street and San Fernando Street	6-7 PM	12.5	B	13.1	B	-0.9	-0.266			10.0	A	13.0	B	2.7	0.026		
21	Lincoln Avenue and San Carlos Street	6-7 PM	34.7	C	35.6	D	3.0	0.188			38.2	D	38.6	D	0.5	0.010		
22	Meridian Avenue and San Carlos Street	6-7 PM	41.0	D	43.3	D	4.1	0.179			48.4	D	48.2	D	-0.3	-0.004		
23	The Alameda and Naglee Avenue *	6-7 PM	34.9	C	39.2	D	6.2	0.193			42.6	D	45.2	D	3.2	0.027		
24	The Alameda and Hedding Street *	6-7 PM	28.4	C	31.0	C	4.7	0.117			31.7	C	33.6	C	2.4	0.068		

Entries denoted in **bold** indicate conditions that exceed the current level of service standard.
* Denotes CMP Intersections

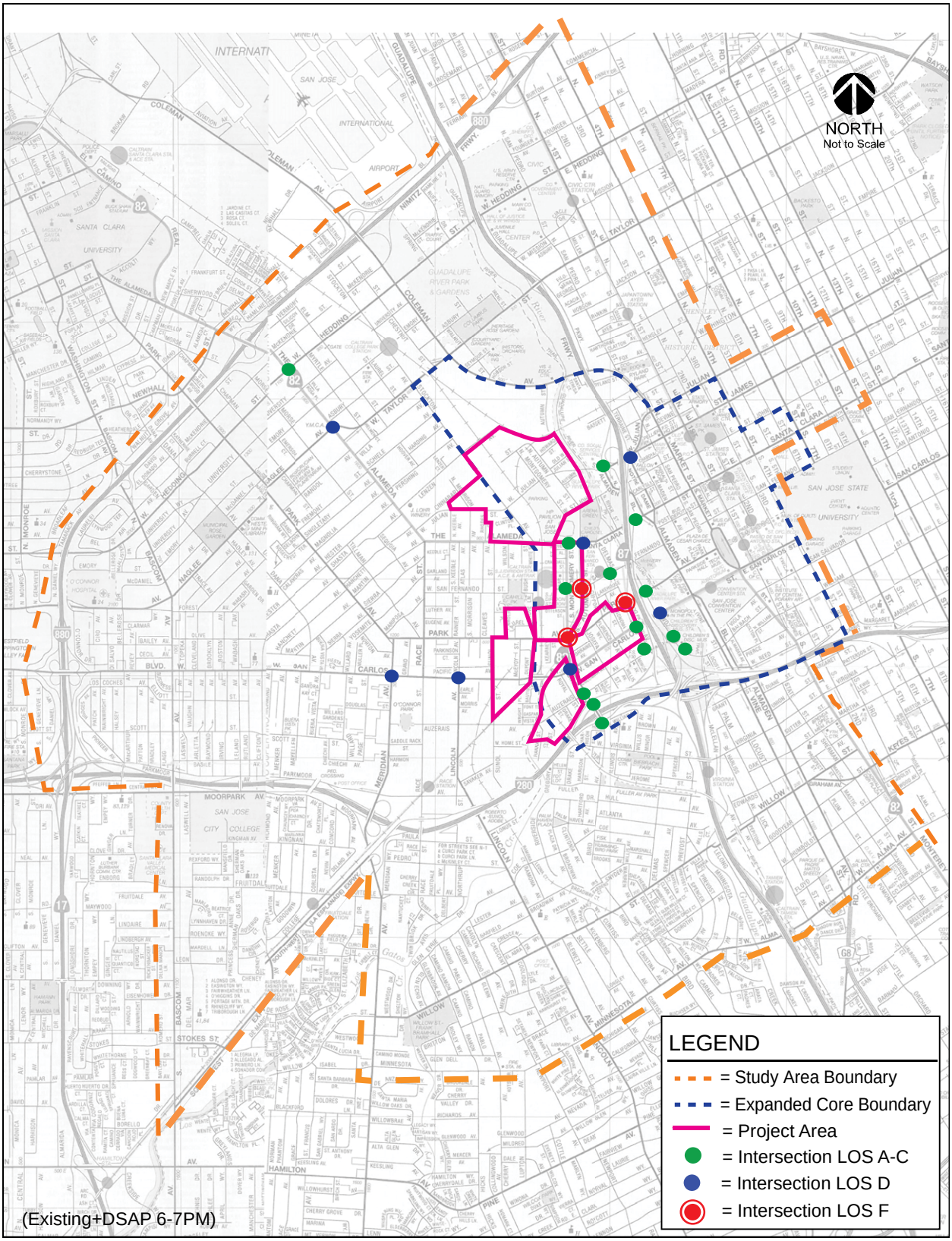


Figure 24
Existing Plus DSAP Buildout Conditions Intersection Levels of Service (6:00-7:00 PM)

