

04-ALA - 580 - PM 18.82/R21.43
04-ALA-680 - PM R18.40/R21.88
Program Code
04-2A210K
February 2008

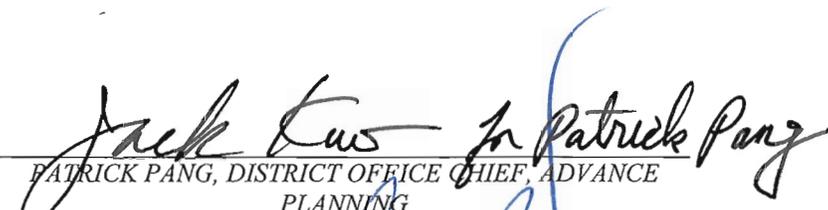
**PROJECT STUDY REPORT
(PDS)**

To

**Request Programming for
Capital Support
(Project Approval and Environmental Document
Phase)
In the 2010/2011 STIP**

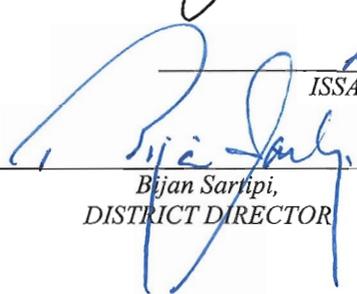
**On Route I-580
Between Hacienda Drive Interchange
and San Ramon Road/Foothill Road Interchange
and
On Route I-680
Between Stoneridge Drive Interchange
and Amador Valley Boulevard Undercrossing**

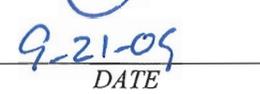
APPROVAL RECOMMENDED:


PATRICK PANG, DISTRICT OFFICE CHIEF, ADVANCE
PLANNING

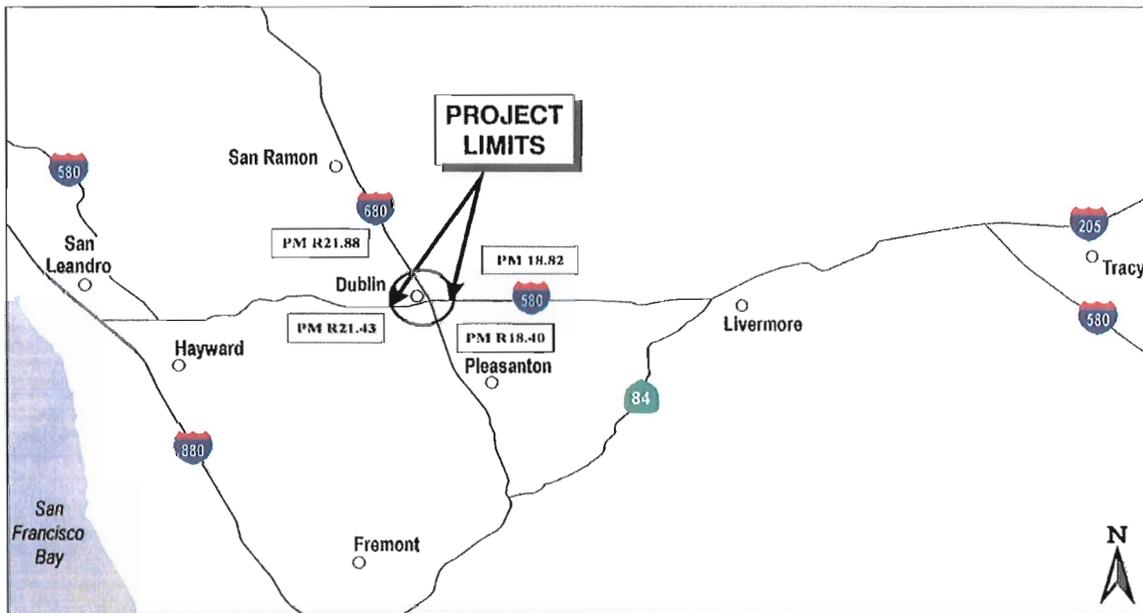

ISSA BOURI, PROJECT MANAGER

APPROVED:


Bjan Saripi,
DISTRICT DIRECTOR


DATE

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On Route I-680
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and Amador Valley Boulevard Undercrossing**

This Project Study Report/Project Development Support (PSR/PDS) has been prepared under the direction of the following Registered Engineer. The registered Civil Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



REGISTERED CIVIL ENGINEER



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Table of Contents

- 1. Introduction 4
- 2. Background 4
- 3. Purpose and Need Statement..... 6
- 4. Alternatives 7
- 5. System and regional planning 14
- 6. Environmental Determination/Document 18
- 7. Community Involvement 19
- 8. Water Quality 19
- 9. Right of way 19
- 10. Funding/Schedule..... 22
- 11. Recommendations 23
- 12. District Contacts..... 23

1. INTRODUCTION

The Alameda County Congestion Management Agency (ACCMA), in cooperation with the California Department of Transportation (Caltrans), proposes to construct I-580/I-680 High Occupancy Vehicle (HOV) connector ramps in the west-to-south and north-to-east directions, provide a direct express bus lane from the eastbound HOV connector into the East Dublin-Pleasanton BART station and provide safety and operational improvements to alleviate significant existing and future congestion along westbound I-580 in the vicinity of the I-580/I-680 interchange. This PSR/PDS has identified three alternatives to be studied, in addition to the no-build alternative. Alternative 1 provides a standard mixed-flow lane right exit direct connection from westbound I-580 to southbound I-680 and a combined westbound I-580 to southbound I-680 and northbound I-680 to eastbound I-580 median HOV lane direct connection. Alternative 2 provides a median combined mixed-flow lane and HOV lane direct connection from westbound I-580 to southbound I-680 and a northbound I-680 to eastbound I-580 HOV median lane direct connection. Alternative 3 provides a mixed-flow lane direct connection from northbound I-680 to westbound I-580 and removes the northbound I-680 to westbound I-580 loop ramp connection. As mentioned above, all three build alternatives include a direct express bus lane from the eastbound I-580 HOV direct connector into the East Dublin-Pleasanton BART station. Substantial additional engineering studies will be required to obtain agency (Caltrans and FHWA) concurrence on the proposed interchange and access modifications proposed in this study. All access from the Stoneridge I/C to I-580 will be removed per the previous conditions that allowed the Stoneridge I/C to be constructed. The estimated capital cost (construction and right of way) range from \$320 million to \$620 million. Costs are in current (2008) dollars (not escalated) unless stated otherwise. At this time, both the schedule and proposed funding sources have not yet been identified. However, it is anticipated that a combination of federal, state, and local funding sources will be required.

A Preliminary Environmental Analysis Report (PEAR) has been prepared for the project. Based on the findings of this analysis, it is anticipated that an Environmental Impact Report/Environmental Impact Statement will be required. The California Department of Transportation is the CEQA and NEPA Lead Agency for this project.

The project would be a Category 4A project and would not require a revised freeway agreement.

2. BACKGROUND

History

The original four-lane divided highway from San Leandro eastward opened in 1938, as part of US 50. The I-580/I-680 freeway-to-freeway interchange located in the cities of Dublin and Pleasanton, was constructed in 1965 as a Type F-4 full cloverleaf interchange. At about the same time, adjacent local service interchanges were constructed at Foothill Road/San Ramon Road and Hopyard Road/Dougherty Road on I-580, and at Alcosta Boulevard on I-680. In 1970, the widening of I-580 from four lanes to eight lanes was completed between I-680 and Vasco Road. The freeway system as constructed, including the I-580/I-680 Interchange, was contemplated at that time as being the complete, ultimate facility. However, following construction of the interchange, local development in the vicinity intensified, and a new local

service interchange was constructed in 1990 at the existing Stoneridge Drive Overcrossing on I-680.

In response to the increasing development, subsequent congestion, and demand for additional local service, as well as to receive Federal Highway Administration (FHWA) approval on the less-than-one-mile spacing of the Stoneridge Drive Interchange, Caltrans undertook geometric alternative studies which examined numerous variations of both partial cloverleaf and four-level, all-directional upgrades of the existing interchange. The selected four-level fully directional alternative was based on the need to simplify design, minimize right-of-way takes, avoid the use of two-lane loops and limiting access to the local access interchanges, while encouraging the highest-type design for the new direct connectors. Access between Stoneridge Drive and the freeway was contingent upon all access between Stoneridge Drive and I-580 being removed when the I-580/I-680 Interchange is modified (per Freeway agreement, dated May 17, 1988).

Beginning in early 1992, the Alameda County Transportation Authority (ACTA) undertook project development activities to implement a South-to-East Direct Connector component of the ultimate I-580/I-680 interchange configuration. Construction of this connector was completed in 2002.

In an effort to address both existing and projected congestion, I-580 HOV lanes were recommended in the 1995 Tri-Valley Transportation Council's Action Plan, MTC's "Blueprint for the 21st Century," and the MTC 1997 HOV Master Plan Update. Additionally, HOV lanes on I-580 between I-238 and I-205 are included in Caltrans' Draft I-580 Transportation Corridor Concept Report for the year 2025. In November of 2005, the Alameda County Congestion Management Agency designated the segment of I-580 easterly of the I-580/I-680 interchange as a HOT Lane Corridor.

Existing Facility

I-580 is the main east-west interregional freeway connecting I-80, I-880, and US 101 in the Bay Area and I-5 in the Central Valley. I-580 also serves as the only major transportation corridor providing a commute route between San Francisco, Oakland, San Jose, (via I-680), and the Tri-Valley (Dublin, Pleasanton, and Livermore) and growing Central Valley areas (Tracy, Stockton, and the I-5 Corridor). Additionally, I-580 is a major route for the movement of goods and freight into and out of the region, as well as significant recreational travel throughout the year. I-580 is classified as a "Lifetime Route," facilitating movement between major staging areas and impacted areas following major earthquakes and is the main access to the Homeland Security Organization at Lawrence Livermore National Laboratory.

Rapid development in eastern Alameda County, the Central Valley, and Santa Clara County has resulted in an increase in interregional traffic in recent years. Traffic delays have steadily grown worse along the I-580 corridor and at the I-580/I-680 interchange over the past decade. The existing congestion is caused by heavy commuter traffic during weekdays and heavy recreational traffic on weekends. The 2001 Caltrans traffic projections indicated an increase of 43 percent in the average daily traffic for both directions of I-580 in 2025. Westbound AM peak volumes will grow by approximately 25% and Eastbound PM peak traffic is expected to double.

3. PURPOSE AND NEED STATEMENT

Project Purpose

The purpose of the modification to the I-580/I-680 Interchange is to:

- ◆ Improve capacity, operations, and safety on westbound I-580 between the Hacienda Drive Interchange and the Interstate 580/680 interchange in the Tri-Valley area.
- ◆ Meet increasing transportation demand and enhance modal inter-relationships in the corridor. Interstate 580 is the only major transportation corridor providing a commute route from the growing Central Valley areas (Tracy, Stockton, and the Interstate 5 Corridor) to San Francisco, Oakland, San Jose (via Interstate 680) and the Tri-Valley (Dublin, Pleasanton, and Livermore).
- ◆ Enhance both mixed flow and HOV system connectivity between I-580 and I-680.

The movement of passengers, goods, and freight depends on the connectivity and people-carrying capacity of both I-580 and I-680. This project may remove some local access to maintain regional connectivity and efficiency. Specifically, current freeway agreements call for the elimination of the Stoneridge Drive to I-580 connections due to the close proximity of the connections to the I-580/I-680 interchange. Additionally, the movements of northbound and southbound I-680 to San Ramon Road/Foothill Road may be removed in Alternative 3. This is due to vertical clearance requirements between the alignment of Alternative 3 and the north pedestrian overcrossing access to the new West Dublin-Pleasanton BART station

Project Need

I-580 currently experiences severe congestion while carrying substantial traffic volumes through the project area during peak hours. Long-range projections indicate an increase in person-trips along this freeway segment associated with the continuing development within the project corridor and in the Central Valley. Travel demands and urban growth projections indicate that, if no improvements are made, unacceptable levels of service will extend for longer periods of time during peak travel periods. The No-Build alternative would continue to extend the periods of unacceptable delays and congestion, as well as perpetuate existing safety issues. As traffic volumes increase, per forecasted projections, traffic conditions will continue to worsen and become intolerable within the foreseeable future. Additionally, it is critical to reduce the number of accidents that take place in the project location due to the weaving problems associated with conflicting traffic movements. Therefore, there is a critical need to decrease existing and projected freeway congestion by improving the people-carrying capacity, as well as meeting the increasing transportation demands of I-580 and the I-580/I-680 interchange.

This project will draw consensus from the region regarding the elimination of selected existing local access to I-580 in order to achieve a significant overall improvement in freeway operations for both I-580 and I-680.

4. ALTERNATIVES

Three “Build” alternatives and a “No Build” alternative were evaluated within the PSR (PDS). The identification of these three “Build” alternatives was the subject of an intensive alternatives analysis process performed over a period of more than 15 months. Extensive coordination meetings and conceptual design workshops were held involving representatives of the Alameda County Congestion Management Agency, the Alameda County Public Works Agency, the Bay Area Rapid Transit District (BART), the cities of Dublin, Livermore, and Pleasanton, the Federal Highway Administration, the Livermore-Amador Valley Transit Agency (LAVTA), and the California Highway Patrol (CHP).

Project alternatives considered consisted of different configurations of HOV facilities overlaying the ultimate buildout of the I-580/I-680 interchange. The provision of mixed-flow and HOV facilities at the interchange are separate actions with independent utility. However, the geometry of future mixed-flow lanes will impact the location and constructability of HOV facilities. Therefore, it is necessary to evaluate alternative HOV facilities in context of the ultimate buildout of the I-580/I-680 interchange.

Reference is made to the technical memorandum entitled, “I-580/I-680 Freeway Interchange Improvements, High Occupancy Vehicle (HOV) Facilities, Preliminary Geometric Design Analysis” dated October 2005 and last revised in June 2006, that identified over 20 different alternative project concepts.

Major criteria used to evaluate alternative concepts included:

- ◆ Effectiveness towards mitigating need (i.e. decrease traffic congestion)
- ◆ Construction cost
- ◆ Maintenance of traffic and safety during construction
- ◆ Maintenance of existing local access and traffic movements
- ◆ ROW acquisition
- ◆ Impacts to BART
- ◆ Additional environmental impacts

Virtually all of the concepts considered require some amount of right-of-way acquisition from the Dublin Sports Park which, as described elsewhere in this Report, requires a Section 4(f) Evaluation and approval. A concept was developed that specifically sought to eliminate right-of-way acquisition from Dublin Sports Park by moving improvements towards the south. The resulting impacts to the Hilton Hotel, the wastewater treatment plant, other local infrastructure and businesses south of I-580 were considered too great for the concept to be considered viable.

One of the families of alternatives studied and discarded can be characterized as including tunnel components. These alternatives were discarded due to high groundwater at the site, high costs associated with tunneling construction, high negative impacts to freeway operations during construction, and high costs in perpetuity for maintenance.

Another family of alternatives studied and discarded included concepts that required significant relocation of BART mainline facilities. BART is not subject to eminent domain and concepts that require relocation were considered to be problematic in terms of schedule and cost, and therefore these concepts were discarded.

The selected build alternatives are described below.

Alternative 1 meets all current Caltrans Design Standards, but also has the greatest right-of-way impact. Alternative 1 includes HOV connectors from northbound I-680 to eastbound I-580 and westbound I-580 to southbound I-680. The east end of the HOV connectors would ascend from separate eastbound and westbound positions adjacent to the median of I-580, straddling the BART tracks at the East Dublin/Pleasanton BART Station. The HOV connector structure would extend west over the BART tracks in the I-580 median, crossing over the center of the Dougherty Road/Hopyard Road interchange structure at the third level. The HOV structure would ascend to the fourth level to cross above the I-580/I-680 interchange, and then descend to enter the I-680 median north of Stoneridge Drive. Alternative 1 also includes a bus-only ramp that would ascend from the bus terminal at the East Dublin/Pleasanton BART Station to the eastbound HOV lane located near the median on I-580.

This alternative also provides a two-lane mixed-flow exit ramp on the right side of westbound I-580 to northbound and southbound I-680 beginning just to the west of the Dougherty Road/Hopyard Road interchange. The ramp would ascend on a structure, splitting to southbound and northbound ramps near the Alamo Canal. The southbound ramp structure would cross over the I-580/I-680 interchange at the fourth level and descend on the west side of I-680, merging with the freeway at the Stoneridge Drive interchange. The northbound ramp structure would descend on the east side of I-680, merging with the freeway at Amador Valley Boulevard.

Access from I-580 to the Stoneridge Drive interchange would be eliminated with this alternative. Traffic from Dougherty Road would access westbound I-580 from a new lane that would merge with the proposed new northbound I-680 off ramp and the existing northbound I-680 to westbound I-580 loop connector. Traffic on southbound I-680 would access Stoneridge Drive from a new exit ramp starting at the north end of the I-580/I-680 interchange, carrying over the interchange on a structure at the second level, and merging with the existing southbound exit ramp at Stoneridge Drive. A hook ramp from northbound I-680 to Village Parkway would also be added, completing the Dublin Boulevard Interchange. Alternative 1 would require the acquisition of 6.6 acres of land from the Dublin Sports Park and Dublin Library through Section 4(f) condemnation.

Alternative 2 meets most current Caltrans Design Standards while requiring less right-of-way than Alternative 1. Alternative 2 also includes HOV connectors from northbound I-680 to eastbound I-580 and westbound I-580 to southbound I-680. The east end of the HOV connectors would ascend from separate eastbound and westbound positions adjacent to the median of I-580. The westbound HOV connector would begin east of the Dougherty Road/Hopyard Road interchange, cross under the interchange structure and then join the same structure as the mixed-flow connector lanes from westbound I-580 to southbound I-680. The eastbound HOV connector would begin in the median of northbound I-680, north of the Stoneridge Drive

interchange, ascend on structure over the I-580/I-680 interchange at the third level, and descend into the median of eastbound I-580, crossing over the Dougherty Road/Hopyard Road interchange and merging with the freeway at the East Dublin/Pleasanton BART Station. A bus-only ramp would ascend from the bus terminal at the East Dublin/Pleasanton BART Station to the eastbound HOV lane located near the median on I-580. Alternative 2 would require the acquisition of 2.6 acres of land from the Dublin Sports Park and Dublin Library through Section 4(f) condemnation.

Mixed-flow traffic from westbound I-580 to southbound I-680 would exit from the left side of I-580 on a new structure beginning just west of the Dougherty Road/Hopyard Road interchange. This connector structure would cross the I-580/I-680 interchange at the fourth level and descend on the left side of the southbound I-680 lanes, merging with the freeway north of Stoneridge Drive. The existing westbound I-580 to southbound I-680 loop connector would be maintained for truck traffic and traffic accessing southbound I-680 from the Dougherty Road/Hopyard Road interchange. An exit ramp on the right side of westbound I-580 would continue to provide access to northbound I-680.

All existing local access ramps would be maintained with this alternative. Traffic from Dougherty Road would access westbound I-580 with a hook ramp similar to the existing on-ramp. The Stoneridge Drive interchange would remain in its current configuration.

Alternative 3 (Minimum Project Alternative, MPA) This alternative would eliminate the existing northbound I-680 to westbound I-580 loop connector and replace it with a direct connector structure to carry northbound I-680 mixed flow traffic over the interchange at the third level to westbound I-580. The project would also add an exit lane from the Dougherty/Hopyard interchange through the existing westbound I-580 to southbound I-680 loop connector to provide additional capacity for the westbound I-580 to southbound I-680 traffic movement. A narrower, non-standard shoulder width is proposed on I-580 from west of the Dougherty Road/Hopyard Road interchange to east of the I-580/I-680 separation to avoid replacing the I-580/I-680 separation structure. A bus-only ramp would ascend from the bus terminal at the East Dublin/Pleasanton BART Station to the eastbound HOV lane located near the median on I-580.

Access from NB and SB I-680 to the San Ramon/Foothill interchange on I-580 and access from the Stoneridge Drive interchange on I-680 to I-580 would be eliminated. Alternative 3 would require the acquisition of 1.9 acres of land from the Dublin Sports Park and Dublin Library through Section 4(f) Right of Way requirements.

No Build Alternative – Under the No Build Alternative, no improvements would be made to the existing I-580/I-680 interchange. The current congestion and safety issues would remain, and become more significant in the future. A westbound HOV lane would be constructed through the I-580/I-680 interchange to the San Ramon Road/Foothill Road interchange as a separately programmed CMIA project. A bus-only ramp would also be built from the westbound HOV lane on I-580 to the bus terminal at the East Dublin/Pleasanton BART Station.

Traffic Operational Analysis of Alternatives

A Draft Traffic Operations Memorandum has been prepared, in which all three alternatives, plus a No-Build alternative, were analyzed under 2035 conditions. See Attachment I “Traffic Forecasting, Analysis and Operations Scoping Checklist” for further discussion concerning traffic forecasting and operational analysis.

Summary of Results

Table 1 shows the network-wide performance Measures of Effectiveness (MOEs) extracted from the VISSIM simulation model under year 2035 conditions. The network-wide performance measures include:

- ◆ Vehicle-Hours of Delay – a measure indicating the total amount of delay (defined as travel speeds lower than free-flow conditions) experienced by all vehicles in the system throughout the study period.
- ◆ Average Vehicle Speed – a measure of the overall travel speed through the system. The average travel speed calculation considers the effect of vehicle queues and overall congestion.
- ◆ Vehicle-Miles Traveled – the total distance of vehicle travel on a designated set of roadways.

Performance Measure	No Build		Project – Alternative 1		Project – Alternative 2		Project – Alternative 3	
	AM	PM	AM	PM	AM	PM	AM	PM
Vehicle-Hours of Delay	4,538	2,062	4,084 (-10%)	1,958 (-5%)	859 (-81%)	1,077 (-48%)	2,543 (-44%)	1,853 (-10%)
Average Vehicle Speed (mph)	20	35	23 (+15%)	36 (+3%)	46 (+130%)	44 (+26%)	31 (+55%)	36 (+3%)
Vehicle-Miles Traveled	138,000	175,000	145,000 (+5%)	176,000 (+1%)	177,000 (+28%)	181,000 (+3%)	166,000 (+20%)	177,000 (+1%)

Source: Fehr & Peers, 2007

Vehicle-Hours of Delay (VHD)

The vehicular hours of delay was calculated for Year 2035 for each alternative. In the AM peak hour, if no improvements are made to the I-580/I-680 interchange, about 4,538 vehicle hours of delay would occur. Alternative 3 would reduce the vehicle hours of delay to about 2,553, representing a 44 percent improvement over the No Build condition. Alternative 2 would further reduce vehicle hours of delay to about 859 or an 81 percent reduction compared to the No Build scenario. Alternative 1 would have the least impact for the AM peak, reducing the vehicle hours of delay to about 4,084 vehicle hours, a reduction of just 10 percent.

The project benefits are less pronounced during the PM peak hour, because most of the improvements studied do not directly address the primary eastbound travel patterns. Alternative 3 would reduce vehicle hours of delay from about 2,062 to 1,853, providing a 10 percent reduction. Alternative 2 would further reduce vehicle hours of delay to about 1,077, representing a 48 percent reduction compared to the No Build alternative. Likewise, Alternative 1 reduces vehicle delay to 1958 vehicle hours, a decrease of just 5 percent.

Travel Speed

A comparison of travel speeds between the three build alternatives shows that both Alternatives 2 and 3 would result in a significant improvement to average travel speed, particularly in the AM peak hour. Alternative 1 would cause a more modest improvement in travel speed. In the AM peak hour, Alternative 3 would increase average travel speeds within the study area by 55 percent while Alternative 2 would increase average travel speeds by 130 percent. Alternative 1 would increase the average vehicle speed by just 15 percent during the AM peak. In the PM peak hour, Alternatives 1 and 3 would increase average travel speeds by 3 percent while Alternative 2 would increase travel speeds by 26 percent. As an aside, with Alternative 3, the northbound I-680 to westbound I-580 travel times increase because of the assumed ramp metering of this freeway-to-freeway connector.

Vehicle-Miles Traveled (VMT)

Each of the three build alternatives increase VMT within the study area by increasing the total throughput of vehicle traffic. In the AM peak hour, Alternative 1 would increase VMT from 138,000 to 145,000, or 5 percent; Alternative 2 would increase VMT to 177,000 or about 28 percent, and Alternative 3 would increase VMT from 138,000 to 166,000 or about 20 percent, while compared to the No Build alternative. In the PM peak hour, VMT would be very similar in all scenarios.

Safety and Traffic Accident Data

Accident data for I-580 and I-680 within the project limits was obtained from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS)-Traffic System Network (TSN) for the three year period from May 1, 2004 and April 30, 2007 and is summarized below. Along I-580, the accident data indicates that the frequency of accidents within the projects limits is higher than the state average, however, the fatality accident rate is lower than the state average. Along I-680, the accident data indicates that the frequency and severity of accidents within the project limits is lower than the statewide average.

**TABLE 1
TASAS ACCIDENT RATE DATA FOR I-580 AND I-680**

Facility			Number of Accidents			Accident Rate (accidents/million vehicle miles)					
			Total	Fatal	Fatal + Injury	Actual			State Average		
County	Route	From – To (Post Miles)				Fatality	Fatal + Injury	Total	Fatality	Fatal + Injury	Total
ALA	I-580	PM 18.820 – PM R021.430	1,141	1	339	0.002	0.60	2.01	0.005	0.32	1.03
ALA	I-680	PM R018.400 – PM R021.878	279	2	103	0.003	0.17	0.46	0.006	0.34	1.09

Note: Shading denotes locations that exceeded the statewide average.
Source: Caltrans District 4 TASAS data between 5/1/2004 and 4/30/2007.

Over the last three years, the I-580 mainline has experienced a collision rate that is higher than the statewide average for a comparable freeway mainline facility. According to TASAS records from the latest available three years, there were 1,141 reported collisions along the study mainline corridor. In terms of collision type, about 74 percent were rear-end, 16 percent sideswipe, 7 percent hitting fixed objects, and various other types making up the remainder. In terms of primary factors, speeding accounted for nearly 70 percent of all collisions, 19 percent “other violations”, six percent improper turning, and the remainder consisted of assorted other factors. Also, over the last three years, the I-680 mainline has experienced a collision rate that is lower than the statewide average for a comparable freeway mainline facility. According to TASAS records from the latest available three years, there were 279 reported collisions along the study mainline corridor. In terms of collision type, about 39 percent were hitting fixed objects, 33 percent rear-end, 19 percent sideswipe, and various other types making up the remainder. In terms of primary factors, speeding accounted for 39 percent of all collisions, 25 percent improper turning, 21 percent “other violations”, and the remainder consisted of assorted other factors.

With the vast majority of collisions being rear-end type and occurring primarily due to speeding, it can be inferred that most collisions are due to existing mainline congestion. The most common type of congestion-related collisions are rear-end, which can occur when vehicles of varying speeds follow each other too closely. It is expected that with the implementation of the proposed interchange modification project, mainline congestion will reduce and consequently the likelihood of rear-end collisions attributable to congestion will decrease along the mainline.

The following table summarizes these accidents by accident type and calculates the percentage of each accident type.

SUMMARY OF ACCIDENT TYPE

TYPE OF ACCIDENTS	I-580		I-680	
	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Head-on	1	0.1%	2	0.7%
Sideswipe	181	15.9%	53	19.0%
Rear End	841	73.7%	91	32.6%
Broadside	15	1.3%	7	2.5%
Hit Object	85	7.4%	110	39.4%
Overturn	15	1.3%	14	5.0%
Auto-Pedestrian	1	0.1%	0	0.0%
Other	2	0.2%	2	0.7%
TOTAL	1141	100%	279	100%

Existing Conditions

The I-580/I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a 450-foot weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks, which is exacerbated by the grade change within the loop ramps. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

I-580 westbound is also greatly affected by the short weave section between the Dougherty/Hopyard Road interchange and I-680. During the AM peak hour, approximately 3,500 vehicles traveling on I-580 westbound are destined for I-680 northbound or southbound. To access I-680, all the vehicles need to shift to the two right-most lanes on I-580 to take the I-580 to I-680 off-ramp. These vehicles conflict with approximately 4,400 vehicles on I-580 continuing along I-580 westbound. During the PM peak hour, approximately 3,500 vehicles on I-580 trying to access I-680 conflict with approximately 3,000 vehicles continuing to travel on I-580 westbound. This conflict during the AM and PM peak periods is further compounded by the addition of vehicles merging onto the freeway from the Hopyard Road on-ramp.

The combination of slow-moving vehicles and the short weave sections between the I-580/I-680 interchange loop ramps and between the Dougherty/Hopyard Road interchange and I-680 results in heavy congestion and queues that spill back onto westbound I-580. During the AM peak period the congestion along I-580 westbound can extend from I-680 into the City of Livermore, leading to long delays, high travel times, and unsafe driving conditions. Similar conditions occur during the PM peak period except the level of congestion is lower than the AM peak period with the queue extending back through the Hacienda Drive interchange area.

5. SYSTEM AND REGIONAL PLANNING

State Planning

The portion of I-580 from the City of San Leandro eastward opened in 1938. It was originally part of U.S. 50. The entire route was added to the California Freeway and Expressway system in 1959. A widening from four lanes to eight lanes was completed in 1970 between I-680 and Vasco Road. This improvement opened the area to affordable single-family housing developments and major employment centers.

I-580 is vital to interregional commuting, recreational traffic and trucking (it is the regional corridor with the highest volume of 5+ axle trucks). From a statewide perspective, I-580 is a critical Interstate connection between the Bay Area and I-5, the State's north-south Interstate facility. It is a major link between the Bay Area, San Joaquin Valley and the Sierra. It also comprises a portion of the main freeway "path" between the San Francisco metropolitan region and Southern California.

I-680 is also vital to interregional commuting and recreational traffic and trucking. From a statewide perspective, I-680 is a critical Interstate connection between Sacramento/Yolo/Solano/Contra Costa Counties with State Routes 24, 242, 84, 237, 238, I-80, I-280, I-780, I-880 and U.S 101

The Route Concept Report prepared by Caltrans for I-580 in 1985 stated that, level of service F operations would result by 2005 if no mitigation was done to alleviate the congestion. One of the concepts and strategies defined in this study to alleviate the congestion was the expansion of I-580 between Greenville Road and I-680 from eight lanes to ten lanes.

Since 1985, other mitigation concepts and strategies for I-580 congestion relief have been presented at the State level. The Draft I-580 Transportation Corridor Concept Report proposed HOV lanes and ramp metering between I-205 and I-238. It was estimated that this was the maximum lane configuration/operational concept that may exist in the year 2025, based on existing setting, currently programmed projects, and planned projects from various regional and local planning programs. In 1988, a similar recommendation to incorporate HOV lanes and ramp metering on I-580 between Greenville Road and I-680 was also proposed in Caltrans' System Management Plan. The plan outlines transportation strategies to improve the overall capacity and efficiency of the system.

In July 2001, the I-580 HOV Lane Project, which was to study and construct the eastbound and westbound HOV lanes from Vasco Road to Tassajara Road/Santa Rita Road and listed in Governor Gray Davis' TCRP, became eligible for \$25 million when the Governor signed AB 2928 (Torlakson). AB 2928 (Torlakson) is a comprehensive transportation funding measure to relieve congestion in the State's transportation system. The I-580 HOV Lane Project was identified as project number 31 in the TCRP.

As Interstate facilities, I-580 and I-680 are legislatively designated as part of the Interregional Road System (IRRS) and as Interstates they are automatically specified as a High Emphasis

Route (HER) in the IRRS. HERs are IRRS routes of increasing importance to region-to-region travel as well as state to state through movement of people and goods.

I-580 has also been included by the State as an Intermodal Corridor of Economic Significance (ICES), critical to the movement of freight and, as an Interstate facility, is included in the Federal National Highway System that consists of roads that are of importance to the nation's economy, defense and mobility.

The I-580/I-680 HOV Lane Direct Connector Project is consistent with the vision for transportation in the year 2025 and beyond as outlined, and the goals, policies and strategies as defined, in the March 2004 Draft California Transportation Plan 2025. The statewide, long-range transportation plan, although it does not select projects, provides guidance to transportation decisions and investments in the 21st Century.

The Governor's Strategic Growth Plan (2006) calls for an infrastructure improvement program that includes a major transportation component (GoCalifornia). The SGP is based on the premise that investments in mobility throughout the system will yield significant improvements in congestion relief. It calls for transportation infrastructure improvements that are designed to decrease congestion, improve travel times and safety, while accommodating growth in the economy and population. The Strategic Growth Plan was supported by the passage of the transportation bond (Prop 1B) in the November 2006 election. The Corridor Mobility Improvement Account (CMIA) was developed as part of Prop 1B and includes funding for projects in this corridor, including funding for EB and WB HOV lanes on I-580 from Foothill Blvd. to Greenville Rd.

On March 15, 2007, the CTC adopted *Resolution CMIA-P-0607-02*. In Sections 2.12 and 2.13 of this resolution, the CTC resolved that "...the Commission expects Caltrans and regional agencies to preserve the mobility gains of urban corridor capacity improvements over time that will be described in Corridor System Management Plans (CSMPs),..." A CSMP is a transportation planning document that will study the facility based on comprehensive performance assessments and evaluations. The strategies are phased and include both operational and more traditional long-range capital expansion strategies. The strategies take into account transit usage and projections and interactions with arterial networks and connection to State Highways. Each CSMP presents an analysis of existing and future traffic conditions and proposes traffic management strategies and capital improvements to maintain and enhance mobility within each corridor.

The Transportation Corridor Concept Report (TCCR) or Corridor Plan (CP) is a long range system planning document that establishes a planning concept for a state highway through the year 2030. The TCCR also identifies existing mass transit, arterial road system, and the deployment of Intellectual Transportation System (ITS) as integral to corridor concept development.

Draft Corridor plans (CP) that have been completed within the vicinity of the project limits are:

- I-680 North-6/04/07
- I-680 South-6/04/07
- I-680 Corridor Data sheet -3/27/07
- I-580/80-2/19/07

Regional Planning

MTC's Transportation 2030 Plan for the San Francisco Bay Area and MTC's Blueprint for the 21st Century, Phased Implementation Plan (2000), included the project to add HOV lanes on I-580, between Vasco Road and Tassajara Road/Santa Rita Road (MTC Project Reference Number 22013, \$445.0 million). The Blueprint identified transportation needs in rail, ferry and rapid bus/HOV systems, focused on near-term relief to the most congested travel corridors and supported expansion of the transit services in the region. It also indicated that one of the benefits achieved by projects included in the plan was to accelerate the expansion of the HOV system to promote use of rapid bus service and carpools. The westbound I-580 to southbound I-680 direct connector is included in MTC's Transportation 2030 Plan (reference number 22013).

The proposed project is included in the 2002 MTC HOV Master Plan, and the Alameda County Congestion Management Agency's County-wide Transportation Plan (CWTP) as part of the CMA Planning Area 4 "vision strategy".

The Alameda County Congestion Management Agency in co-operation with the cities of Livermore, Pleasanton and Dublin, and with participation from Caltrans, Alameda County and Alameda County Transportation Improvement Authority prepared the Triangle Traffic Study. The purpose of the study was to develop a long range transportation plan for improvements on I-580, I-680 and Route 84 that benefits the Tri-Valley region. The study made recommendations for project sequencing and an implementation strategy that will provide cost effective improvements to relieve congestion that are consistent with the transportation needs in the area. The I-580/I-680 westbound to southbound, and northbound to eastbound HOV lane direct connectors were recommended as priority projects as a result of the Triangle Study.

In September 2006, the ACCMA Board approved initiating an operational and revenue analysis for an eastbound I-580 High Occupancy/Toll (HOT) lane in this portion of the I-580 corridor.

Recently completed, on-going, and future I-580 corridor improvements included in MTC's Transportation 2030:

- I-580 TOS and Ramp Metering, San Joaquin County Line to City of Dublin (Phase 1) (21085)
- I-580 TOS and Ramp Metering, City of Dublin to I-880 (Phase 2) (22092)
- I-580 Auxiliary Lane, Santa Rita Road/Tassajara Road to Airway Boulevard Interchanges (21456)

- I-580/San Ramon Road/Foothill Road Interchange Improvements (21489)
- I-580/I-680 TOS Improvements (21493)
- I-205/I-580 Altamont Pass Westbound Truck Lane (22657)
- I-580 Eastbound Auxiliary Lane, First Street to Vasco Road (22785)
- Install Ramp Metering on All Existing I-580 Ramps in Livermore (22786)
- I-580/Vasco Road Interchange Improvements (21100)
- I-580/Isabel Avenue Interchange Improvements (Phases 1 and 2) (22105)
- New West Dublin/Pleasanton BART Station (21133)
- I-580/First Street Interchange Improvements (21475)
- I-580/Greenville Road Interchange Improvements (21477)
- I-580 HOV/Auxiliary Lanes/Truck climbing Lane Corridor Improvements (22013)
- I-580 HOT Lanes, Greenville Road to I-680 (22664)

Local Planning

The Tri-Valley Transportation Council, represented by the counties of Contra Costa and Alameda, the cities of San Ramon, Pleasanton, Livermore and Dublin and the Town of Danville, completed the Tri-Valley Transportation Plan/Action Plan for Routes of Regional Significance in 1995. The plan presented eleven high-priority transportation improvements to alleviate traffic congestion in the area; one of the eleven improvements was the improvements to the I-580/I-680 interchange. Funding for the improvements was set up through the Tri-Valley Development Fee, which is applied and collected from new residential and commercial developments.

The Regional Measure 2, approved by Bay Area voters in March 2004, increased the tolls on State-owned bridges to \$3. The revenue from the increased tolls is dedicated to funding specific transportation capital projects and operating costs for selected transit operators. One of the projects funded by this measure is the design and construction of the direct bus ramps into the East Dublin/Pleasanton BART station.

6. ENVIRONMENTAL DETERMINATION/DOCUMENT

A key issue for project alternatives is acquisition of the Dublin Sports Grounds, a major public park in the City of Dublin and the Dublin Library. The required acquisition varies between 1.9 acres (Alternative 3) to 6.6 acres (Alternative 1) This would require a Section 4(f) Evaluation and approval, which is the principal reason why environmental review of the project will require an EIR/EIS. The California Department of Transportation is the CEQA and NEPA Lead Agency for this project.

The property occupied by the Dublin Sports Grounds was deeded to the City of Dublin by the U.S. government through the National Park Service in 1988 for a public park and public recreational area. A covenant of that deed is that the property be used for a public park and recreation area in perpetuity. In the event there is a breach of that or any other condition or covenant of the deed, title and interest to the property shall revert to and become the property of the United States at its option.

The residential and commercial development of the City of Dublin is divided into two separate parts by U.S. government and Alameda County land that lies between Dougherty Road to the west and Tassajara Road to the east. The Dublin Sports Grounds is the only large developed park and recreation facility located in west Dublin and all remaining land in that portion of the City is approaching buildout. East Dublin is currently going through commercial and residential expansion and park facilities are planned for that portion of the City. As indicated above, the loss of a portion of the Sports Grounds could result in all of it reverting to the U.S. government. Because of a lack of vacant land in west Dublin, the central location of the park, and deed covenants on the land, encroachment by the HOV Connector Project into the Dublin Sports Center would result in a substantial 4(f) impact, and it is not clear that this impact could be mitigated to the satisfaction of the City of Dublin. This issue could result in substantial project schedule delays.

Another important issue associated with the project is elimination of access to I-580 from the Stoneridge Drive interchange under Alternatives 1 and 3, and elimination of access to I-680 from the San Ramon Road/Foothill Road interchange under Alternative 3. This is expected to raise concerns to business owners at Stoneridge Mall and in the commercial area of Dublin in the northwest quadrant of the I-580/I-680 interchange, and it will raise general public concern regarding the ease of access to these commercial areas.

It is expected that project alternatives can avoid impacts to Alamo Canal. If project construction cannot avoid this canal, project alternatives have the potential to impact habitat for the threatened California red-legged frog and California tiger salamander. This would require biological surveys for these species. Alamo Canal qualifies as waters of the U.S. but it does not contain wetlands in the project area. Therefore, if the canal is impacted by project alternatives, a 404 permit would be required from the U.S. Army Corps of Engineers, a 401 Water Quality Certification would be required from the San Francisco Regional Water Quality Control Board, and a Streambed Alteration Agreement would be required from the California Department of Fish and Game.

7. COMMUNITY INVOLVEMENT

As stated previously, Alternative 1 and Alternative 3 would require access restrictions. In Alternative 1, access from I-580 to the Stoneridge Drive interchange would be eliminated. Traffic from Dougherty Road would access westbound I-580 from a new lane that would merge with the proposed new northbound I-680 off ramp and the existing northbound I-680 to westbound I-580 loop connector. Traffic on southbound I-680 would access Stoneridge Drive from a new exit ramp starting at the north end of the I-580/I-680 interchange, carrying over the interchange on a structure at the second level, and merging with the existing southbound exit ramp at Stoneridge Drive. A hook ramp from northbound I-680 to Village Parkway would also be added, completing the Dublin Boulevard Interchange. Alternative 1 would require the partial acquisition of land from the Dublin Sports Park and Dublin Library.

In Alternative 3, access from NB and SB I-680 to the San Ramon/Foothill interchange on I-580 and access from the Stoneridge Drive interchange on I-680 to I-580 would be eliminated. Alternative 3 would require partial acquisition of land from the Dublin Sports Park and Dublin Library.

These access restrictions were discussed during extensive coordination meetings and conceptual design workshops that were held involving representatives of the Alameda County Congestion Management Agency, the Alameda County Public Works Agency, the Bay Area Rapid Transit District (BART), the cities of Dublin, Livermore, and Pleasanton, the Federal Highway Administration, the Livermore-Amador Valley Transit Agency (LAVTA), and the California Highway Patrol (CHP).

8. WATER QUALITY

The project will comply with Caltrans' Statewide NPDES permit. A Storm Water Data Report was prepared for the project summarizing the actions taken in compliance with the permit.

9. RIGHT OF WAY

Each of the three build alternatives will require Section 4(f) right-of-way acquisition from the Dublin Sports Complex due to the widened westbound roadway and addition of new ramps north of existing I-580. The impacts of this Section 4(f) right-of-way acquisition is discussed in more detail at the end of this section, as well as in the Preliminary Environmental Analysis Report (PEAR). Each of the alternatives is anticipated to require relocation displacement of Office Depot near the Dougherty Road/Hopyard Road interchange. The right-of-way impacts to Scarlett Court, east of Dougherty Road, are subject to negotiation with the City of Dublin and will be defined during the Project Report phase of this project. Any additional right-of-way impacts will be defined in the Project Report phase.

The attached Right of Way Data Sheets (Attachment J) summarizes the right-of-way issues applicable to each alternative.

Alternative 1:**Acquisition**

The proposed right-of-way acquisition for this alternative involves 41 parcels (38 partial takes and 3 full takes) covering approximately 16.70 acres with an approximate cost of \$110M (including utilities). The fill slope (4:1) from the widening near the Dublin Sports Complex will require about 215 feet of right-of-way take into the recreational field. However, the right-of-way acquisition could be minimized by constructing a retaining wall.

Railroad

Once an alternative is selected for further study, BART will most likely need to be single tracked for a period of time during construction of the footings and columns. A cooperative agreement will be required with BART, and BART will require a construction permit. There will most likely be specification requirements, and additional requirements from BART while working within the BART operating envelope. The impact of this single tracking will be further defined during PA/ED and PS&E.

Utilities

Initial coordination with utility companies has been completed. Some utility company information has been collected. Coordination is expected to occur with Dublin San Ramon Services District (DSRSD). As alternatives are further defined, complete utility coordination and investigation will be required during PS&E, unless indicated otherwise during PA/ED.

Alternative 2:**Acquisition**

The proposed right-of-way acquisition for this alternative involves 29 parcels (26 partial acquisitions and 3 full acquisitions) covering approximately 11.04 acres with an approximate cost of \$70M (including utilities). The fill slope (4:1) from the widening near the Dublin Sports Complex will require about 160 feet of right-of-way take into the recreational field. However, the right-of-way acquisition could be minimized by constructing a retaining wall.

Railroad

Once an alternative is selected for further study, BART will most likely need to be single tracked for a period of time during construction of the footings and columns. A cooperative agreement will be required with BART, and BART will require a construction permit. There will most likely be specification requirements, and additional requirements from BART while working within the BART operating envelope. The impact of this single tracking will be further defined during PA/ED and PS&E.

Utilities

Initial coordination with utility companies has been completed. Some utility company information has been collected. Coordination is expected to occur with Dublin San Ramon Services District (DSRSD). As alternatives are further defined, complete utility coordination and investigation will be required during PS&E, unless indicated otherwise during PA/ED.

Alternative 3:

Acquisition

The proposed right-of-way acquisition for this alternative involves 22 parcels (20 partial acquisitions and 2 full acquisitions) covering approximately 10.20 acres with an approximate cost of \$42M (including utilities). The fill slope (4:1) from the widening near the Dublin Sports Complex will require about 137 feet of right-of-way acquisition into the recreational field. However, the right-of-way acquisition could be minimized by constructing a retaining wall.

Railroad

Once an alternative is selected for further study, BART would most likely need to be single tracked for a period of time during construction of the footings and columns. A cooperative agreement will be required with BART, and BART will require a construction permit. There will most likely be specification requirements, and additional requirements from BART while working within the BART operating envelope. The impact of this single tracking will be further defined during PA/ED and PS&E.

Utilities

Initial coordination with utility companies has been completed. Some utility company information has been collected. Coordination is expected to occur with Dublin San Ramon Services District (DSRSD). As alternatives are further defined, complete utility coordination and investigation will be required during PS&E, unless indicated otherwise during PA/ED.

Section 4(f) Right-of-Way Impacts

The property occupied by the Dublin Sports Grounds was deeded to the City of Dublin by the U.S. government through the National Park Service in 1988 for a public park and public recreational area. A covenant of that deed is that the property be used for a public park and recreation area in perpetuity. In the event there is a breach of that or any other condition or covenant of the deed, title and interest to the property shall revert to and become the property of the United States at its option.

The residential and commercial development of the City of Dublin is divided into two separate parts by U.S. government and Alameda County land that lies between Dougherty Road to the west and Tassajara to the east. The Dublin Sports Grounds is the only large developed park and recreation facility located in west Dublin and all remaining land in that portion of the City is approaching buildout. East Dublin is currently going through commercial and residential expansion and park facilities are planned for that portion of the City. As indicated above, the loss of a portion of the Sports Grounds could result in all of it reverting to the U.S. government. Because of a lack of vacant land in west Dublin, the central location of the park, and deed covenants on the land, encroachment by the I-580 / I-680 Freeway Interchange Improvements Project into the Dublin Sports Center would result in a substantial 4(f) impact, and it is not clear that this impact could be mitigated to the satisfaction of the City of Dublin. This issue could result in substantial project schedule delays.

10. FUNDING/SCHEDULE

The approval of this PSR (PDS) will allow for funds to be programmed for support costs only. The estimated support costs for this project are \$95-100 million (in escalated dollars). This cost is based upon Alternative 1 (the maximum cost alternative). The \$95-100 million consists of \$15 million for PA&ED, \$58 million for PS&E, and \$21 million for right-of-way.

At this time, a funding source has yet to be determined. However, it is the intention of the Alameda County Congestion Management Agency and local agencies to apply for funding from the Regional Transportation Program.

SUMMARY OF APPROXIMATE PRELIMINARY PROJECT COSTS (in 1,000,000's)

PROJECT COMPONENT	ALT. 1		ALT. 2		ALT. 3	
	CURRENT COST ¹	ESCALATED COST ² /Year	CURRENT COST ¹	ESCALATED COST ² /Year	CURRENT COST ¹	ESCALATED COST ² /Year
Construction Capital	500	860/2016	450	760/2016	280	480/2016
R/W Capital	120	140/2014	70	81/2014	40	51/2014
Environmental Support	15	17/2012	15	17/2012	15	17/2012
Design Support	50	58/2012	45	51/2012	28	32/2012
R/W Support	17	21/2014	10	12/2014	6	8/2014
Construction Support	60	77/2015	54	68/2015	33	41/2015
APPROXIMATE TOTAL	\$760	\$1,200	\$640	\$990	\$400	\$630

¹ Current cost is in 2008 dollars.

² Escalated cost is calculated to approximate mid-point of component phase. Escalation rate for construction phase is 7% per year. Escalation rate for Environmental, Right of Way, and support costs is 3.5% per year.

The level of detail available to develop these capital cost estimates is only accurate to within the above ranges and are useful for long range planning purposes only. The capital costs should not be used to program or commit capital funds. The Project Report will serve as the appropriate document from which the remaining support and capital components of the project will be programmed.

TENTATIVE PROJECT SCHEDULE

MILESTONE	DATE/FISCAL YEAR
PSR (PDS)	November 2007
PA&ED	2010/2011
PS&E	2013
Right of Way Certification	2014
Construction Complete	2018

Only the PA&ED milestone is to be used for programming commitments. All other milestones are used to indicate relative time frames for planning purposes.