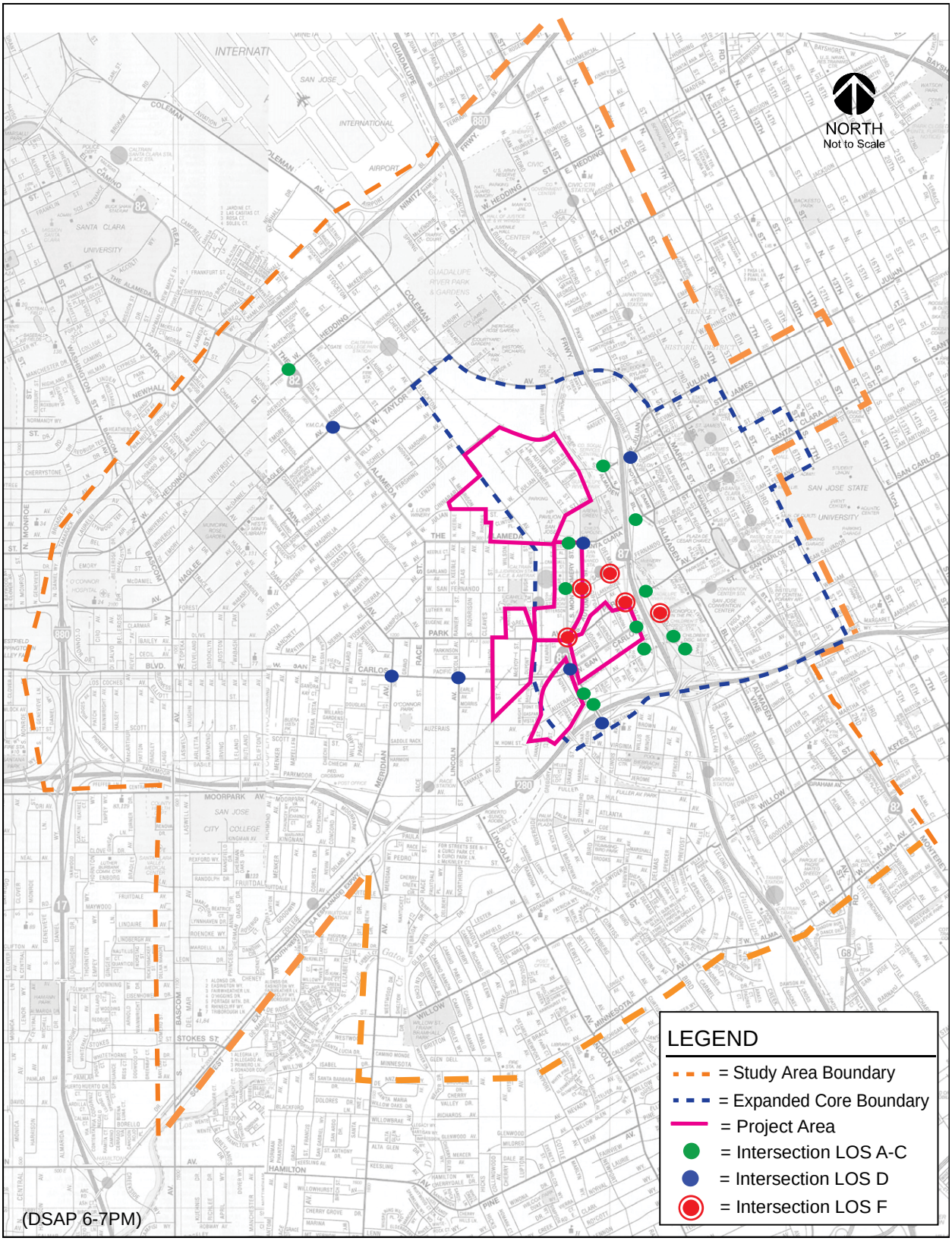


Figure 25
DSAP Buildout Plus Strategy 2000 Conditions Intersection Levels of Service (6:00-7:00 PM)

simultaneously, the westbound left turn queue could be reduced each signal cycle, while the intersection remains at LOS D. To ensure that these measures would achieve the desired results, the Traffic and Parking Management Plan (TPMP) measures would be fully developed and re-evaluated when the actual projects are approved and constructed to ensure effective operations.