11. RECOMMENDATIONS

It is recommended that this PSR (PDS) be approved and the amount of \$ 15 million be programmed. The three project alternatives and the no-build alternative, identified in this report are to be studied further in the PA&ED phase to determine the preferred alternative. Additional alternatives may be added, or the three recommended alternatives be revised, during the PA&ED phase as more information becomes available. Once the preferred alternative is determined, maintenance agreements will be discussed during the PA&ED phase.

Recognizing that all access between the Stoneridge Drive I/C and I-580 will be removed as part of this project, further study of impacts to the local system will be required.

The approval of this PSR (PDS) allows the flexibility of pursuing STIP funding for support components, however, it does not preclude the use of local funds for any of the support components.

12. DISTRICT CONTACTS

The following individuals should be contacted if any questions should arise about this report:

Title	Name	Phone
Caltrans Project Manager	Issa Bouri	(510) 286-5220
Highway Operations	David Seriani	(510) 286-4653
Advance Planning Office	Val Ignacio	(510) 286-5566
Advance Planning Senior	Jack Kwei	(510) 286-5530
Environmental Unit Supervisor	Ed Pang	(510) 286-5609
Right of Way Unit	Julie McDaniel	(510) 286-5308
HQ Design Coordinator	Michael Thomas	(510) 286-4687
ACCMA Project Manager	Ray Akkawi	(510) 836-2560
Design Engineer - Project Manager (TYLI)	Tom Wintch	(925) 365-3960
Design Engineer – Project Engineer (TYLI)	Sean Mayer	(925) 365-3960

Attachments

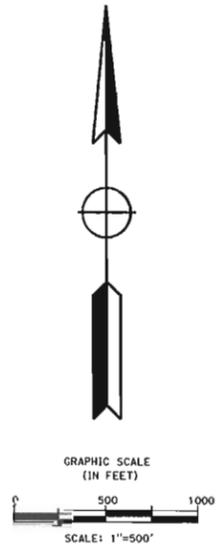
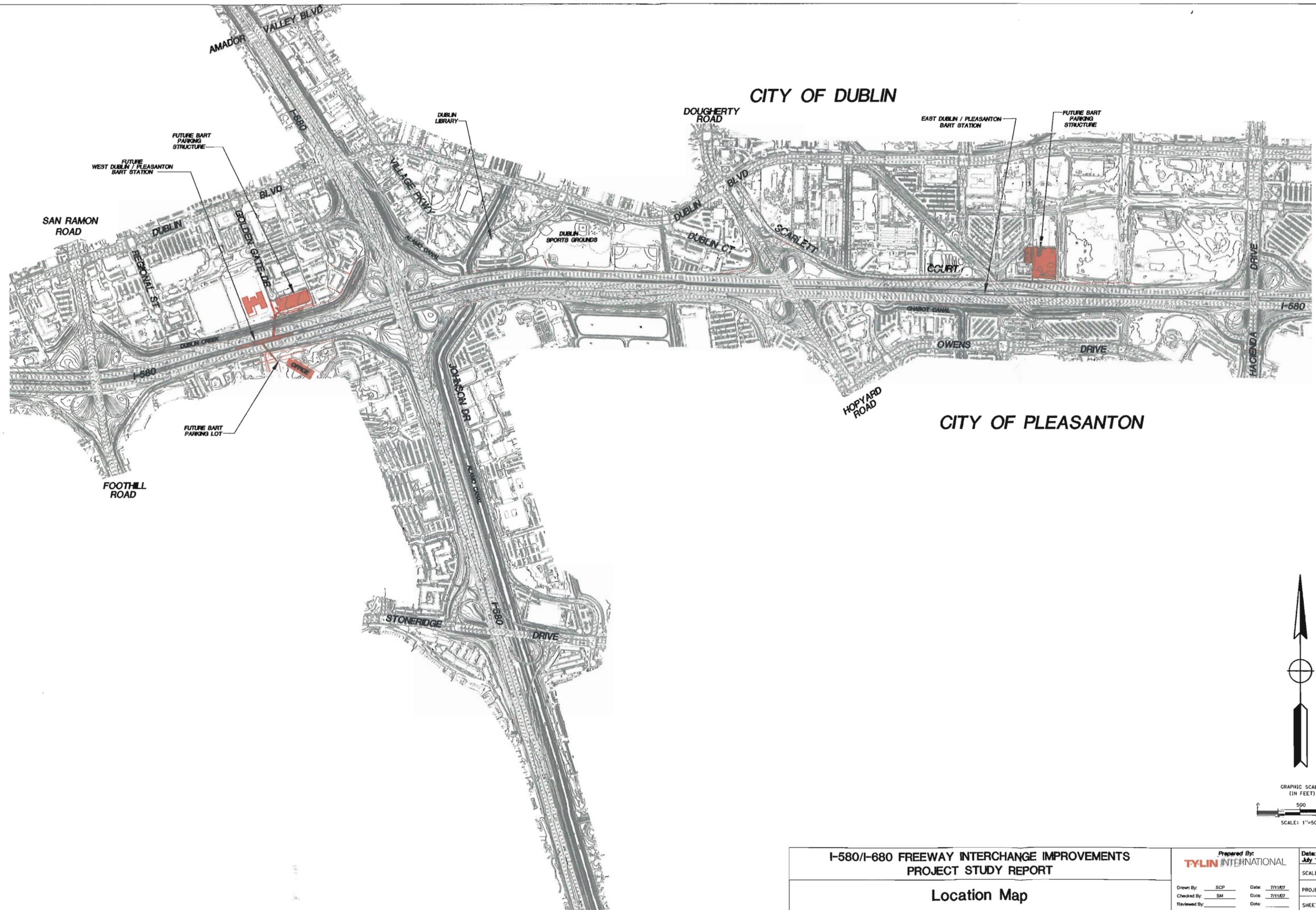
- A. Location Map
- A1. Vicinity Map
- A2. Ultimate Interchange
- B. Typical Cross Sections (Alternatives 1, 2, & 3)
- C. Layout and Profile Sheets (Alternative 1)
- D. Layout and Profile Sheets (Alternative 2)
- E. Layout and Profile Sheets (Alternative 3)
- F. PSR (PDS) Cost Estimates (Alternatives 1, 2, & 3)
- G. PDS Design Scoping Checklist
- H. Preliminary Environmental Analysis Report (PEAR)
- I. PDS Traffic Forecasting, Analysis and Operations Scoping Checklist
- J. Right-of-Way Data Sheets (Alternatives 1, 2, & 3)
- K. Project Support Cost Estimate for PA/ED Support
- L. Storm Water Data Report
- M. Structure Advance Planning Study (Alternative 3)
- N. Draft Cooperative Agreement for PA&ED
- O. Risk Management Plan

ATTACHMENT A

Location Map

CITY OF DUBLIN

CITY OF PLEASANTON



**I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT**

Location Map

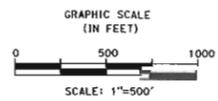
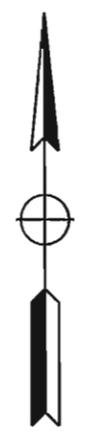
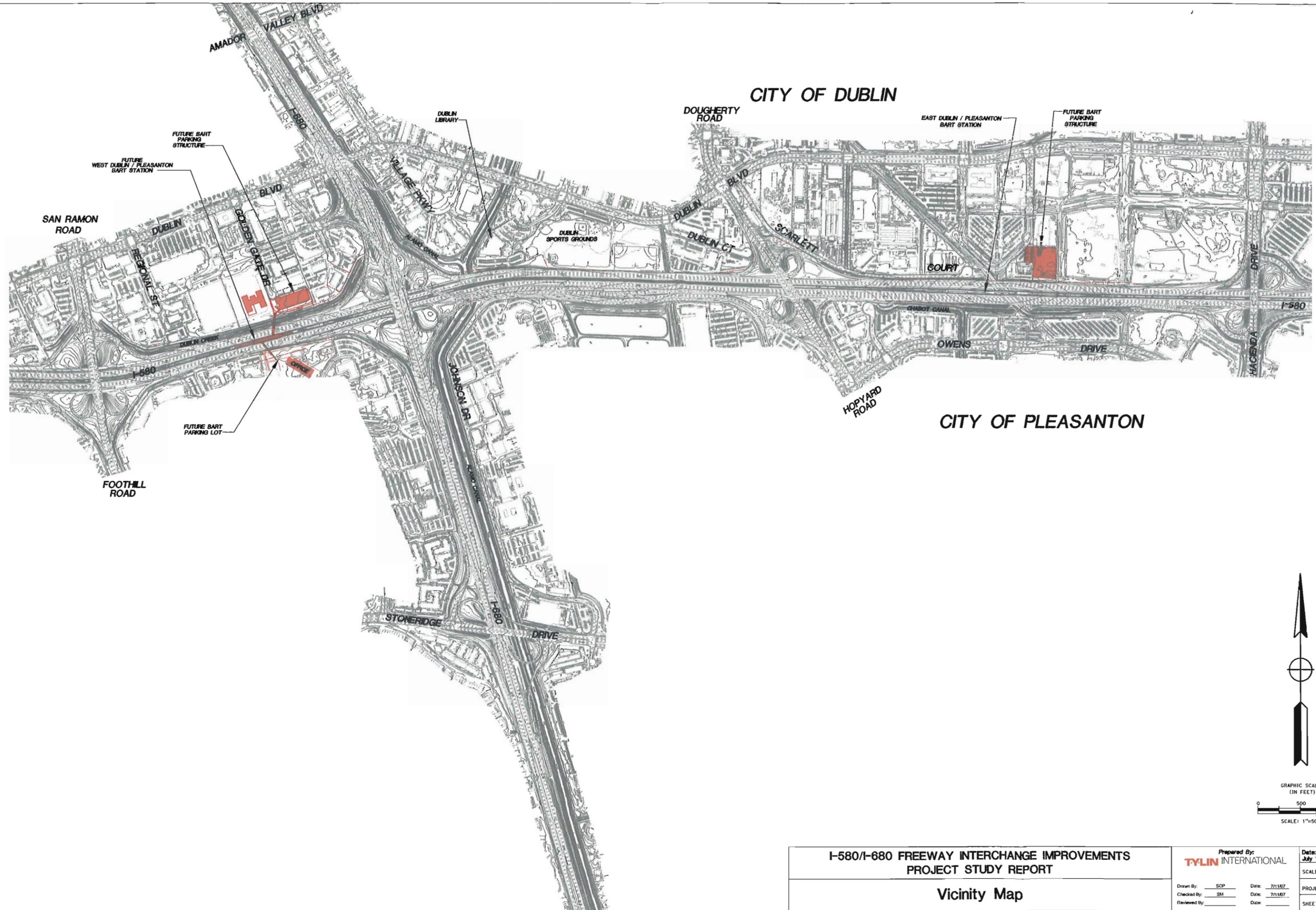
Prepared By: TYLIN INTERNATIONAL		Date: July 11, 2007
Drawn By: SCP	Date: 7/11/07	PROJECT NO. 320086
Checked By: SM	Date: 7/11/07	SHEET ___ OF ___
Reviewed By:	Date:	

ATTACHMENT A1

Vicinity Map

CITY OF DUBLIN

CITY OF PLEASANTON



I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT

Vicinity Map

Prepared By:
TYLIN INTERNATIONAL

Date:
July 11, 2007

Drawn By: SOP Date: 7/11/07
Checked By: SM Date: 7/11/07
Reviewed By: Date:

PROJECT NO. 320086
SHEET -- OF --

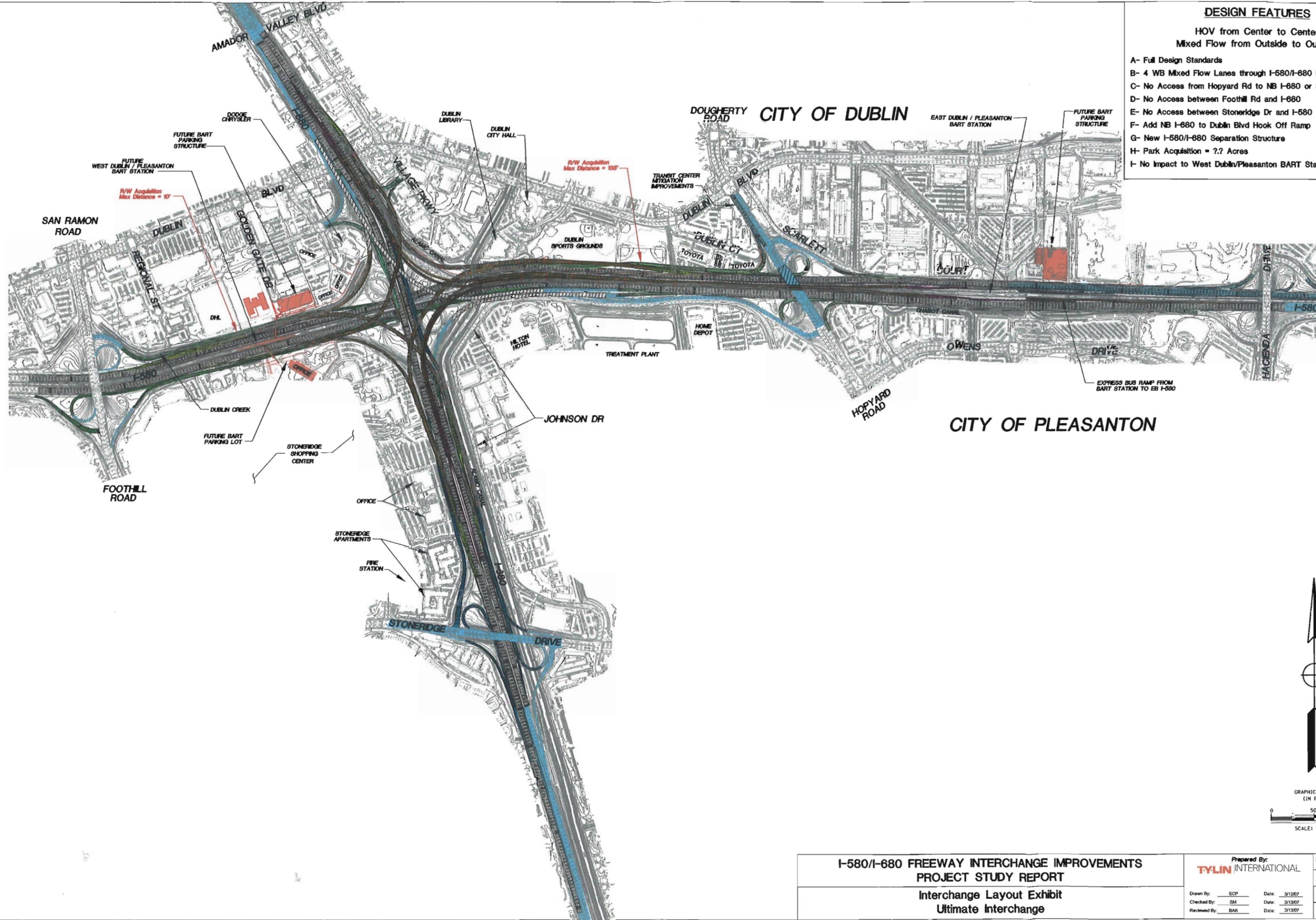
ATTACHMENT A2

Ultimate Interchange

DESIGN FEATURES

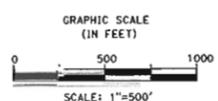
HOV from Center to Center
Mixed Flow from Outside to Outside

- A- Full Design Standards
- B- 4 WB Mixed Flow Lanes through I-580/I-680 IC
- C- No Access from Hopyard Rd to NB I-680 or SB I-680
- D- No Access between Foothill Rd and I-680
- E- No Access between Stoneridge Dr and I-580
- F- Add NB I-680 to Dublin Blvd Hook Off Ramp
- G- New I-580/I-680 Separation Structure
- H- Park Acquisition = 7.7 Acres
- I- No Impact to West Dublin/Pleasanton BART Station



CITY OF PLEASANTON

CITY OF DUBLIN



**I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT**

Interchange Layout Exhibit
Ultimate Interchange

Prepared By: TYLIN INTERNATIONAL		Date: June 10, 2007
Drawn By: SCP	Date: 3/13/07	SCALE: 1"=500'
Checked By: SM	Date: 3/13/07	PROJECT NO. 320086
Reviewed By: BAK	Date: 3/13/07	SHEET J. OF J.

ATTACHMENT B

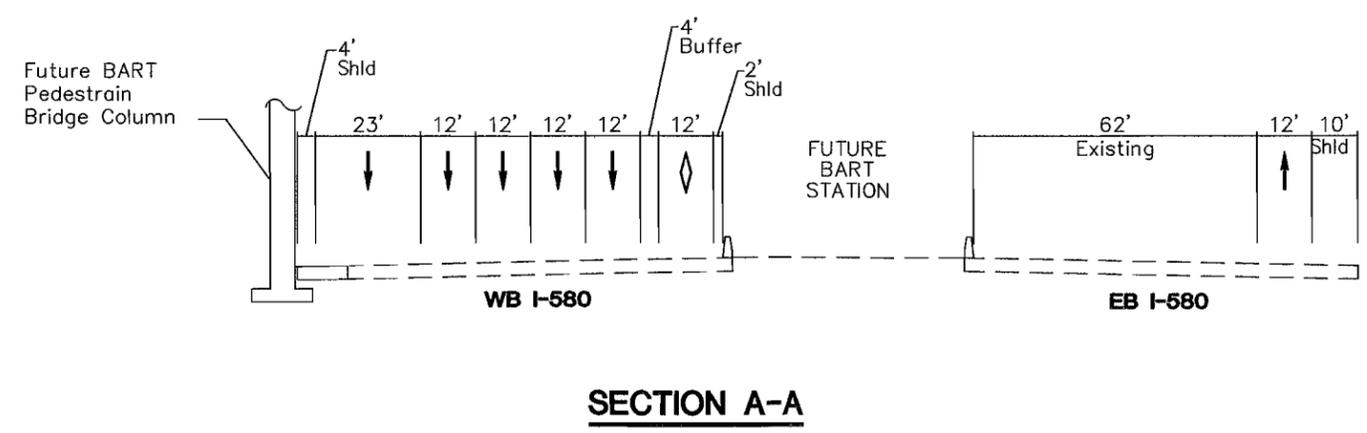
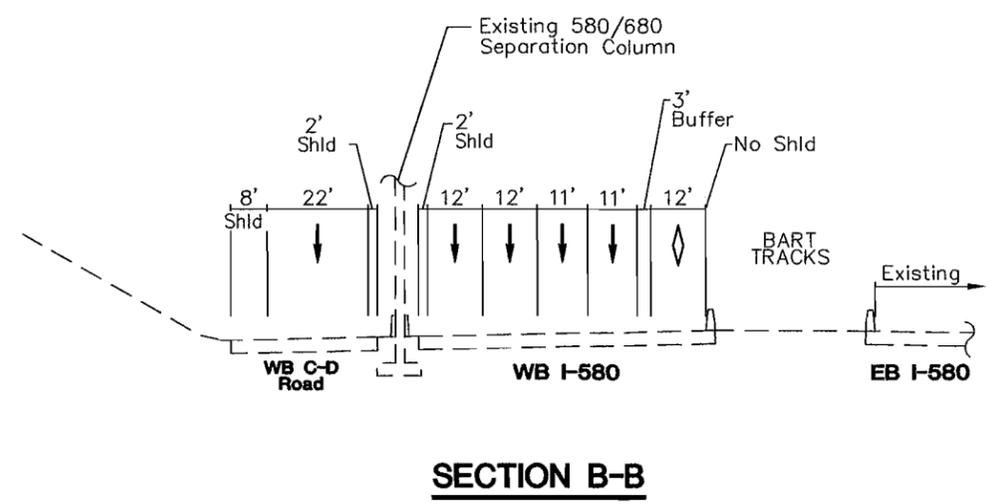
Typical Cross Sections (Alternatives 1, 2, & 3)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 SCIP
 SM
 DATE 7/7/07
 REVISION BY 7/7/07
 DATE REVISION 7/7/07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	4

REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE
 No. _____
 Exp. _____
 CIVIL
 STATE OF CALIFORNIA
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 1333 BROADWAY, SUITE 220
 OAKLAND, CA 94612
 T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



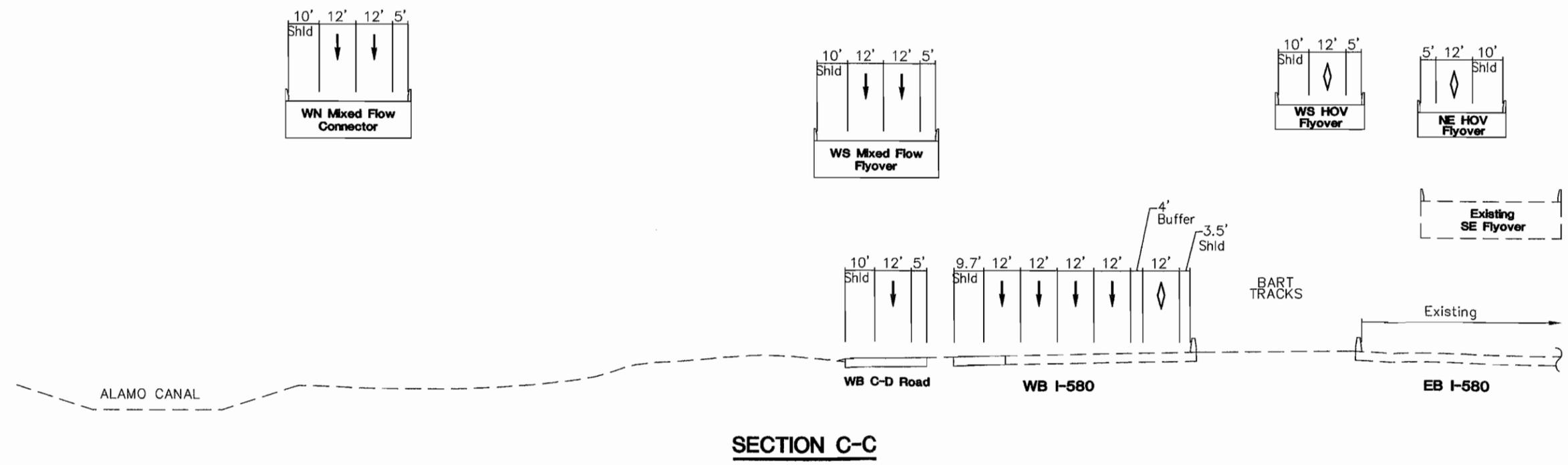
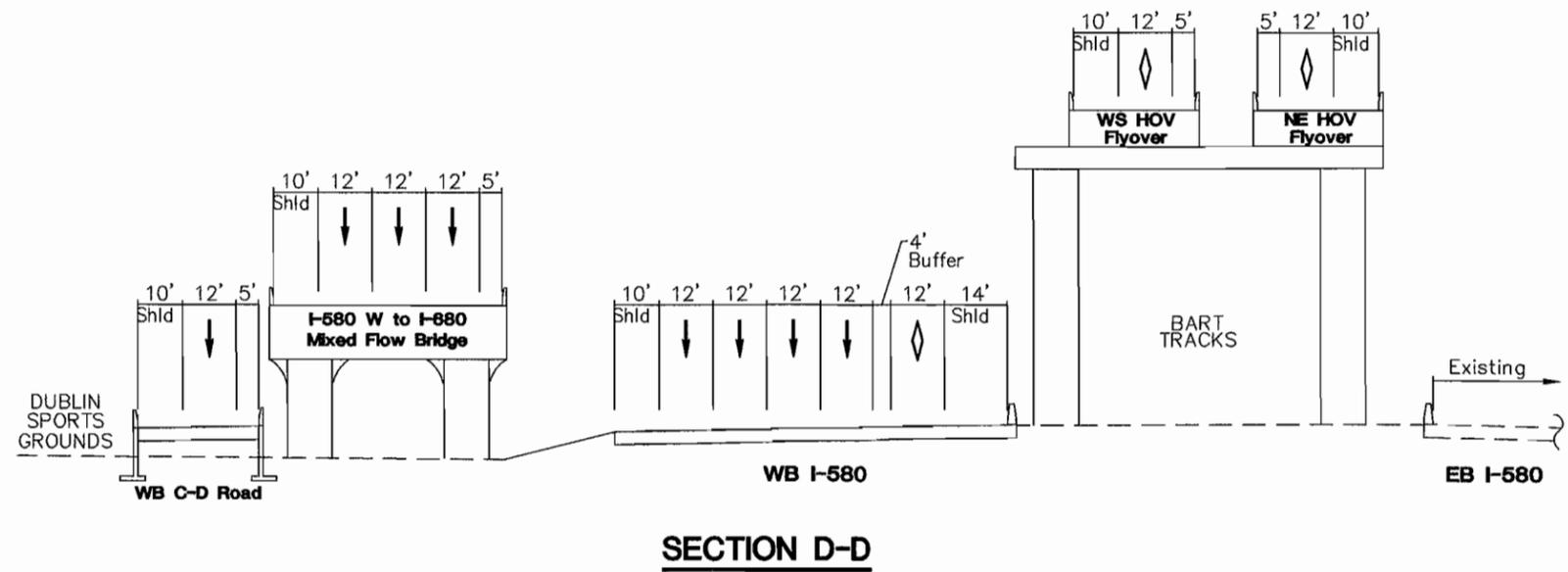
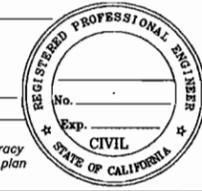
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
TYPICAL CROSS SECTIONS
X-1
 Scale: 1"=20'