(9) Autumn Street and San Fernando Street

Issues/Measures: This intersection is projected to operate at LOS F during the 6:00-7:00 PM event period under Background plus DSAP 10-Year development, Existing plus DSAP Buildout, and DSAP Buildout plus Strategy 2000 conditions. The intersection's deficient level of service is primarily due to the inclusion of a pedestrian only "scramble" phase to accommodate event-bound (to an SJ Arena and/or Ballpark event) pedestrian activity. The pedestrian "scramble" phase is regarded in LOS analysis as "lost time" for vehicular traffic, or time not available to vehicular traffic, which increases average vehicle delay at an intersection. By widening the pedestrian crosswalks on all approaches as described in the Ballpark study, serving the pedestrian movements concurrently with the vehicle phases, and eliminating the pedestrian only "scramble" phase, the intersection operation would improve to LOS D or better under each of the study scenarios. To ensure that these measures would achieve the desired results, the TPMP measures would be fully developed and re-evaluated when the actual projects are approved and constructed to ensure effective operations.

(13) Delmas Avenue and Park Avenue

Issues/Measures: This intersection is projected to operate at LOS F during the 6:00-7:00 PM event period under Background plus DSAP 10-Year development, Existing plus DSAP Buildout, and DSAP Buildout plus Strategy 2000 conditions. The intersection is projected to operate at LOS F primarily because of the inclusion of an extended westbound green phase to accommodate event-bound (to an SJ Arena and/or Ballpark event) pedestrian activity. Intersection operations would improve to LOS D or better under each of the study scenarios by widening the pedestrian crosswalks on the north and south legs, serving the pedestrian movements concurrently with the vehicle phases, and shortening the westbound green phase as described in the Ballpark study. To ensure that these measures would achieve the desired results, the TPMP measures would be fully developed and re-evaluated when the actual projects are approved and constructed to ensure effective operations.

(15) Montgomery Street and Park Avenue

Issues/Measures: This intersection is projected to operate at LOS F during the 6:00-7:00 PM event period under Background plus DSAP 10-Year development, Existing plus DSAP Buildout, and DSAP Buildout plus Strategy 2000 conditions. The intersection is projected to operate at LOS F because of the inclusion of a pedestrian only "scramble" phase to accommodate event-bound (to an SJ Arena and/or Ballpark event) pedestrian activity. Intersection operations would improve to LOS D or better under each of the study scenarios by widening the pedestrian crosswalks on all approaches as described in the Ballpark study, serving the pedestrian movements concurrently with the vehicle phases, and eliminating the pedestrian only "scramble" phase. To ensure that these measures would achieve the desired results, the TPMP measures would be fully developed and re-evaluated when the actual projects are approved and constructed to ensure effective operations.

(17) Woz Way and San Carlos Street

Issues/Measures: This intersection is projected to operate at LOS F during the 6:00-7:00 PM event period under DSAP Buildout plus Strategy 2000 conditions. Physical improvements at the intersection are not feasible due to right-of-way constraints and the Light Rail line that runs adjacent to the intersection. The intersection serves as a primary access point for event-bound (to an SJ Arena and/or Ballpark event) traffic. Therefore, it is recommended that the intersection be monitored and considered as a location for a traffic control officer during peak arrival periods for event traffic or possible restriction of left-turn movements at the intersection.

(18) Delmas Avenue and San Fernando Street

Issues/Measures: This intersection is projected to operate at LOS F during the 6:00-7:00 PM event period under DSAP Buildout plus Strategy 2000 conditions. The operations at this intersection would be improved by temporarily converting the segment of Delmas Avenue between Santa Clara Street and San Fernando Street to a one-way operation, in the southbound direction. The temporary conversion to one-way operations will minimize vehicular conflicts at the intersection and reduce delay experienced during peak event periods. With this measure, the average vehicular delays at this intersection would be improved to LOS C conditions under the DSAP Buildout plus Strategy 2000 conditions. To ensure that these measures would achieve the desired results, the TPMP measures would be fully developed and re-evaluated when the actual projects are approved and constructed to ensure effective operations.

9. Conclusions

The project is defined as the development level expected to occur as identified by the DSAP with adjustments to the approved *Strategy 2000* plan for Downtown San Jose. The study included level of service analysis of AM and PM peak hour traffic conditions for identified intersections and freeway segments within and surrounding the downtown area. The analysis consisted of the evaluation of a total of 104 intersections and 76 freeway segments. The potential level of service impacts of the planned DSAP development levels were evaluated in accordance with the standards set forth by City of San Jose and the Congestion Management Program (CMP) of Santa Clara County and compared with the adopted Strategy 2000 plan.