LAST REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 SCP
 SM
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISIONS:
 BY DATE REVISIONS BY DATE REVISIONS
 7/7/07
 7/7/07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	2	4

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 SAN RAMON, CA 94583



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
TYPICAL CROSS SECTIONS
X-2
 Scale: 1"=20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

SC.P

SM

DATE 7/7/07

7/7/07

REVISOR BY

DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	3	4

REGISTERED CIVIL ENGINEER

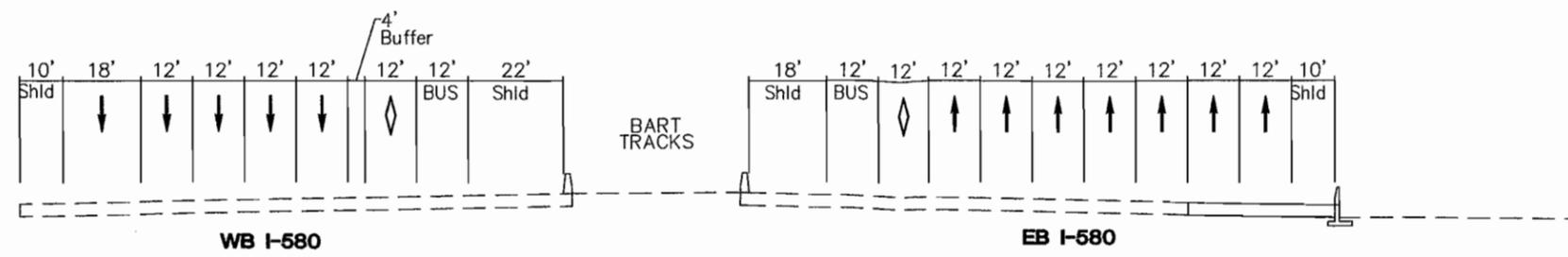
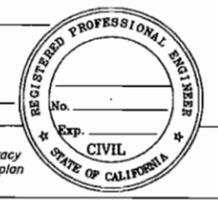
PLANS APPROVAL DATE

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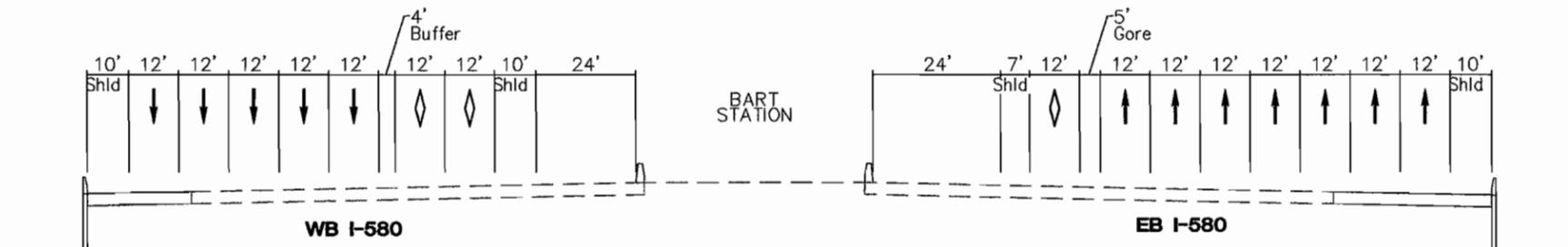
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

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 OAKLAND, CA 94612

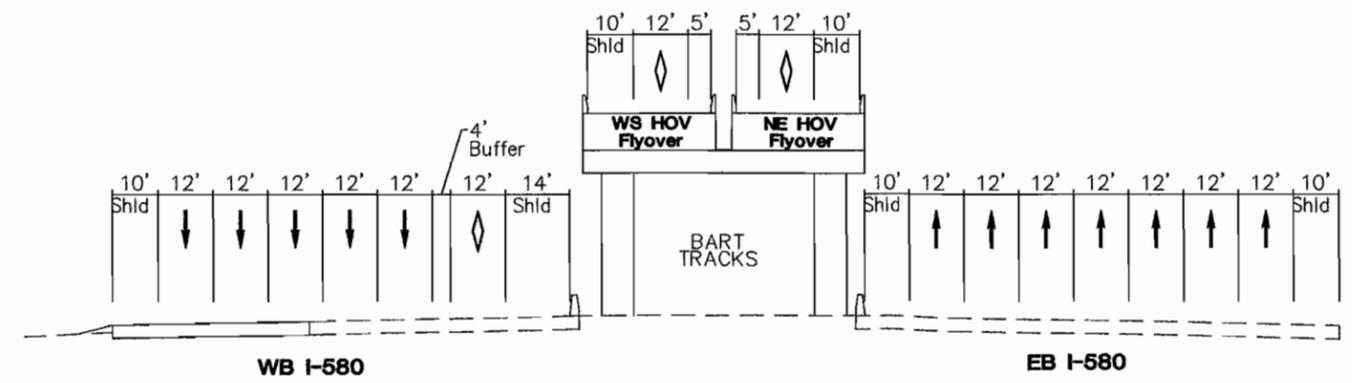
T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



SECTION G-G



SECTION F-F



SECTION E-E

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 1

TYPICAL CROSS SECTIONS

X-3

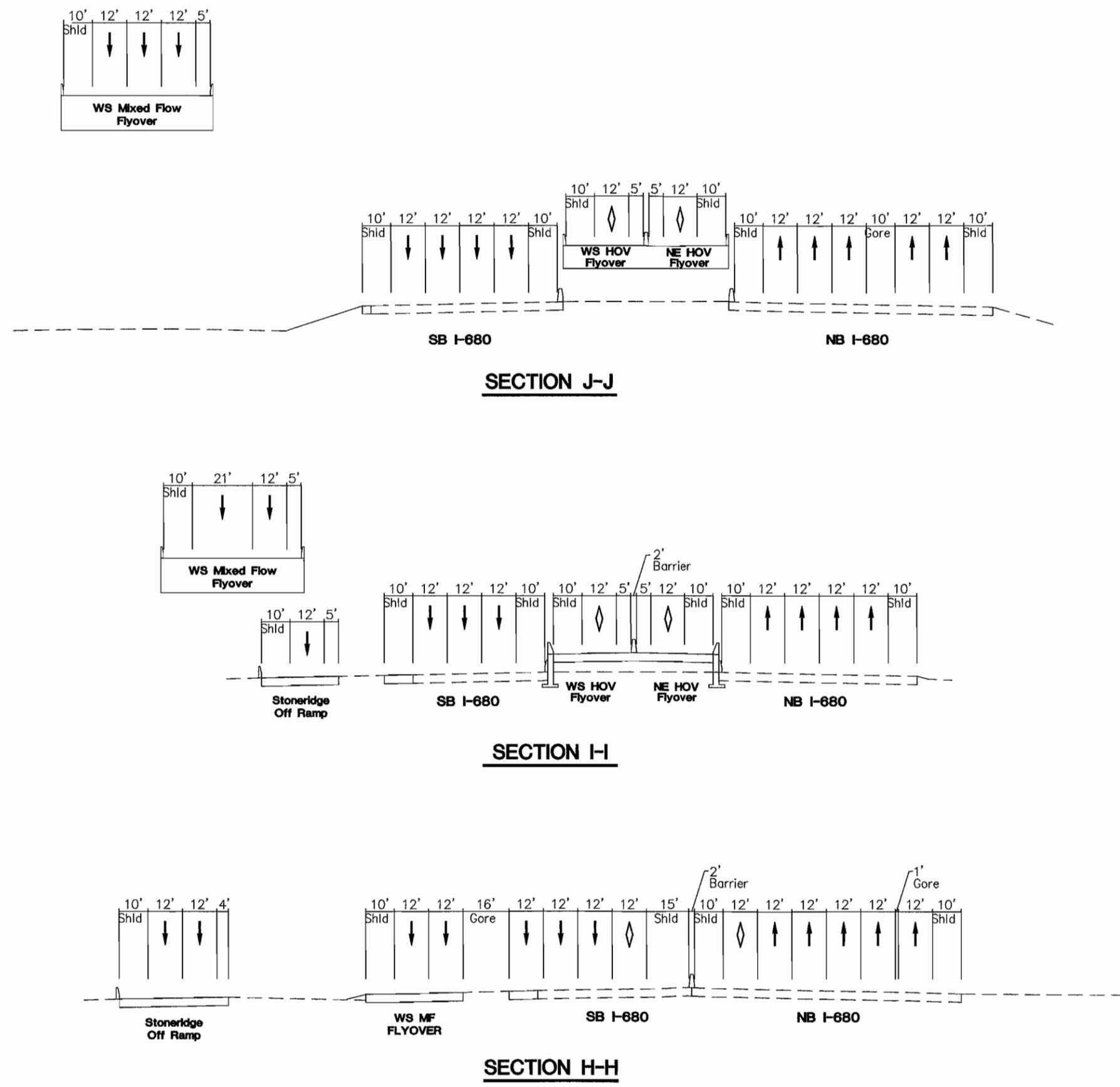
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER
 SCP
 SM
 CALCULATED/DESIGNED BY
 CHECKED BY

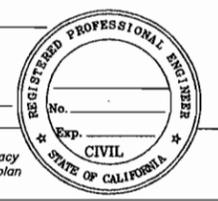
REVISOR
 DATE
 7/7/07

REVISOR
 DATE
 7/7/07



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	4	4

REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE



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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
TYPICAL CROSS SECTIONS
X-4
 Scale: 1"=20'

LAST REVISION

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PROJECT ENGINEER

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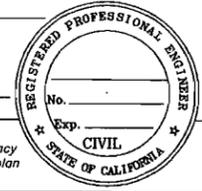
SCP
SM

DATE
7/9/07

REVISOR BY
DATE REVISOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	5

REGISTERED CIVIL ENGINEER



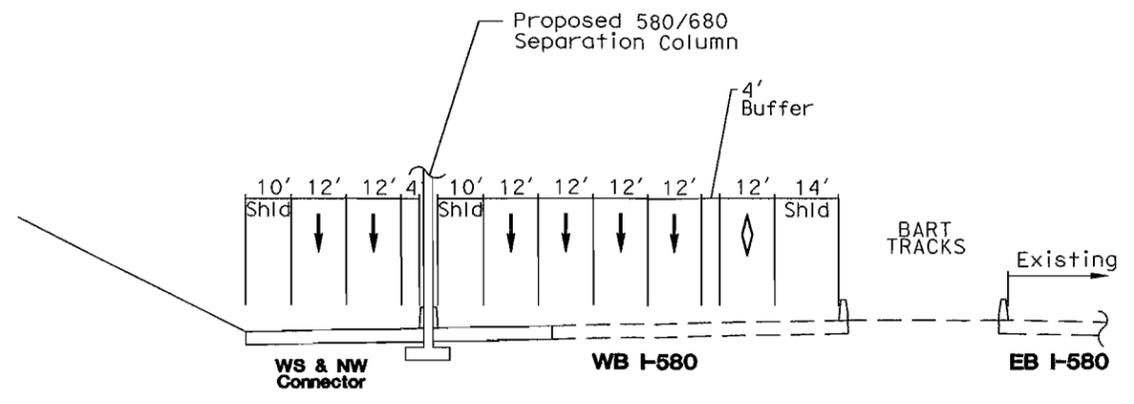
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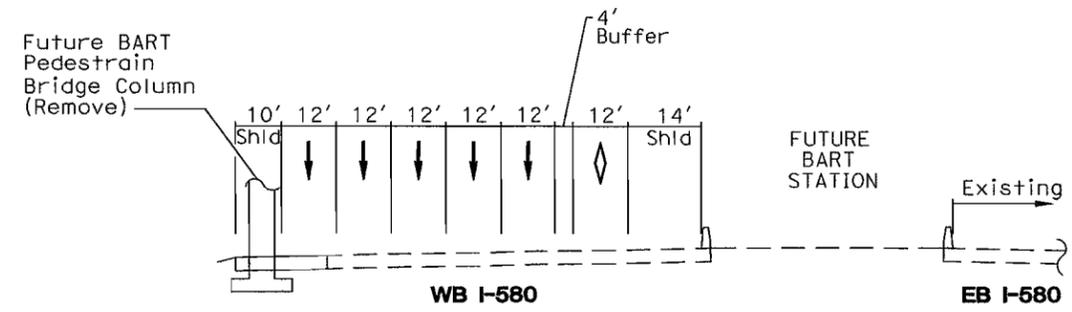
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SECTION B-B



SECTION A-A

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 2
TYPICAL CROSS SECTIONS
X-1
 Scale: 1"=20'

LAST REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

CALCULATED/
DESIGNED BY

SCP

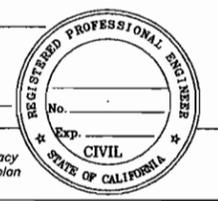
DATE
7/9/07

REVISOR BY

DATE REVISOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	2	5

REGISTERED CIVIL ENGINEER



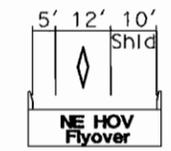
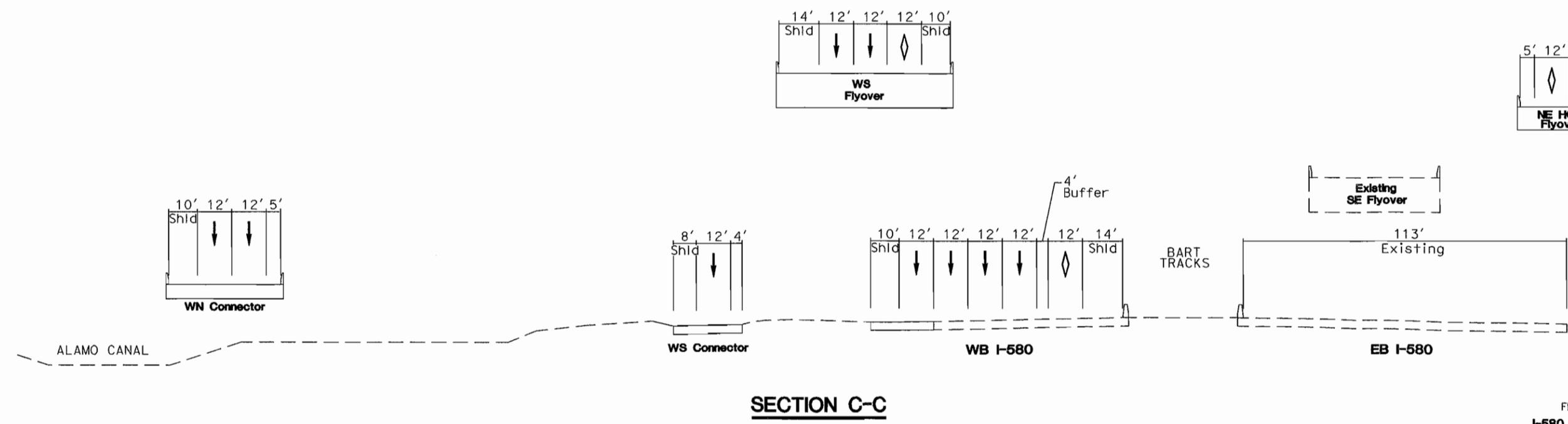
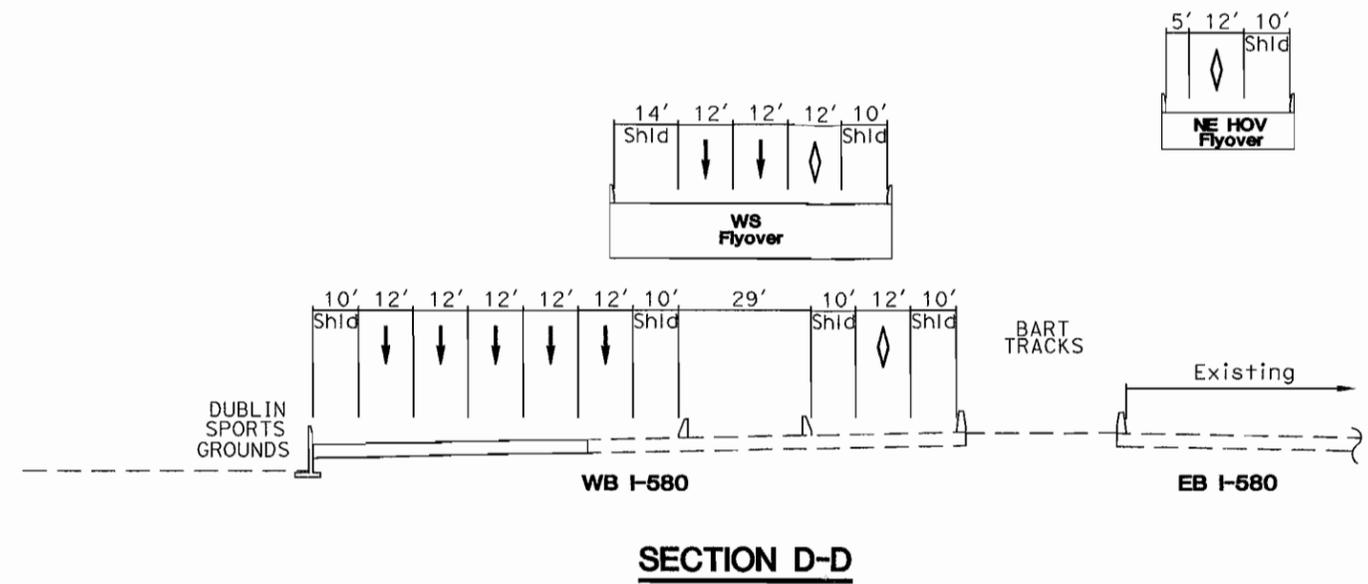
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SECTION C-C

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 2
TYPICAL CROSS SECTIONS
X-2
 Scale: 1"=20'

LAST REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

CALCULATED/DESIGNED BY
 CHECKED BY

SCP
 SM

DATE
 7/9/07
 7/9/07

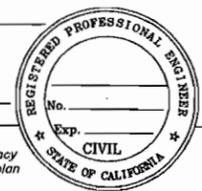
REVISED BY
 DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	3	5

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

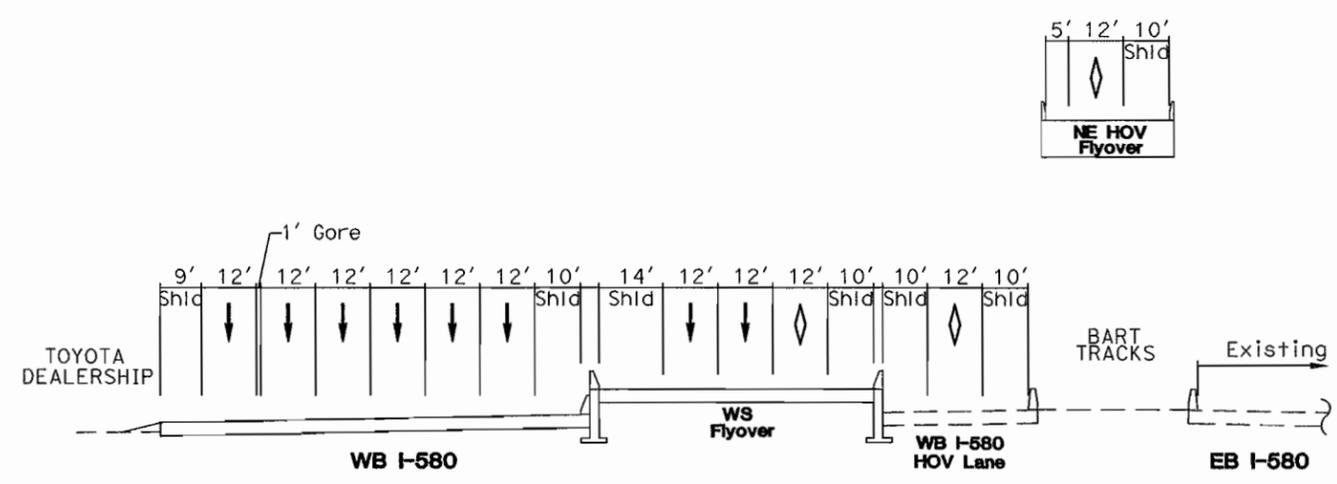
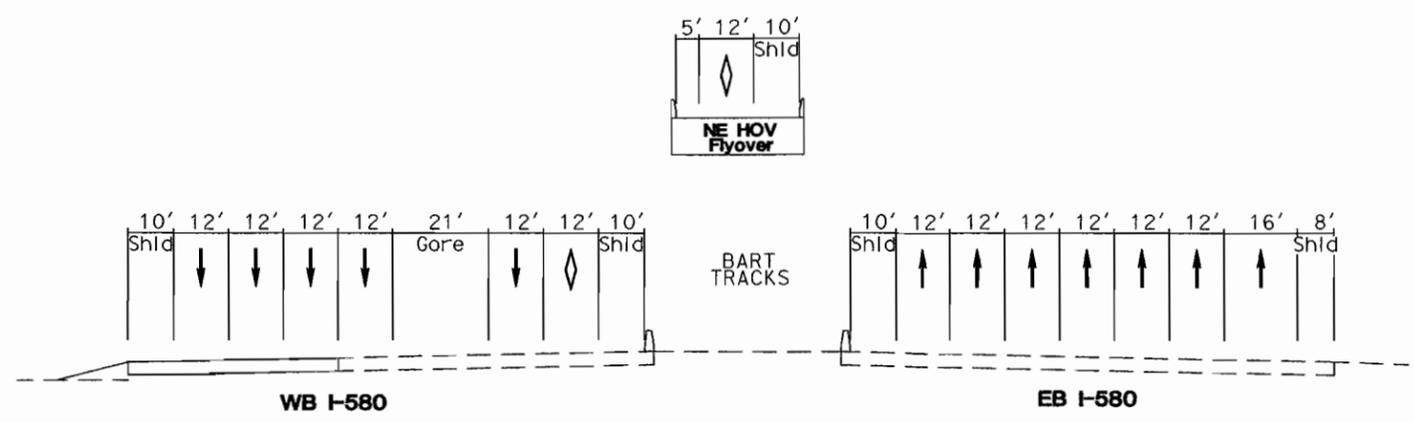
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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 2

TYPICAL CROSS SECTIONS

X-3

Scale: 1"=20'

LAST REVISION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	4	5

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SAN RAMON, CA 94583



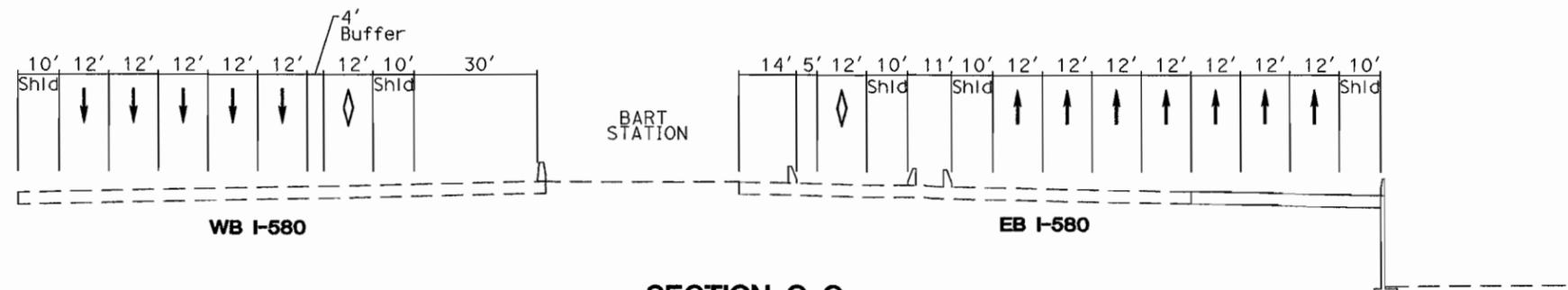
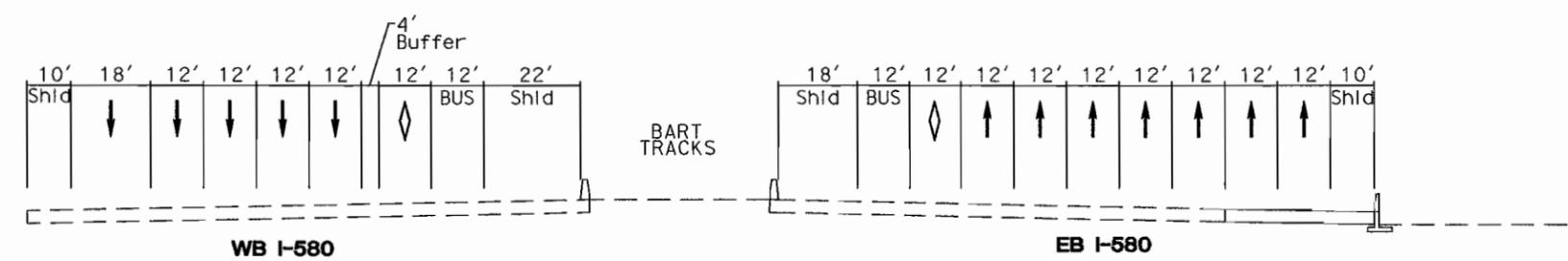
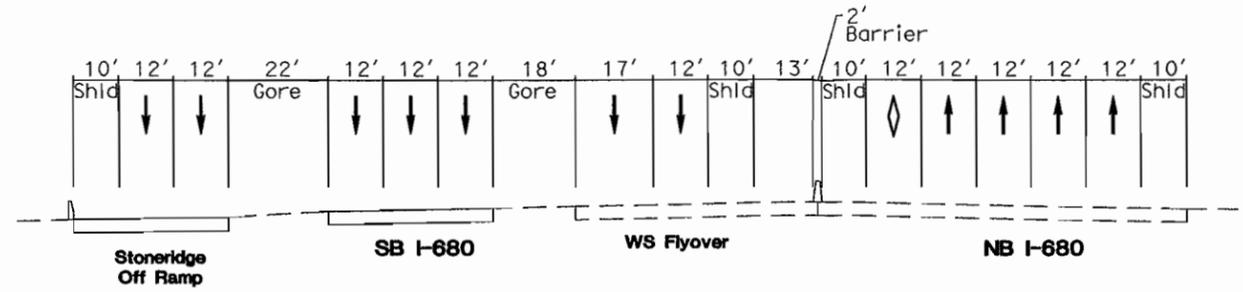
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

SCALP BY SM

DATE 7/9/07

REVISOR BY DATE REVISION



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 2

TYPICAL CROSS SECTIONS

X-4

Scale: 1"=20'

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	5	5

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

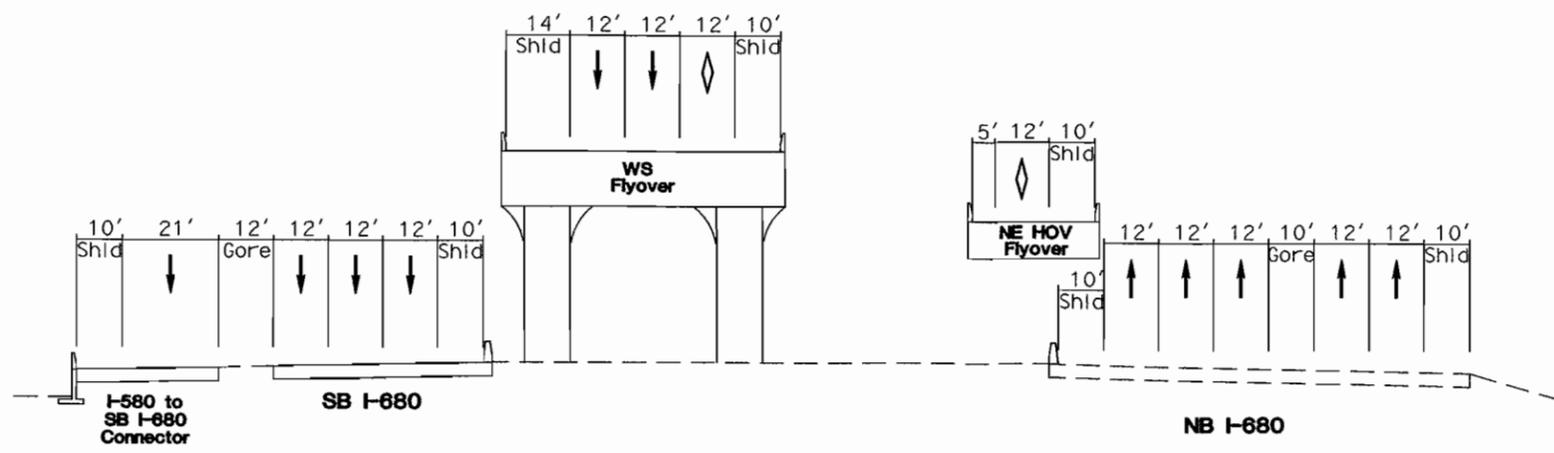


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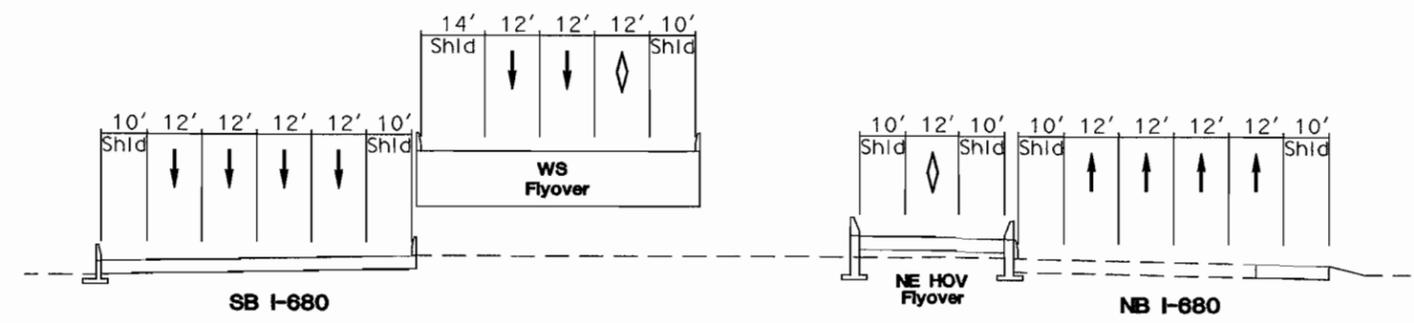
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SAN RAMON, CA 94583



SECTION K-K



SECTION J-J

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 2

TYPICAL CROSS SECTIONS

X-5

Scale: 1"=20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER

SCCP

SM

DATE 7/9/07

7/9/07

REVISOR BY

DATE REVISOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	4

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

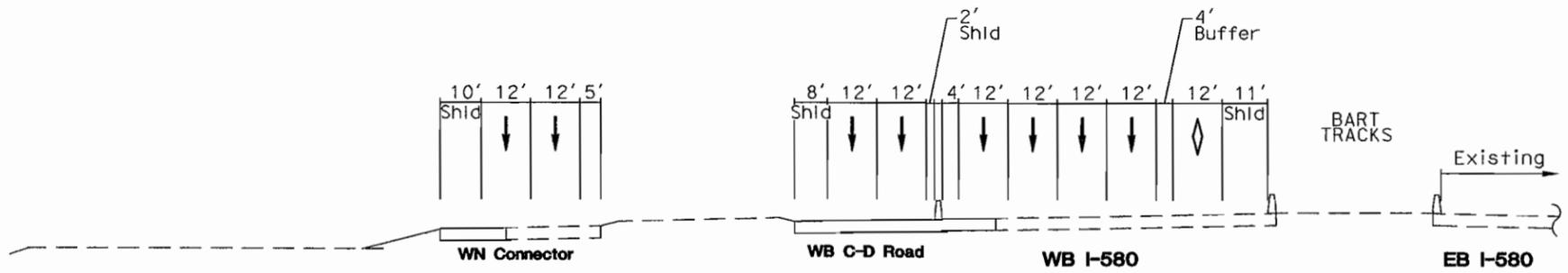
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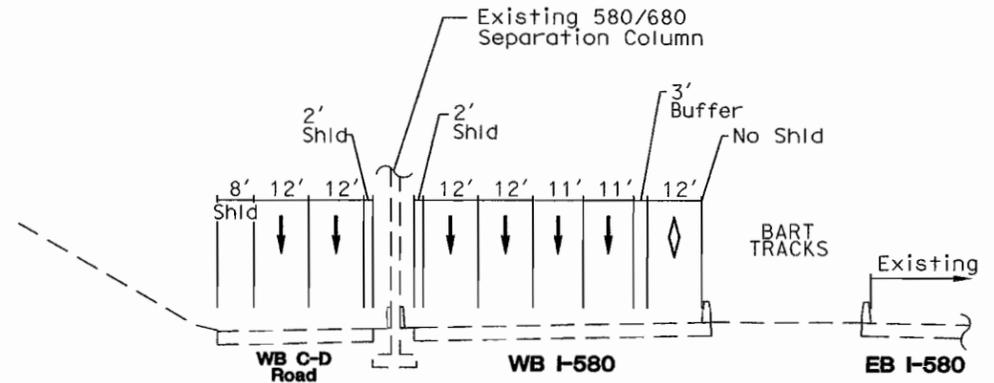


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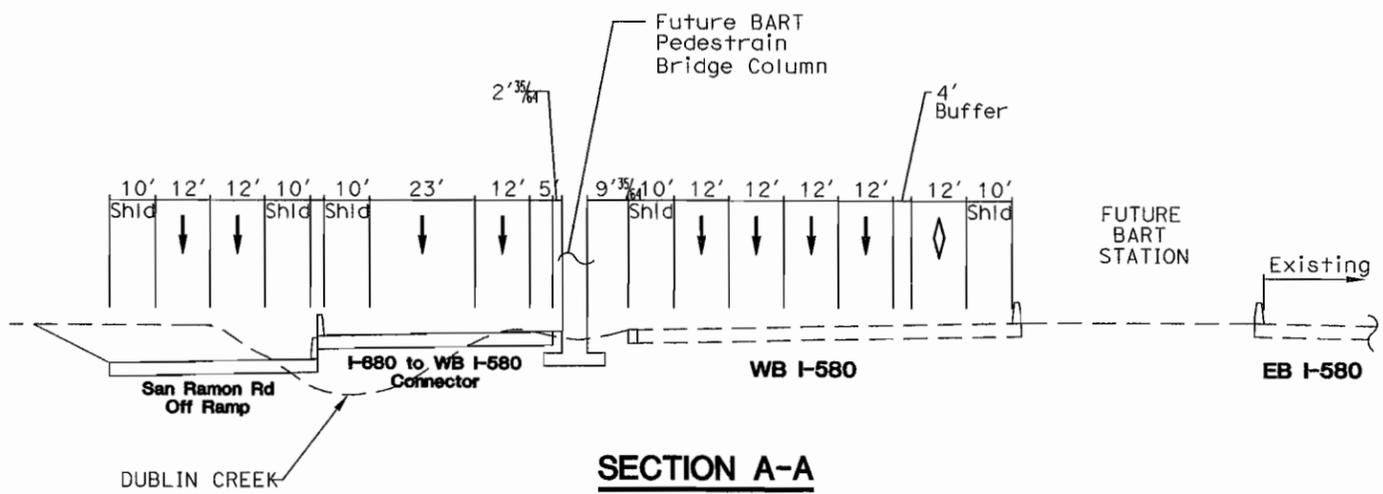
T Y LIN INTERNATIONAL
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SAN RAMON, CA 94583



SECTION C-C



SECTION B-B



SECTION A-A

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 3

TYPICAL CROSS SECTIONS

X-1

Scale: 1"=20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER

SCP

SM

REVISOR

BY

DATE

7/11/07

7/11/07

DATE

7/11/07

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

CALCULATED/
DESIGNED BY
CHECKED BY

SCP
SM

DATE
7/9/07
7/9/07

REVISED BY
DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	2	4

REGISTERED CIVIL ENGINEER



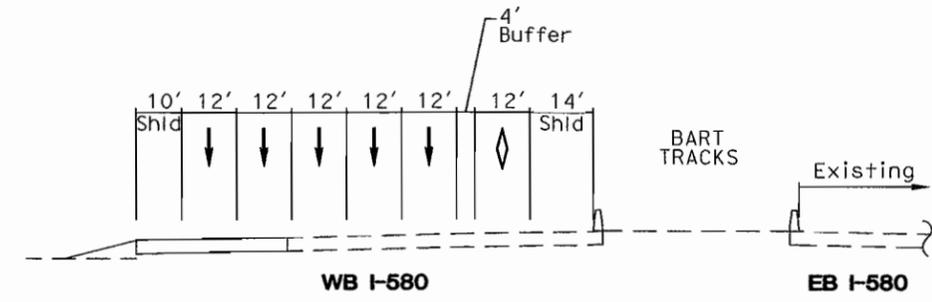
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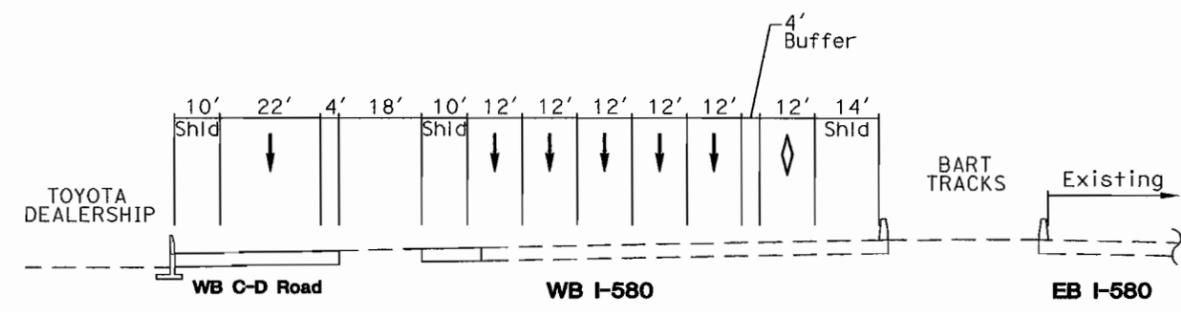
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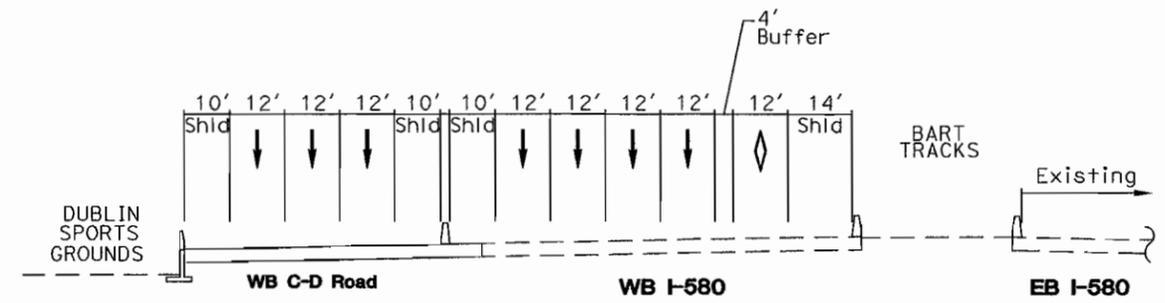
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SECTION F-F



SECTION E-E



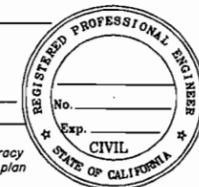
SECTION D-D

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 3
TYPICAL CROSS SECTIONS
X-2
 Scale: 1"=20'

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	4	4

REGISTERED CIVIL ENGINEER



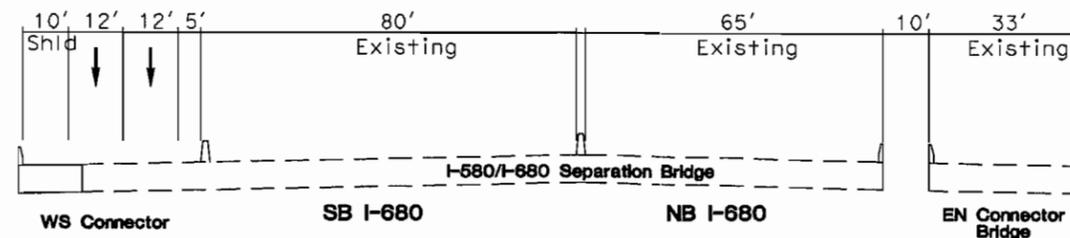
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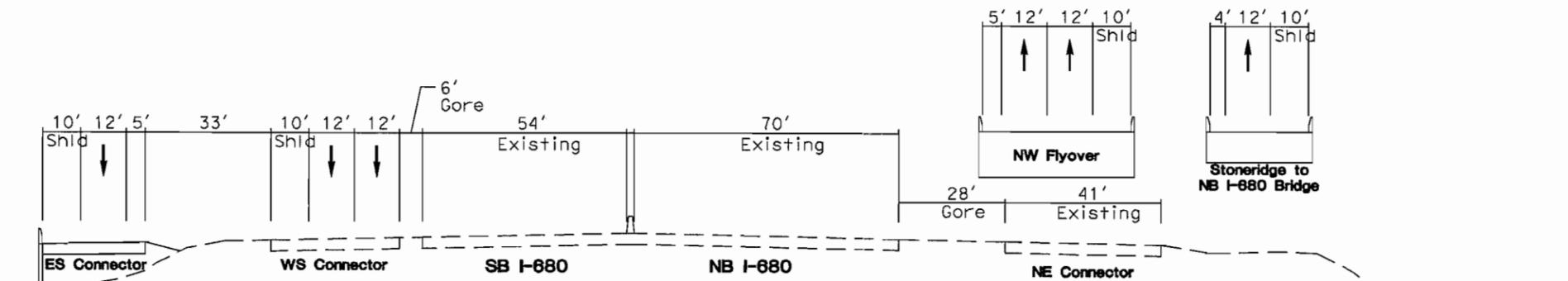
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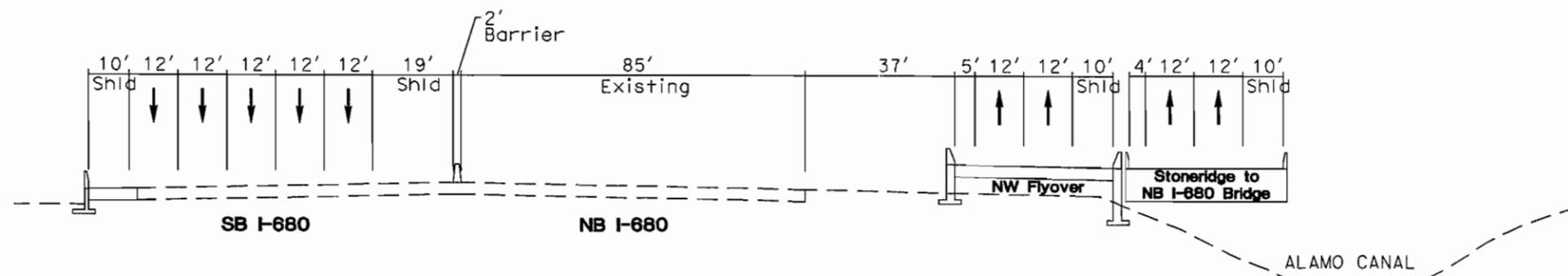
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 SAN RAMON, CA 94583



SECTION L-L



SECTION K-K

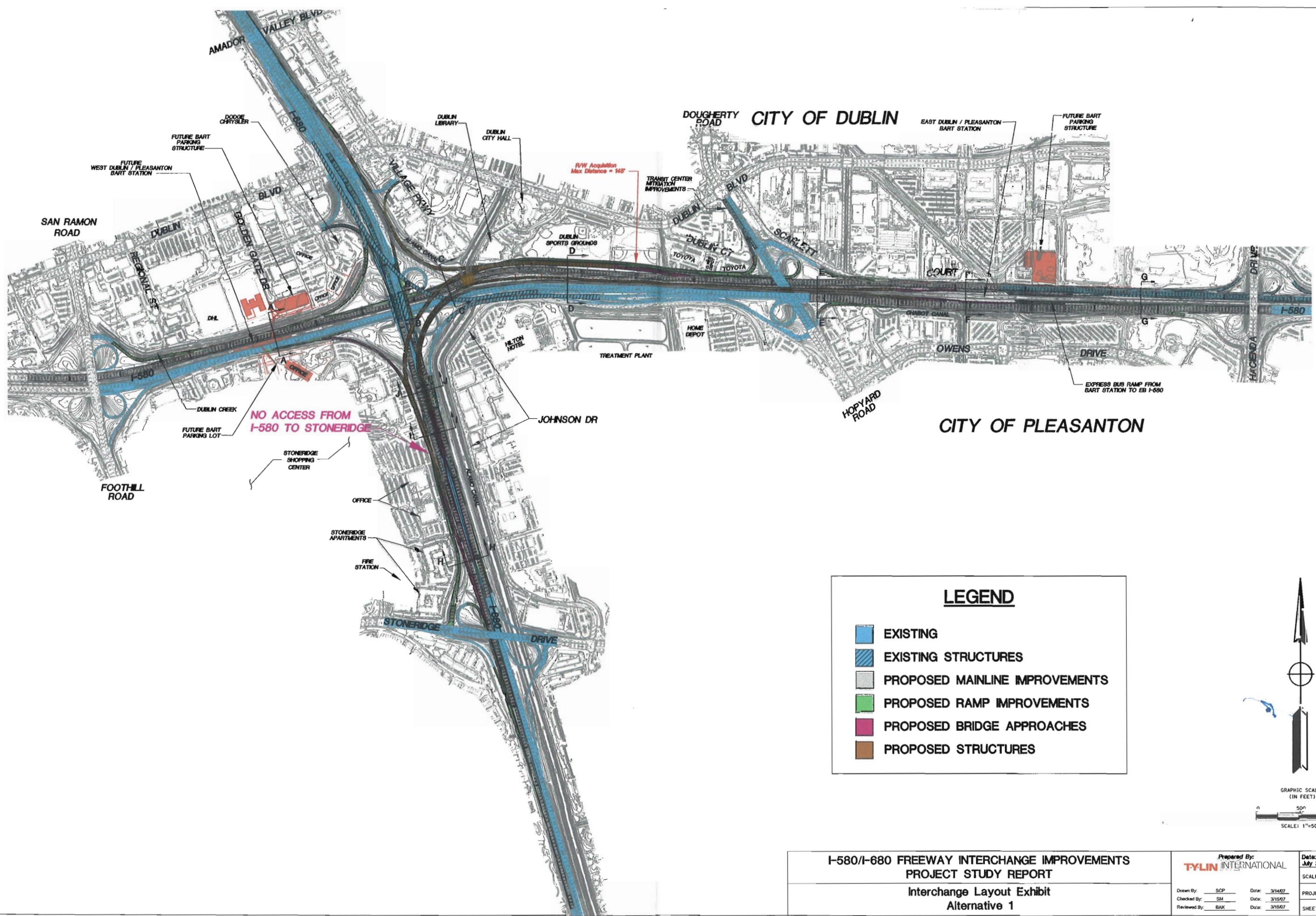


SECTION J-J

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 3
TYPICAL CROSS SECTIONS
X-4
 Scale: 1"=20'

ATTACHMENT C

Layout and Profile Sheets (Alternative 1)