Project Impacts and Mitigation Measures

Intersection Impacts and Mitigation Measures

Intersection level of service analysis was used to evaluate traffic operations at the study intersections under Existing Plus DSAP Buildout Conditions and under DSAP Buildout Plus Strategy 2000 project conditions. The analysis of Existing Plus DSAP Buildout Conditions did not identify any significant intersection or freeway impacts.

The results of the evaluation of DSAP Buildout plus Strategy 2000 conditions show that 14 of the study intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions during at least one peak hour. When compared to Strategy 2000 background conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 10 intersections. Seven of the 10 intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

Improvements were investigated for each of the 10 intersections. Some locations were found to have no feasible improvements. The following is a description of the feasible improvements and the intersections that would remain deficient. A table summarizing the intersection level of service results for all study intersections and calculation sheets are included in Appendix B.

Downtown Core Intersections

The following downtown core intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. These intersections are located in the downtown core and are therefore exempt from the city's level of service policy. Nonetheless, potential improvements at each of

the intersections were investigated to determine whether any improvements, although not required, were feasible. The improvements are provided as recommendations for consideration.

(4) Montgomery Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS B under the PM peak hour with implementation of the Autumn Street improvements.

(6) Montgomery Street and Park Avenue

This intersection is projected to operate below the City LOS standard due to the planned narrowing of Bird Avenue from six to four lanes and Park Avenue from four to two lanes that were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(7) Coleman Avenue and Taylor Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the widening of Coleman Avenue from a four-lane roadway to a six-lane roadway (including the associated improvements of double-left-turn lanes and separate right turn-lanes on Taylor Street) and the Autumn Street connection to Coleman Avenue as identified in the City's General Plan. The Autumn Street extension and Coleman Avenue widening were assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The additional left-turn lanes and eastbound right-turn lane on Taylor Street also have been completed. The implementation of the remaining westbound right-turn lane on Taylor Street would improve intersection level of service to LOS D and E under both the AM and PM peak hours, respectively. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR determined that this intersection would operate at LOS D under both peak hours with implementation of the Coleman Avenue and Autumn Street improvements.

(10) Autumn Street and Santa Clara Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street connection to Coleman Avenue as identified in the City's General Plan, in addition to providing two westbound left-turn lanes at the intersection. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. No further feasible improvements can be implemented to improve intersection level of service to acceptable levels. It should be noted that the Strategy 2000 EIR also determined that this intersection would operate at LOS E under the PM peak hour with implementation of the Autumn Street improvements. In accordance with CMP conformance standard, this is an acceptable level of service.

(12) Bird Avenue and San Carlos Street

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified the addition of a second northbound left-turn lane as a potential improvement. The addition of a second northbound left-turn lane on Bird Avenue was also identified as a potential improvement as part of the proposed baseball stadium and therefore, was assumed to be complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The implementation of the second northbound left-turn lane is projected

to only improve intersection level of service to LOS E. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection were identified in the Strategy 2000 EIR. Operational problems such as blocked intersections and an imbalance of lane usage along Bird Avenue between San Carlos Street and I-280 are due to large volumes and the close spacing of intersections. As such, signal-timing modifications along Bird Avenue between I-280 and San Carlos Street should also be implemented.

(16) Delmas Avenue and San Fernando Street

There are no further feasible improvements can be implemented to improve intersection level of service to acceptable levels.

(26) SR 87 and Julian Street (E)

The Strategy 2000 EIR also projected this intersection to operate below City LOS standards. The Strategy 2000 EIR identified improvements that included the Autumn Street extension from Julian Street to Coleman Avenue as identified in the City's General Plan, addition of second exclusive through and left-turn lanes on the SR 87 northbound off-ramp, addition of exclusive through and right-turn lanes from Notre Dame Street, addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing. The Autumn Street extension was assumed complete as part of the evaluation of Strategy 2000 background conditions as well as DSAP Buildout plus Strategy 2000 project conditions. The addition of the second exclusive through and left-turn lanes on the SR 87 northbound off-ramp and addition of exclusive through and right-turn lanes from Notre Dame Street have been completed. The implementation of the remaining addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing would improve intersection level of service to LOS E during the AM peak hour. In accordance with CMP conformance standard, this is an acceptable level of service. The deficient levels at the intersection also were identified in the Strategy 2000 EIR as well.