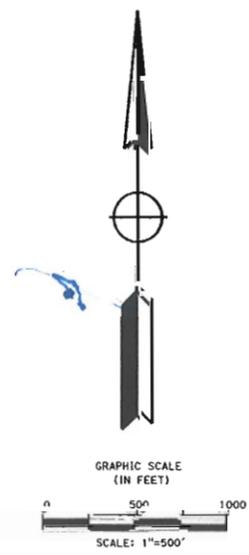


CITY OF DUBLIN

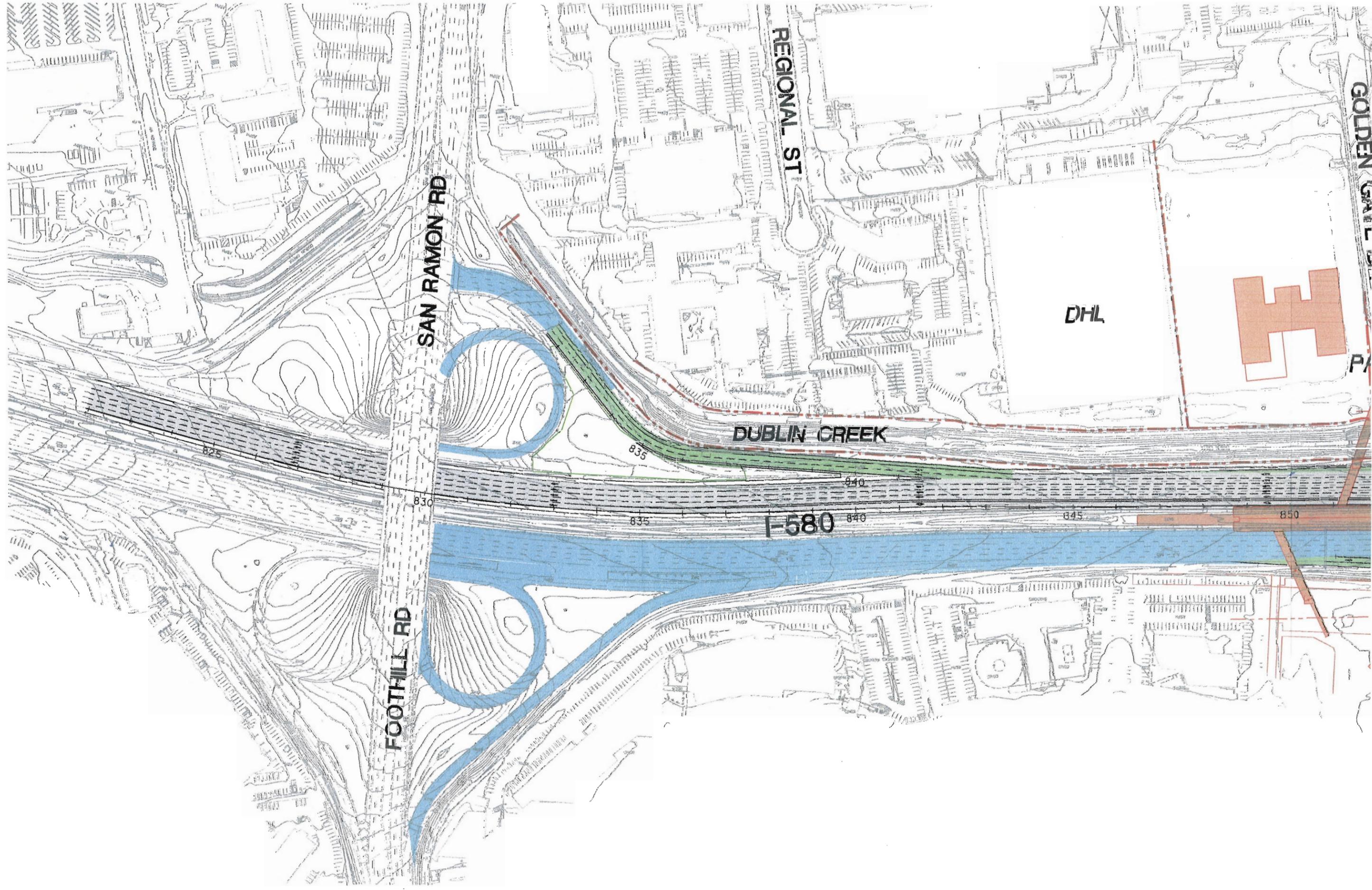
CITY OF PLEASANTON

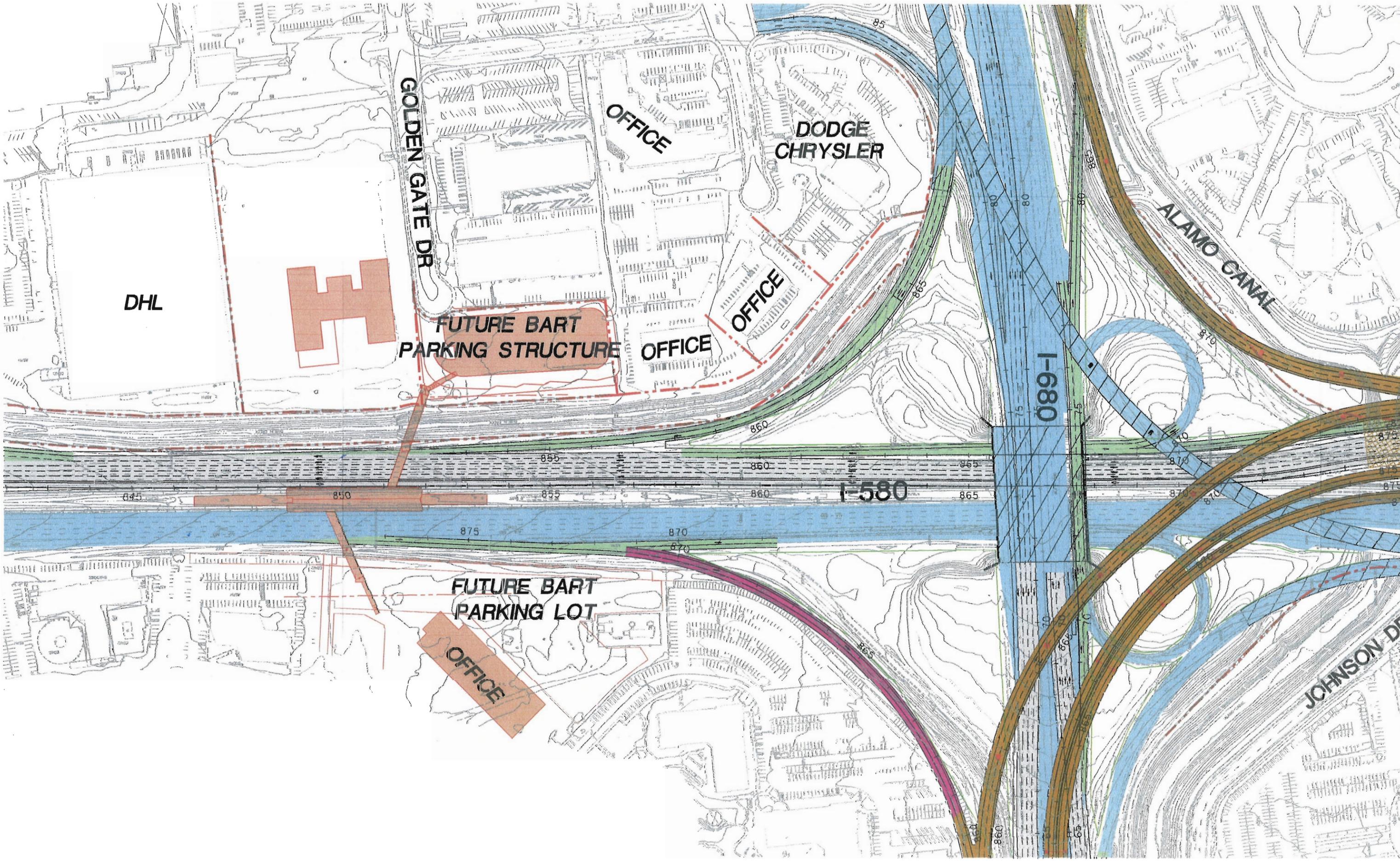
LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS PROJECT STUDY REPORT		<small>Prepared By:</small> TYLIN INTERNATIONAL	<small>Date:</small> July 27, 2007
Interchange Layout Exhibit Alternative 1		<small>SCALE:</small> 1"=500'	<small>PROJECT NO.:</small> 320086
<small>Drawn By:</small> SCP	<small>Date:</small> 3/14/07	<small>PROJECT NO.:</small> 320086	<small>SHEET</small> ... <small>OF</small> ...
<small>Checked By:</small> SM	<small>Date:</small> 3/15/07		
<small>Reviewed By:</small> BAK	<small>Date:</small> 3/15/07		





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	1	4

LEGEND

-  EXISTING
-  EXISTING STRUCTURES
-  PROPOSED MAINLINE IMPROVEMENTS
-  PROPOSED RAMP IMPROVEMENTS
-  PROPOSED BRIDGE APPROACHES
-  PROPOSED STRUCTURES

REGISTERED CIVIL ENGINEER

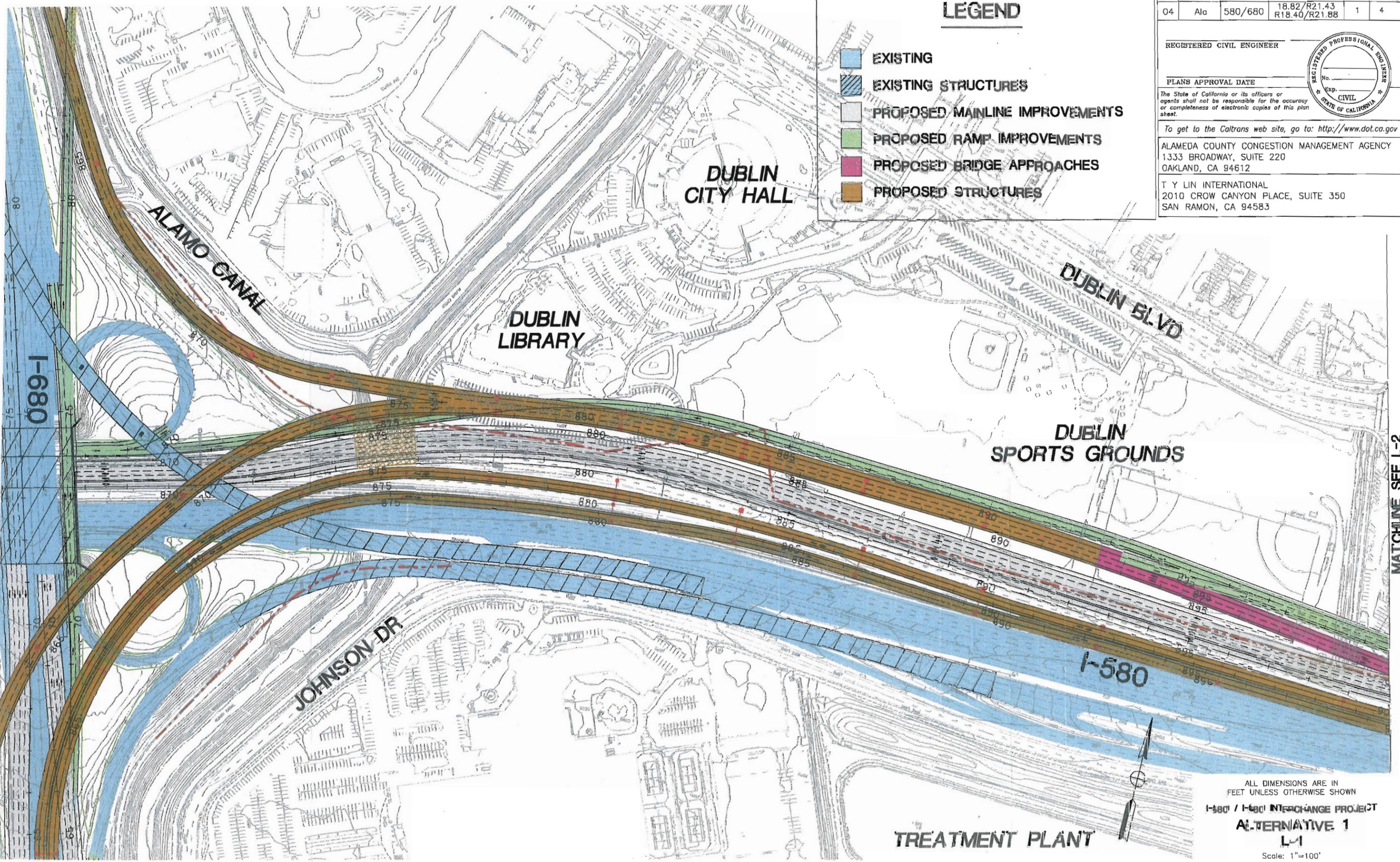
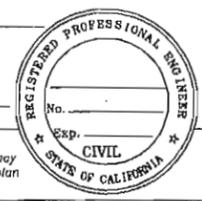
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T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
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MATCHLINE SEE L-2

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

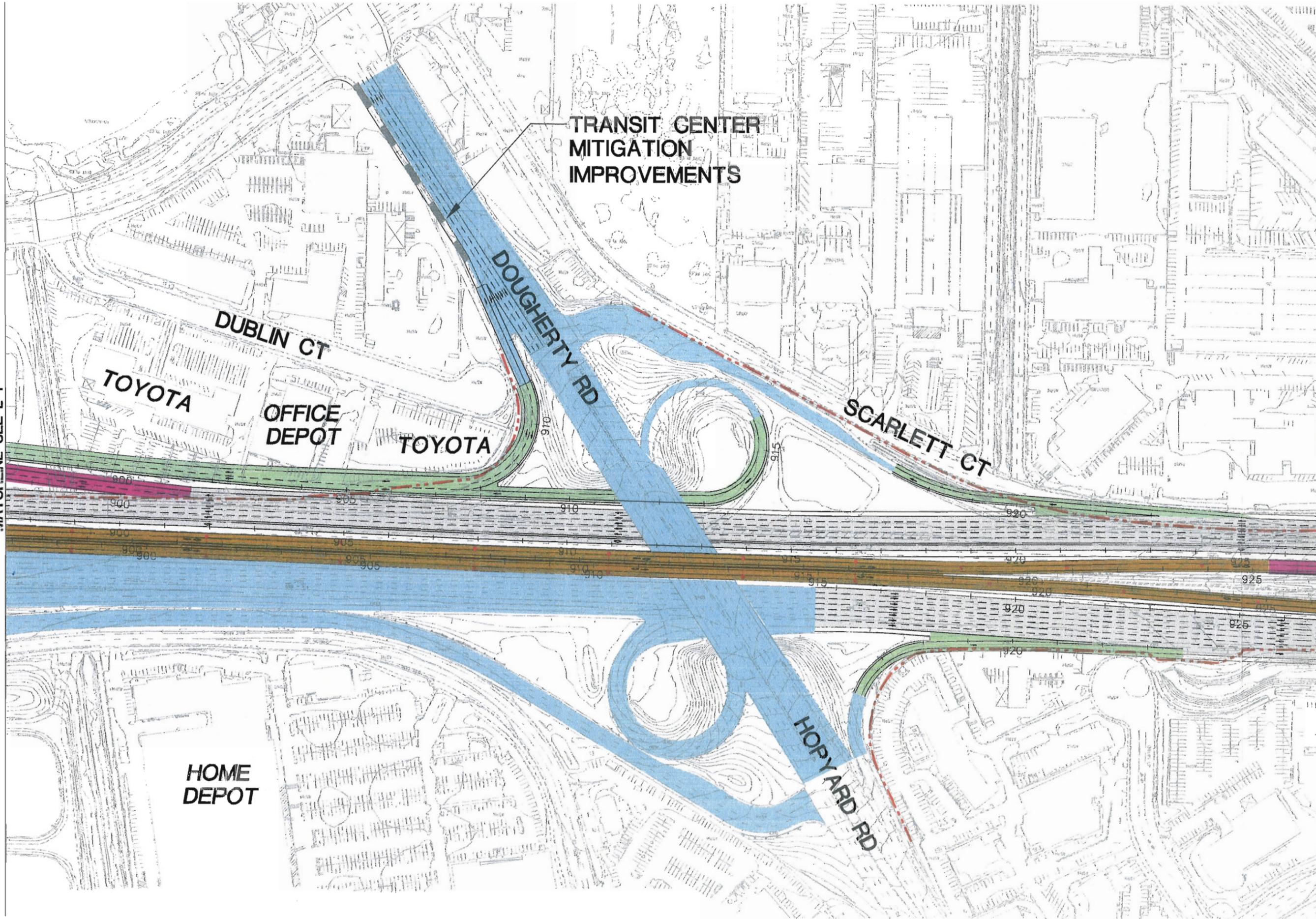
I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 1

L-1

Scale: 1"=100'

MATCHLINE SEE L-1



TRANSIT CENTER
MITIGATION
IMPROVEMENTS

DUBLIN CT

TOYOTA

OFFICE
DEPOT

TOYOTA

DOUGHERTY RD

SCARLETT CT

HOPYARD RD

HOME
DEPOT

910

915

920

925

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**EAST DUBLIN/PLEASANTON
BART STATION**

**FUTURE BART
PARKING STRUCTURE**

I-580

CHABOT CANAL

OWENS DR

**EXPRESS BUS RAMP FROM
BART TO EB I-580**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	2	4

REGISTERED CIVIL ENGINEER

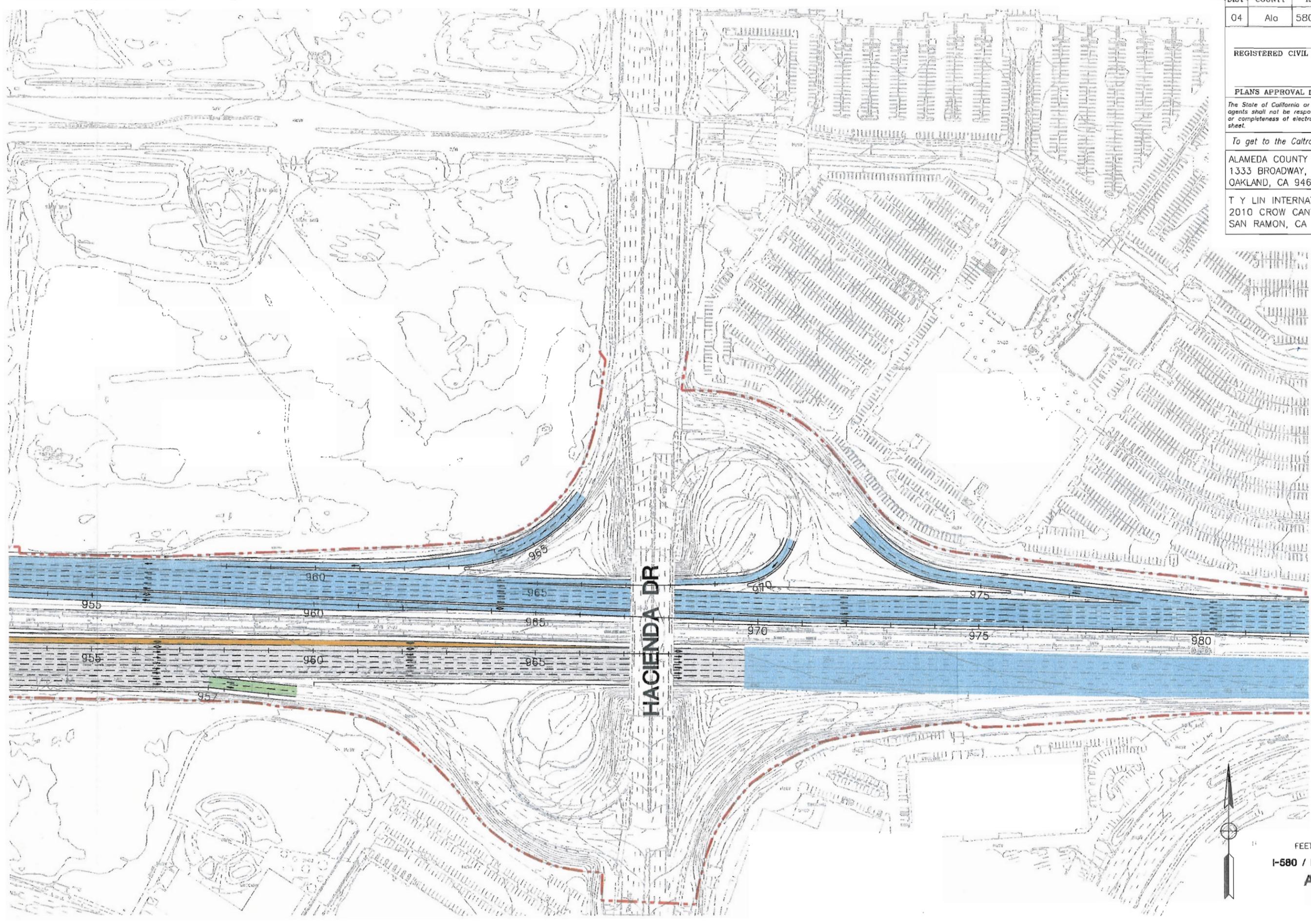
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OAKLAND, CA 94612

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2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 1

L-2

Scale: 1"=100'

PROJECT ENGINEER

CALCULATED/
DESIGNED BY

SCP

DATE

6/15/07

REVISD BY

SM

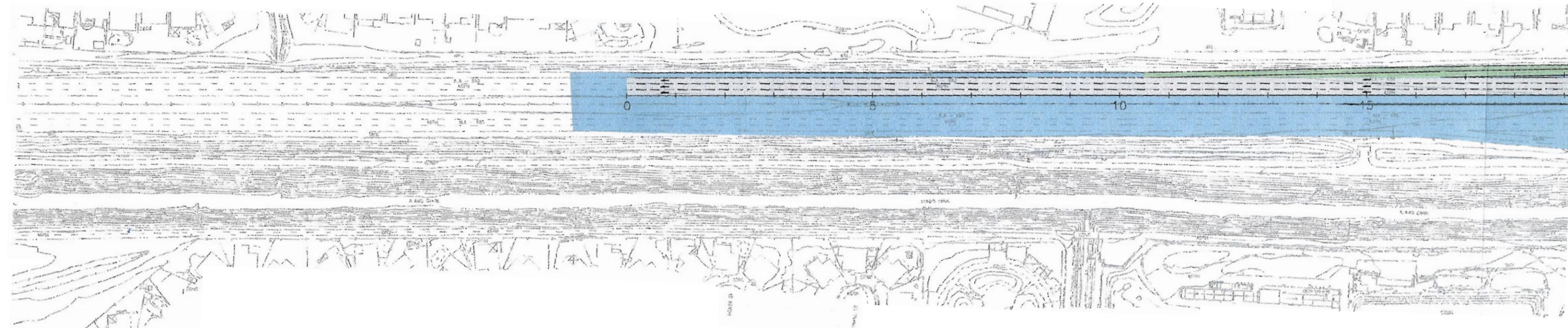
DATE

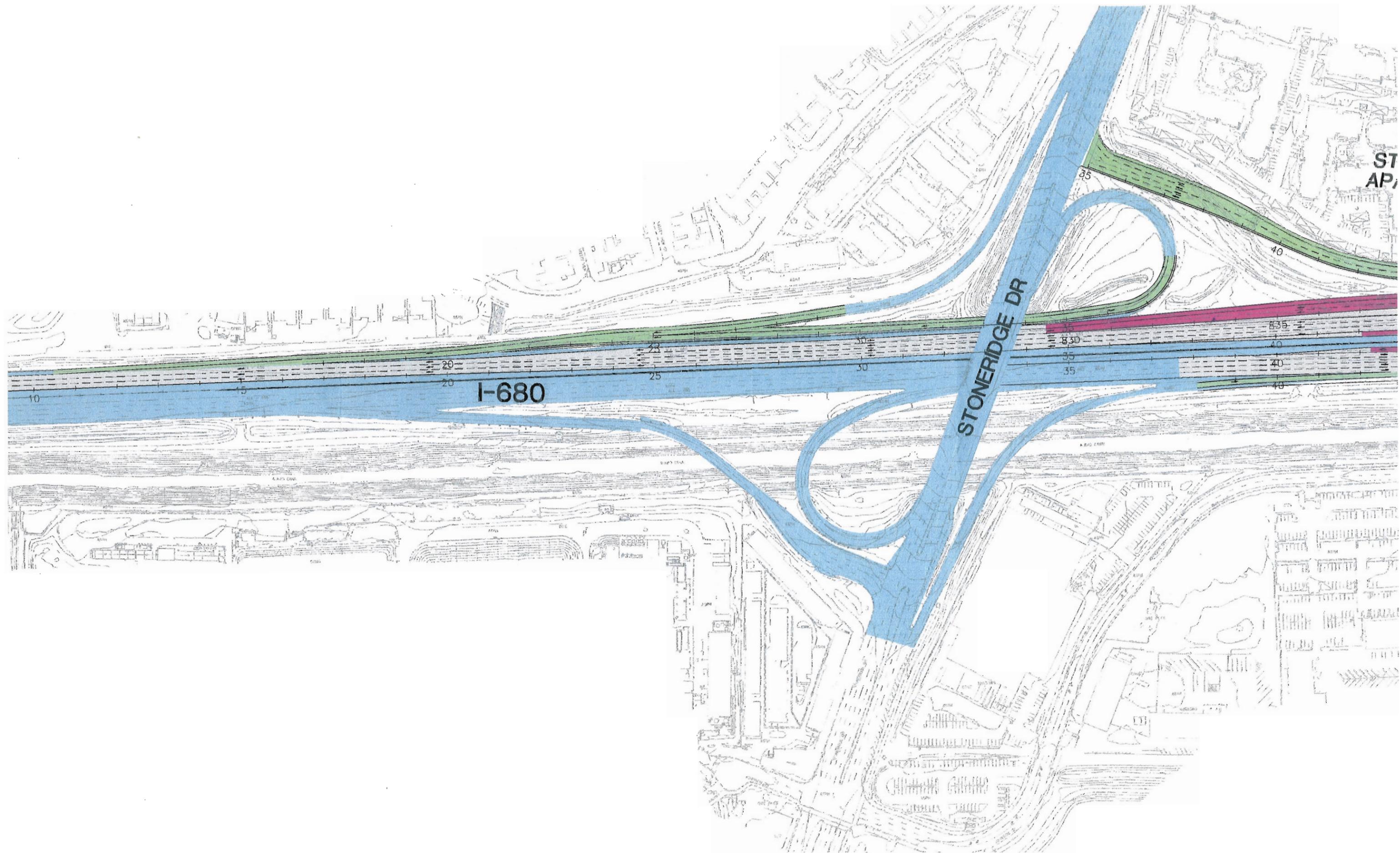
6/18/07

REVISD

DATE

REVISD





I-680

STONERIDGE DR

ST AP

CHERRY CREEK

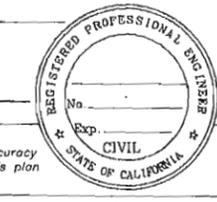
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	3	4

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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1333 BROADWAY, SUITE 220
OAKLAND, CA 94612

T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



MATCHLINE SEE L-4



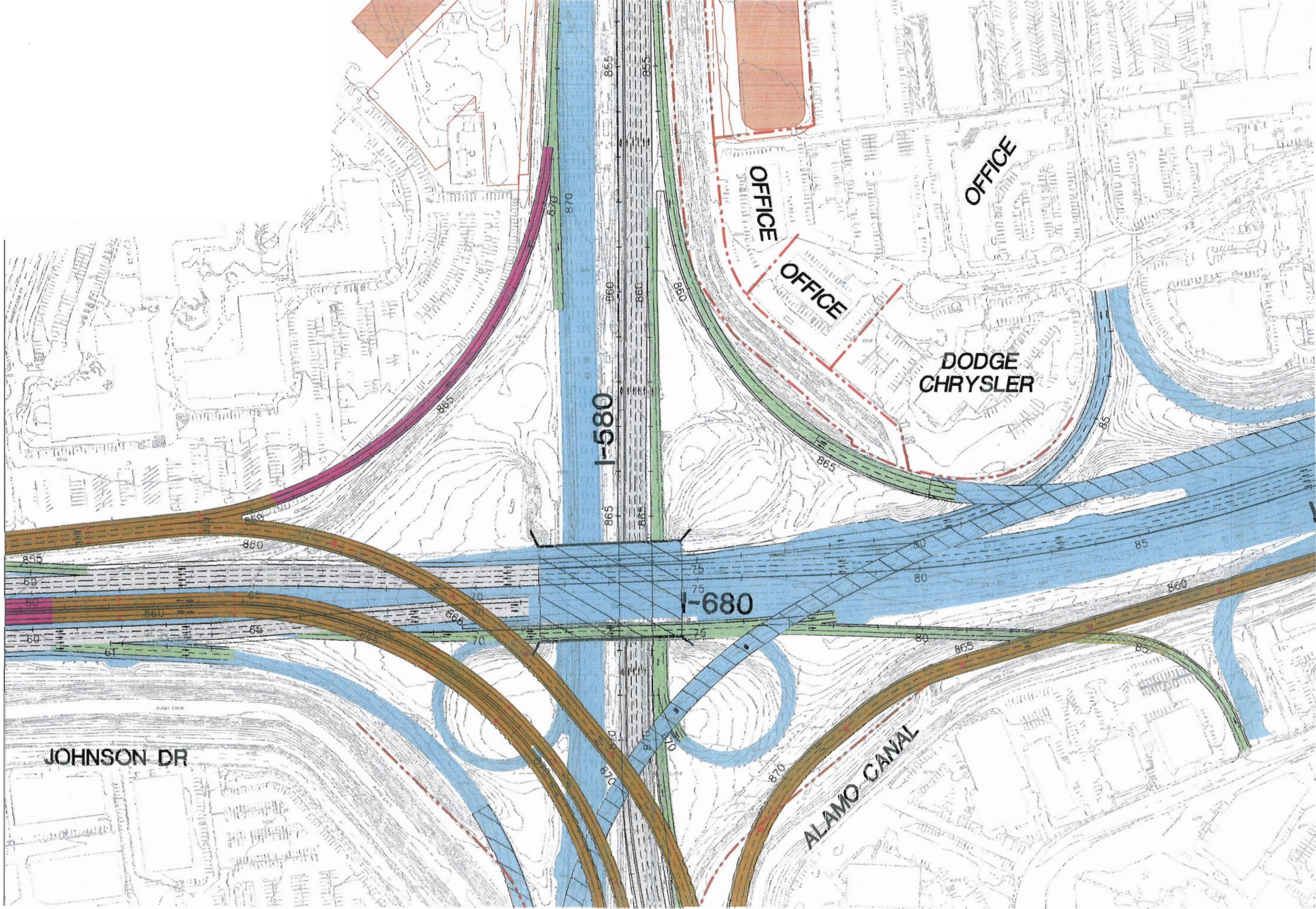
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-880 INTERCHANGE PROJECT

ALTERNATIVE 1

L-3

MATCHLINE SEE L-3



JOHNSON DR

I-580

I-680

ALAMO CANAL

OFFICE

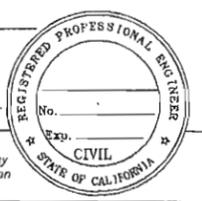
OFFICE

DODGE
CHRYSLER

OFFICE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	4	4

REGISTERED CIVIL ENGINEER



PLANS APPROVAL DATE

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1333 BROADWAY, SUITE 220
OAKLAND, CA 94612

T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



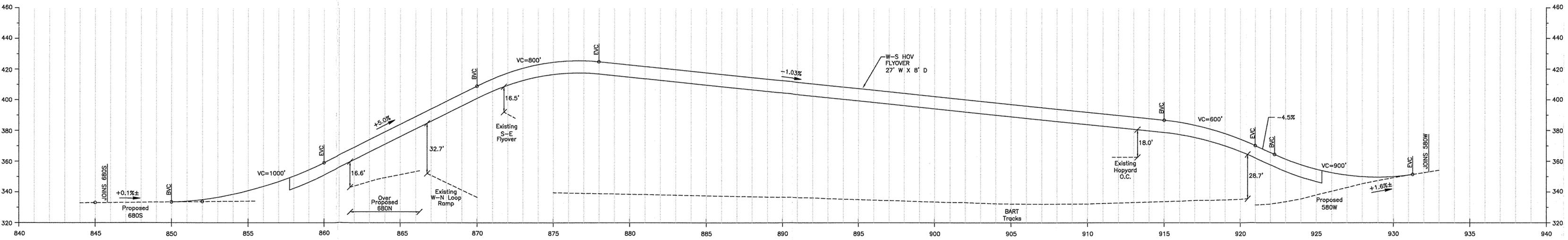
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-680 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
L-4
Scale: 1"=100'

LAST REVISION

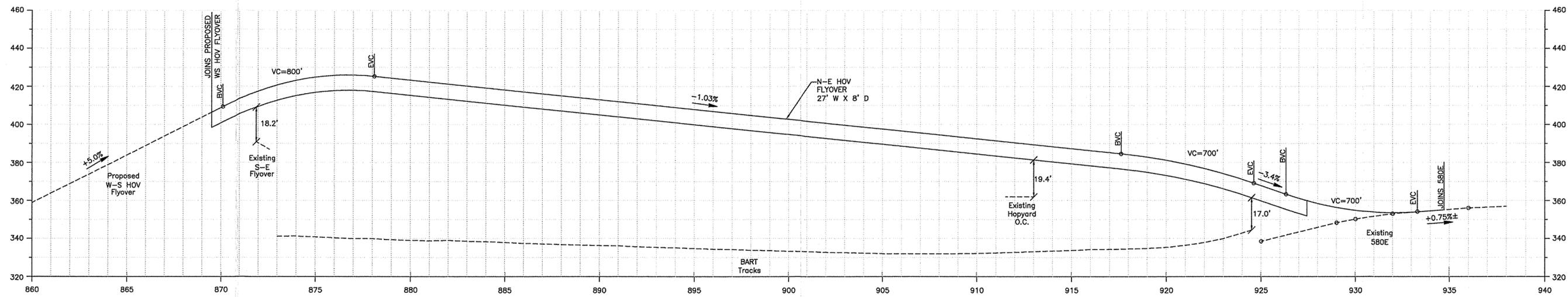
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 CALCULATED/DESIGNED BY SCP
 CHECKED BY SM
 DATE 3/27/07
 REVISED BY
 DATE 3/28/07
 REVISED DATE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	2

REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE
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 1333 BROADWAY, SUITE 220
 OAKLAND, CA 94612
 T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



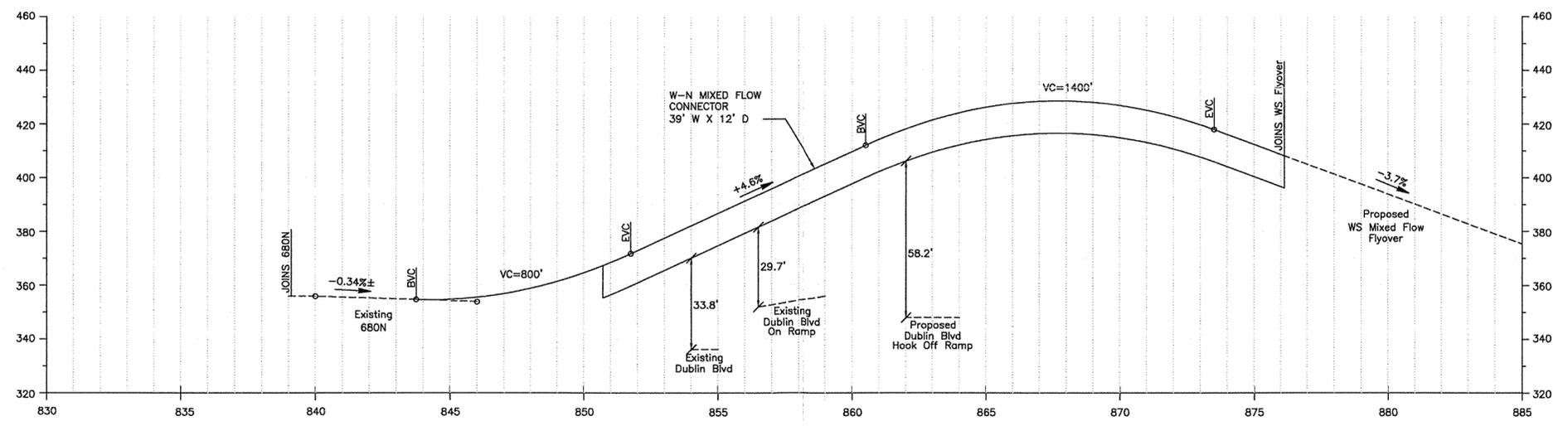
W-S HOV Flyover



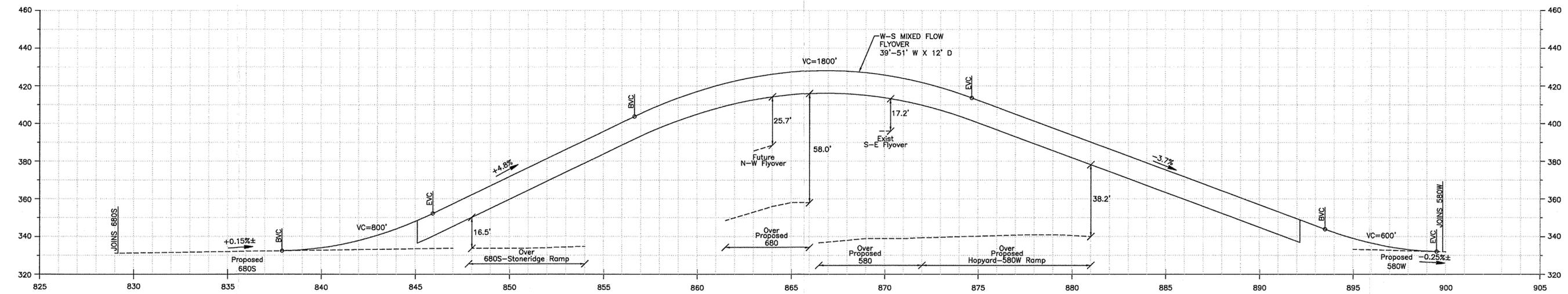
N-E HOV Flyover

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
PROFILE P-1
 Scale: HORIZ 1"=200'
 VERT 1"=20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 CALCULATED/DESIGNED BY
 CHECKED BY
 SCP
 SM
 DATE
 3/27/07
 3/28/07
 REVISIONS
 BY
 DATE
 REVISIONS
 BY
 DATE



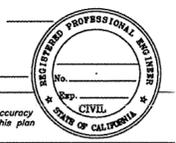
W-N Mixed Flow Connector



W-S Mixed Flow Flyover

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	2	2

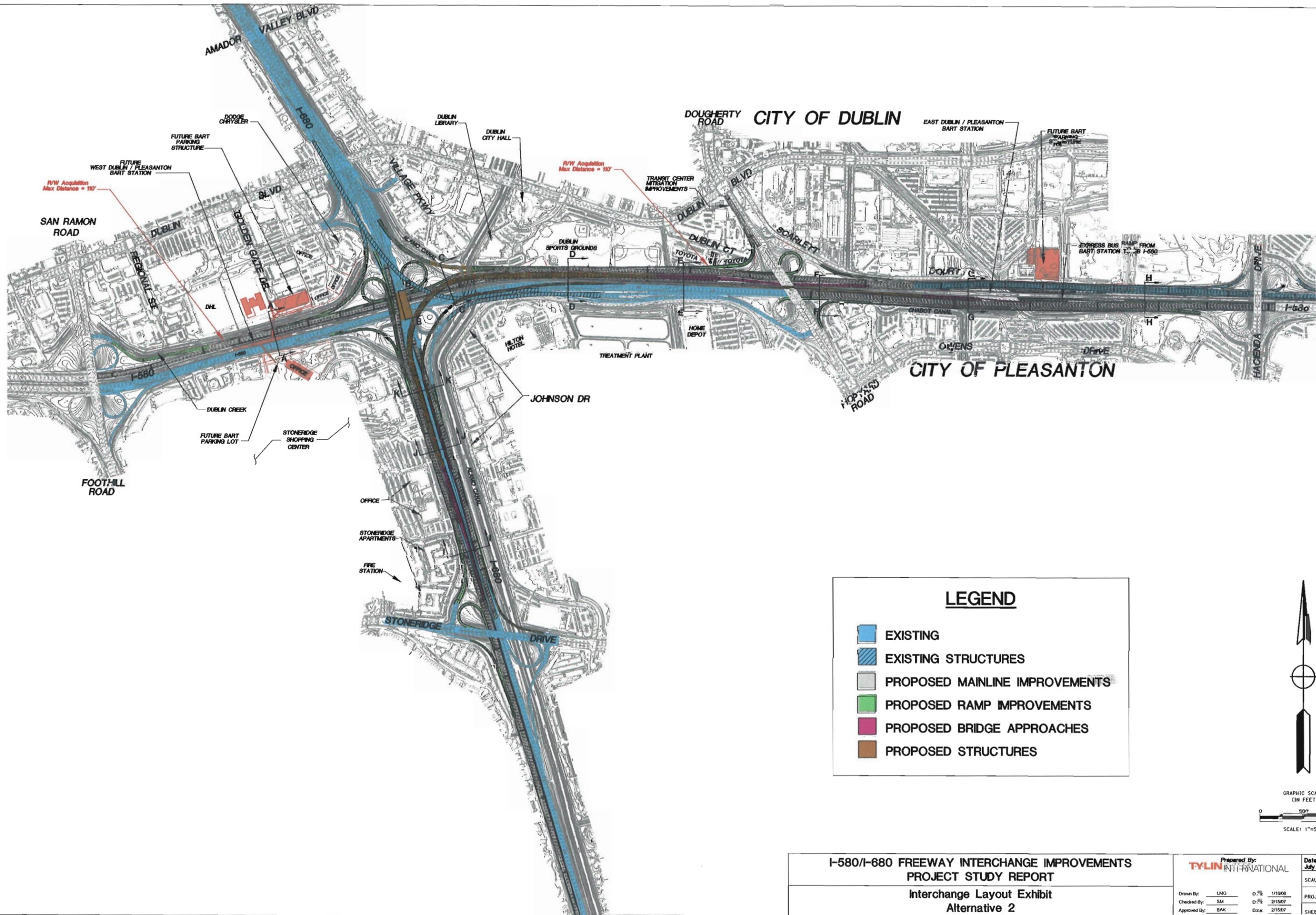
REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE
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 OAKLAND, CA 94612
 T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
1-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 1
PROFILE
P-2
 Scale: HORIZ 1"=200'
 VERT 1"=20'

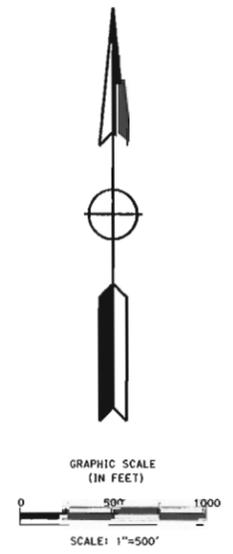
ATTACHMENT D

Layout and Profile Sheets (Alternative 2)



LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



**I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT**

**Interchange Layout Exhibit
Alternative 2**

Prepared By: TYLIN INTERNATIONAL		Date: July 27, 2007
Drawn By: LMG		Scale: 1"=500'
Checked By: SM		PROJECT NO. 320086
Approved By: BAK		SHEET ___ OF ___