Intersections Outside Core/Expanded Core

The following three intersections are projected to operate at LOS E or F under DSAP Buildout plus Strategy 2000 project conditions. The intersections are subject to the city's level of service policy since they are located outside of the Downtown Core boundaries. One of the three intersections, The Alameda and Hedding Street is identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. It is recommended that the remaining two intersections be added to the City of San Jose list of protected intersections.

The City of San Jose Protected Intersection Policy provides an exemption for intersections that serve as gateways to the greater downtown area from the City's level of service policy. The Protected Intersection Policy contends that the intersections serve as gateways to the greater downtown area and experience higher traffic demands resulting in traffic impacts. The Protected Intersection Policy requests that additional capacity not be added to the intersections and they be allowed to operate at capacity (thus, not being required to meet the LOS D standard) with the expectation that alternative routes or modes will be used by drivers when delays become unacceptable.

The policy allows for the addition of intersections to the list of Protected Intersections so long as they are located within designated Special Planning Areas and consistent with the General Plan. The Special Planning Areas may inlcude:

- Transit-Oriented Development Corridors
- Planned Residential/Community Areas
- Neighborhood Business Districts
- Downtown Gateways

(67) Park Avenue and Naglee Avenue

Impact: This intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at Park Avenue and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

(76) The Alameda and Hedding Street

Impact: This CMP intersection would operate at LOS E during the AM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. The intersection of The Alameda and Hedding Street has been identified as a Protected Intersection. The LOS policy specifies that Protected Intersections consist of locations that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon other transportation facilities (such as pedestrian, bicycle, and transit systems). The policy acknowledges that exceptions to the City's LOS policy of maintaining a Level of Service D at local intersections will be made for certain Protected Intersections that have been built to their planned maximum capacity. If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided that enhance pedestrian, bicycle and transit facilities in the community near the Protected Intersection.

This significant unavoidable impact was previously identified in the City of San José's *Modifications to the City of San José's Transportation Impact Policy Final EIR* (September 2005) and therefore, is not a new impact of the proposed project.

(77) The Alameda and Naglee Avenue

Impact: This CMP intersection would operate at LOS E during the PM peak hour under Strategy 2000 background conditions, and the added trips as a result of the DSAP Buildout plus Strategy 2000 project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact.

Mitigation Measure. There are no feasible improvements at The Alameda and Naglee Avenue intersection due to right-of-way restrictions. The addition of project traffic to the intersection would result in significant unavoidable impacts. Since the intersection is along a roadway corridor that serves as a gateway to the greater downtown area, it is proposed that the intersection be added to the list of protected intersections. Until that time, the project will result in a significant unavoidable impact at this intersection.

Freeway Impacts

The results of the freeway segment analysis show that the DSAP will have a significant impact on mixed-flow lanes on 41 directional freeway segments and HOV lanes on five directional freeway segments during at least one peak hour. The DSAP results in an impact to one additional directional freeway segment when compared to Strategy 2000 background conditions.

Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. Since it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way, and no comprehensive project to add through lanes has been developed by Caltrans or VTA for individual projects to contribute to, the significant impacts on the directional freeway segments identified above must be considered significant and unavoidable.

Cumulative Conditions Intersection Levels of Service

The results of the cumulative conditions analysis show that 16 and 18 of the study intersections are projected to operate at LOS E or F during at least one peak hour under Strategy 2000 and DSAP Buildout plus Strategy 2000 cumulative conditions, respectively. When compared to Strategy 2000 cumulative conditions, the addition of traffic associated with the proposed DSAP land use adjustments would result in the degradation of levels of service at 12 intersections. However, traffic associated with the proposed DSAP land use adjustments would contribute to significant cumulative impacts at only four of the 12 intersections that are located outside of the Downtown Core Area boundary:

(67) Park Avenue and Naglee Avenue
(76) The Alameda and Hedding Street*
(77) The Alameda and Naglee Avenue*
(83) Lincoln Avenue and San Carlos Street

As identified under DSAP Buildout plus Strategy 2000 project conditions, there are no feasible improvements that can be implemented at the Park Avenue/Naglee Avenue, The Alameda/Hedding Street, and The Alameda/Naglee Avenue intersections. Similarly, no feasible improvements are possible at the Lincoln Avenue and San Carlos Street intersection. It is recommended that the Lincoln Avenue and San Carlos Street intersection also be added to the list of Protected Intersections because it serves as a gateway to the greater downtown area. The remaining eight intersections are located within the Downtown Core Area boundary and are exempt from the city's level of service policy.

Appendix C1

Transportation Impact Analysis Appendices

(Available on CD located in back of document)