PROJECT ENGINEER

CALCULATED /
DESIGNED BY

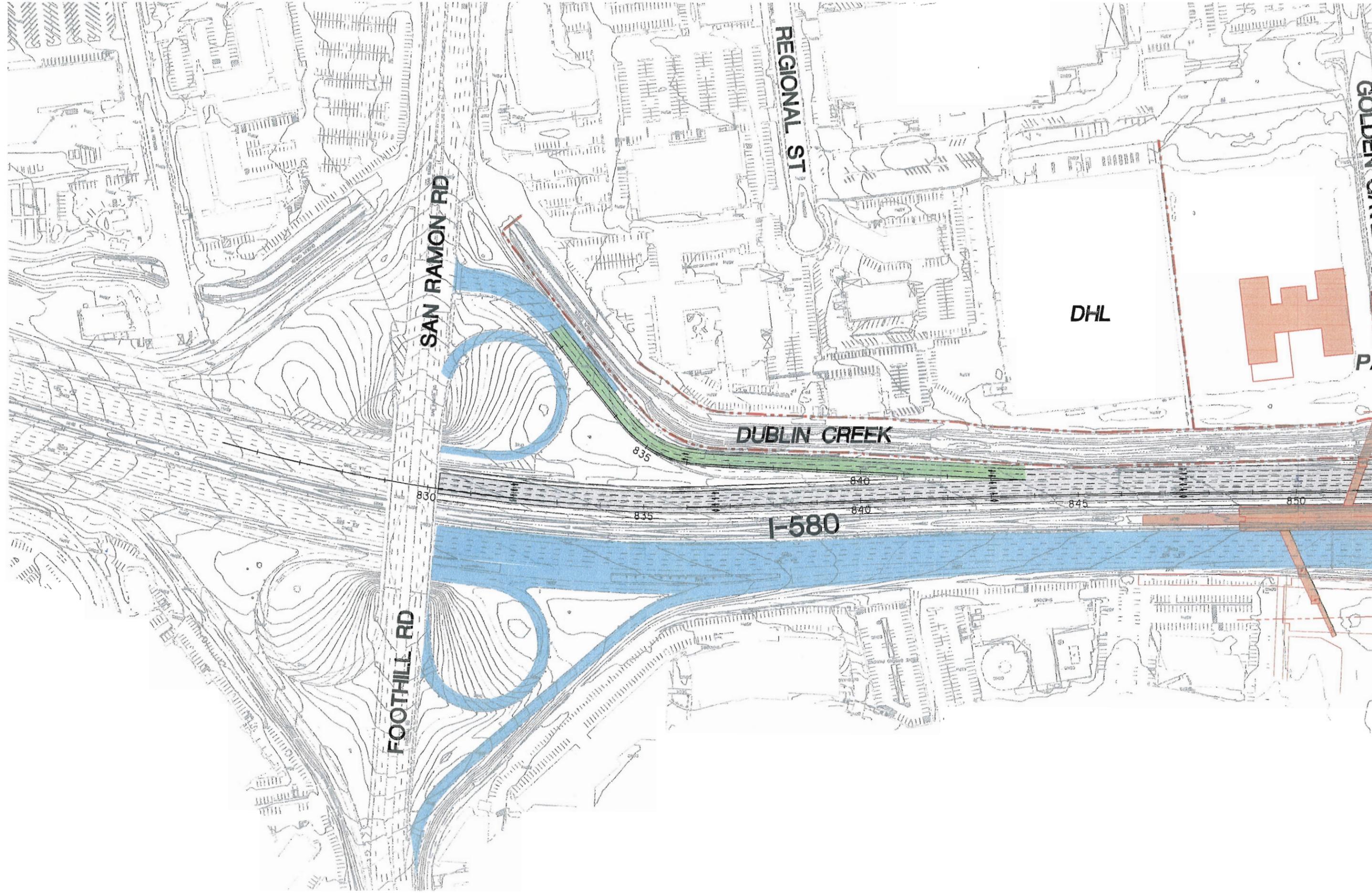
CHECKED BY

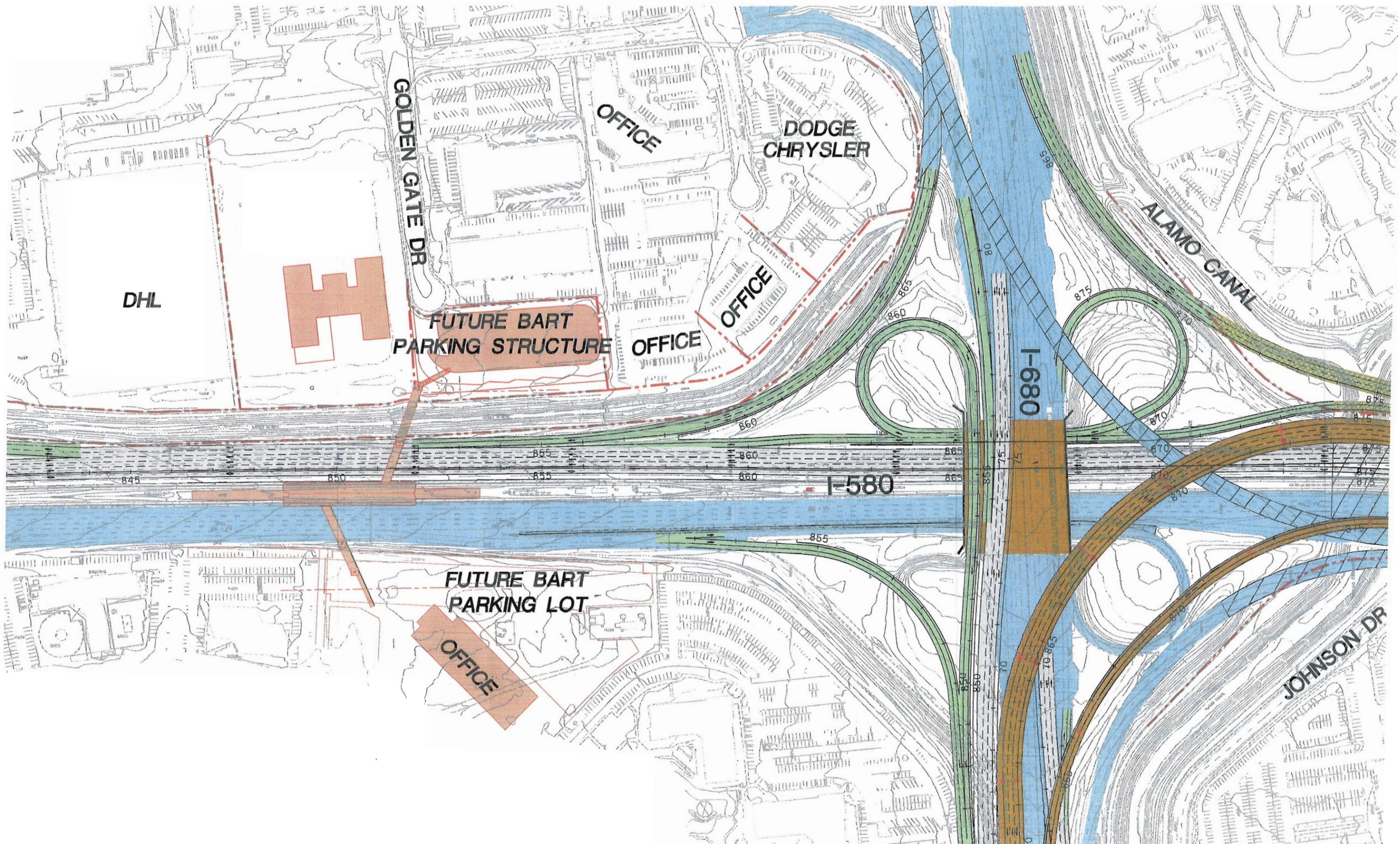
SCP

SM

DATE
6/15/07

REVISD BY
DATE
6/18/07





DHL

GOLDEN GATE DR

OFFICE

DODGE CHRYSLER

FUTURE BART PARKING STRUCTURE

OFFICE

OFFICE

ALAMO CANAL

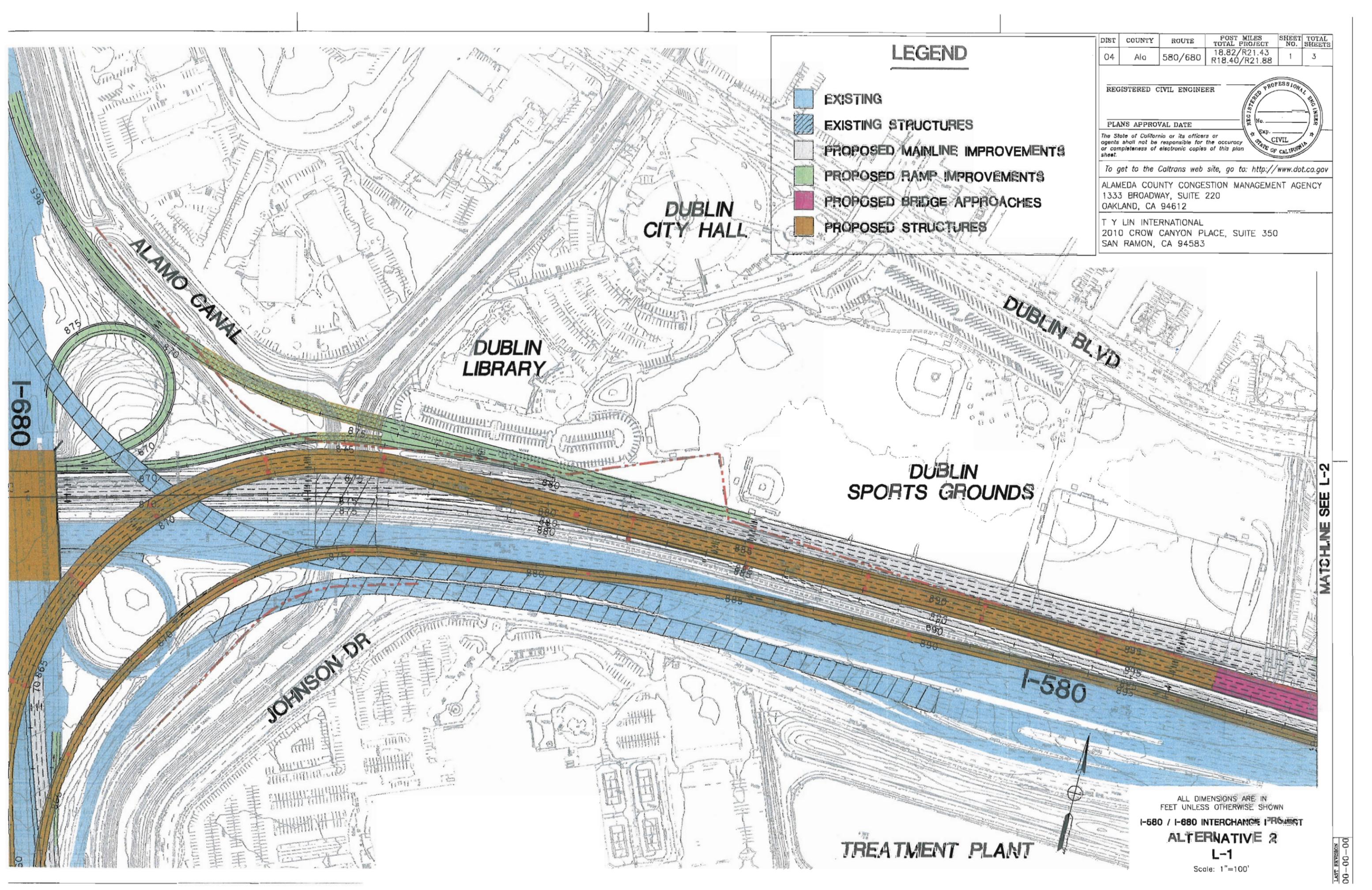
I-680

I-580

FUTURE BART PARKING LOT

OFFICE

JOHNSON DR



LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	1	3

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE
 No. _____
 EXP. _____
 CIVIL
 STATE OF CALIFORNIA



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 OAKLAND, CA 94612
 T Y LIN INTERNATIONAL
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 SAN RAMON, CA 94583

**DUBLIN
CITY HALL**

**DUBLIN
LIBRARY**

**DUBLIN
SPORTS GROUNDS**

JOHNSON DR

DUBLIN BLVD

I-580

TREATMENT PLANT

I-680

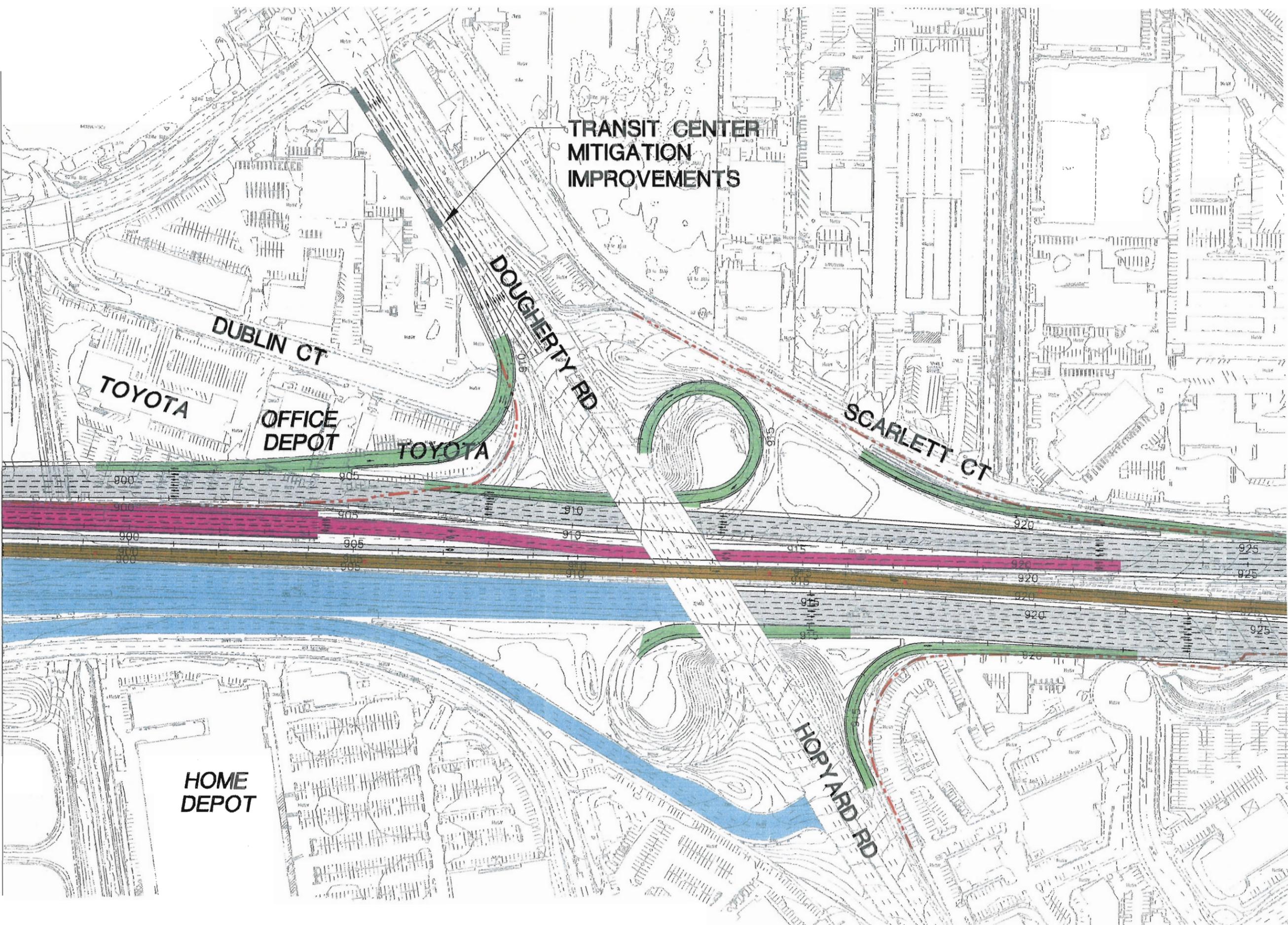
MATCHLINE SEE L-2

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-680 / I-580 INTERCHANGE PROJECT
ALTERNATIVE 2
L-1
 Scale: 1"=100'

LAST REVISION
00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER		CALCULATED/DESIGNED BY		DATE	
			SCP		6/15/07	
Caltrans	PROJECT ENGINEER		CHECKED BY		DATE	
			SM		6/18/07	
				REVISED BY		
				DATE		

MATCHLINE SEE L-1



**EAST DUBLIN/PLEASANTON
BART STATION**

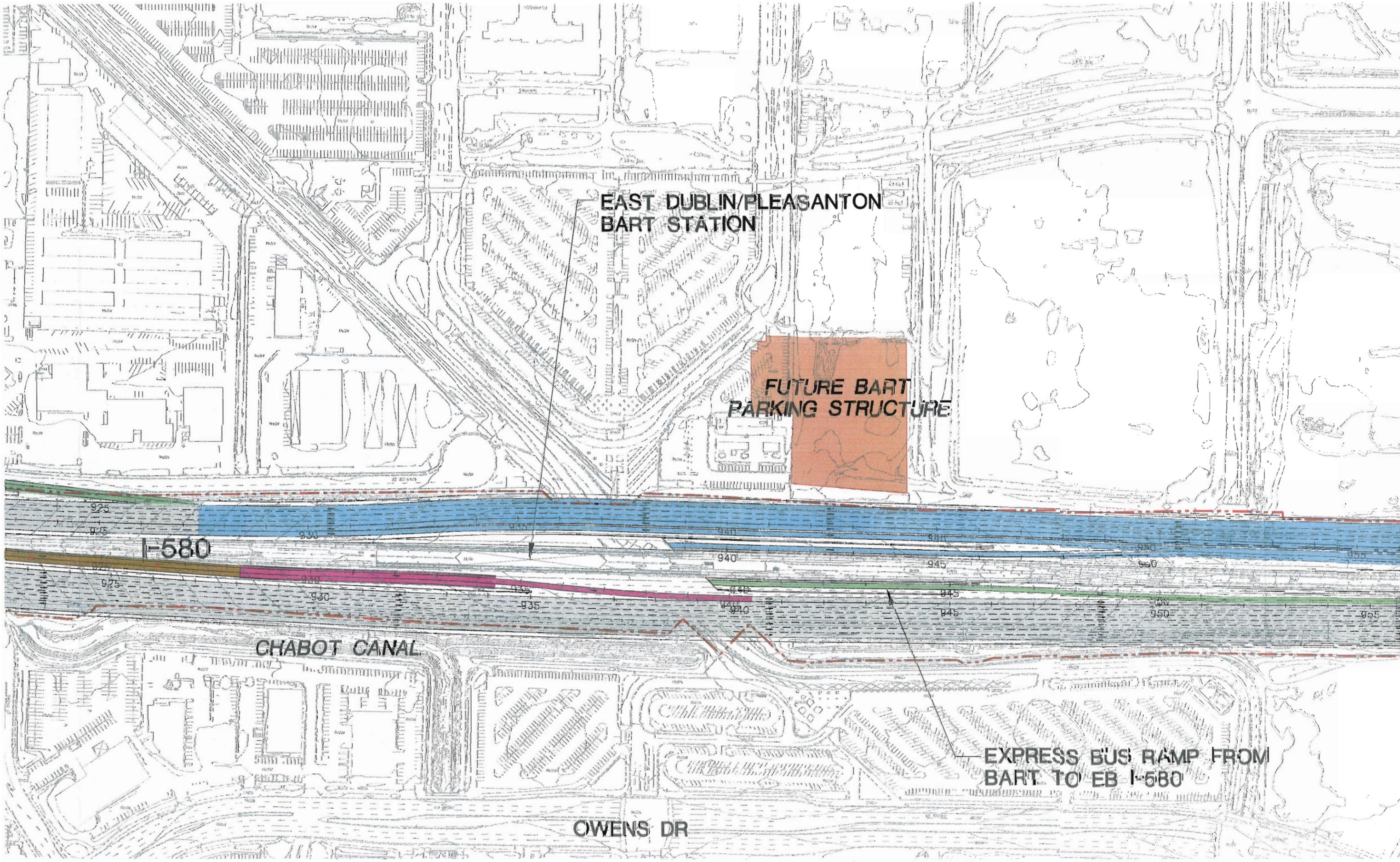
**FUTURE BART
PARKING STRUCTURE**

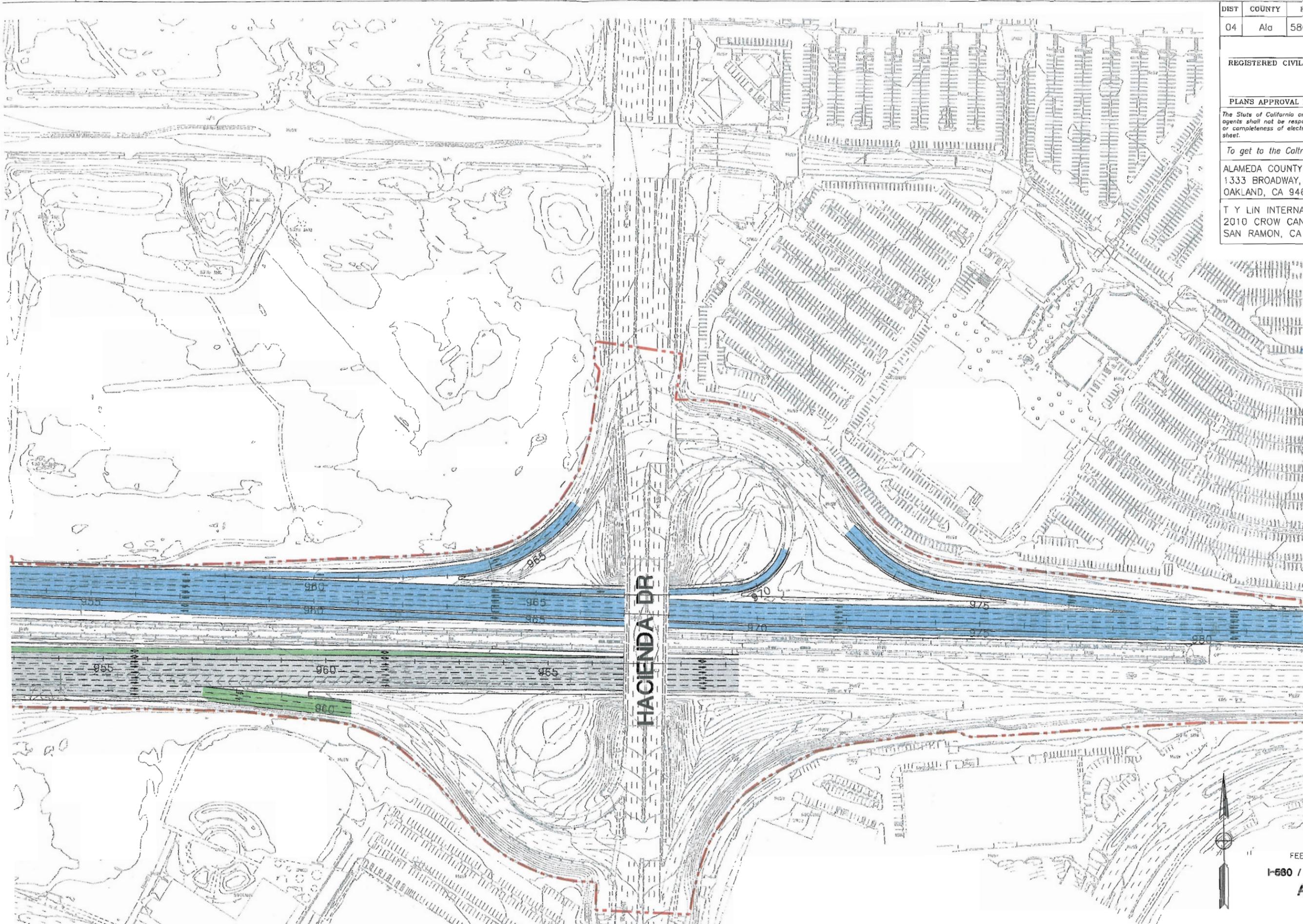
I-580

CHABOT CANAL

OWENS DR

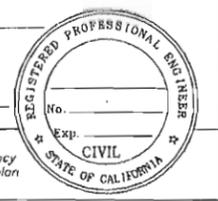
**EXPRESS BUS RAMP FROM
BART TO EB I-580**





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	2	3

REGISTERED CIVIL ENGINEER



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1333 BROADWAY, SUITE 220
OAKLAND, CA 94612

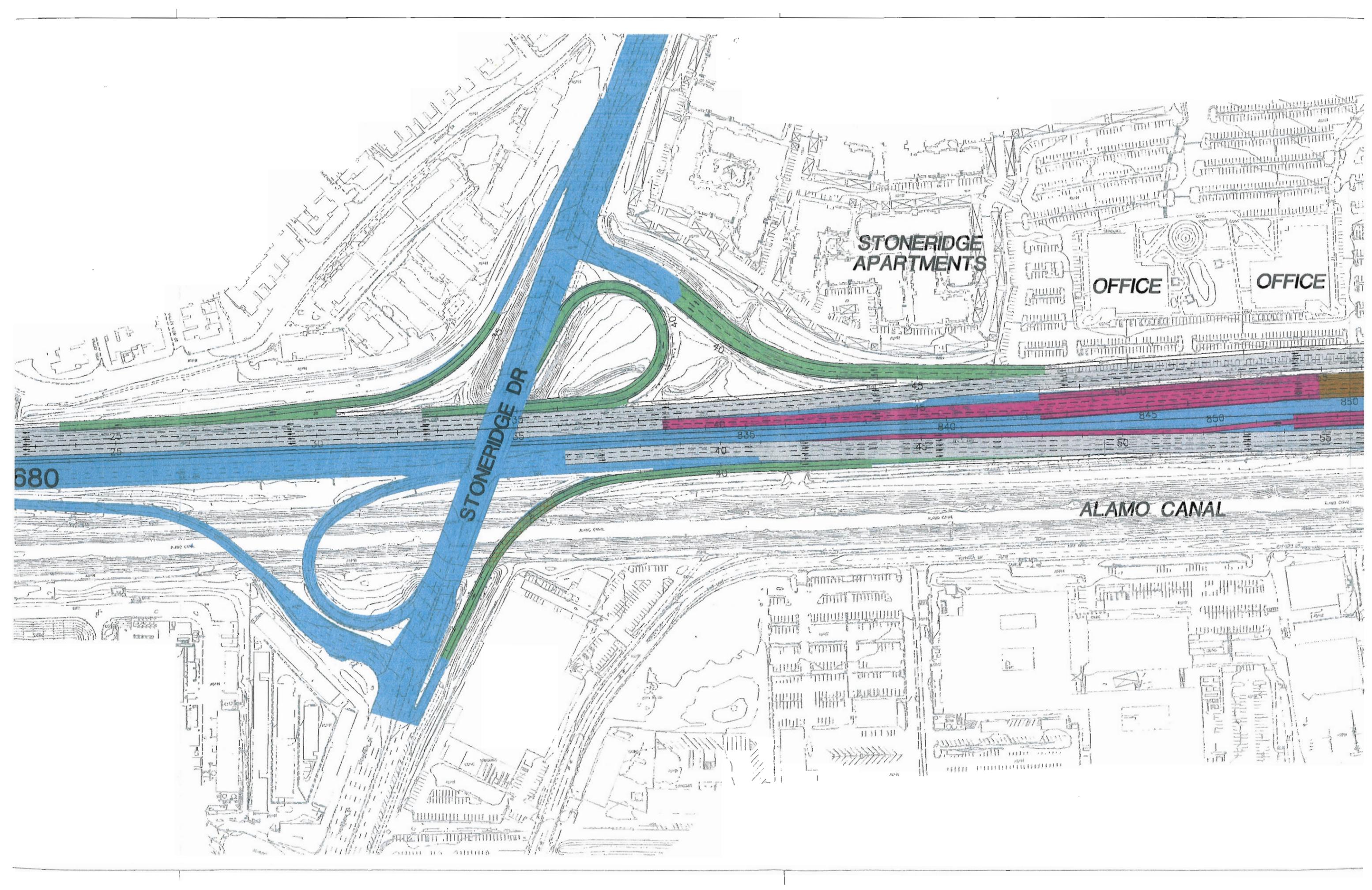
T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583

HACIENDA DR



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 2
L-2
Scale: 1"=100'

LAST REVISION
0-00-00



**STONERIDGE
APARTMENTS**

OFFICE

OFFICE

STONERIDGE DR

ALAMO CANAL

680

835

840

845

850

850

55

40

35

ALAMO CANAL

ALAMO CANAL

ALAMO CANAL

STONERIDGE DR



**STONERIDGE
APARTMENTS**

OFFICE

OFFICE

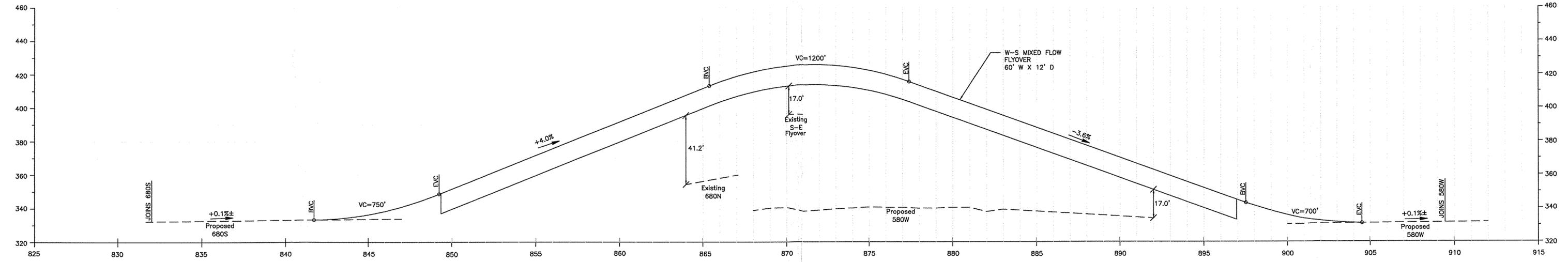
ALAMO CANAL

JOHNSON DR

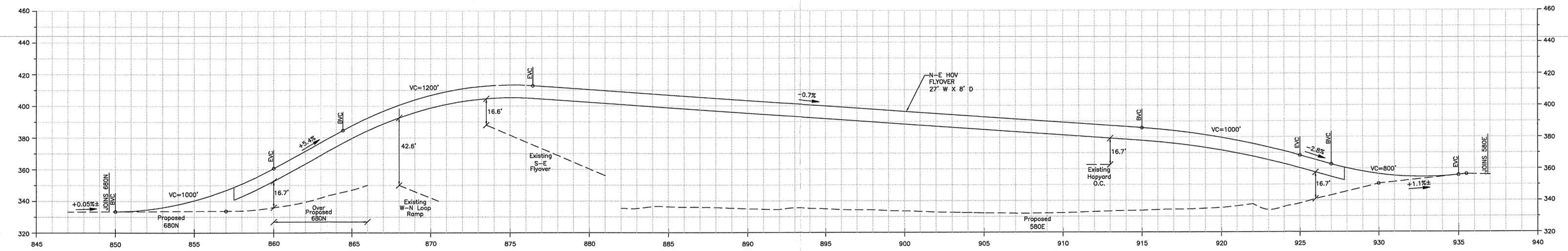
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 CALCULATED/DESIGNED BY: SCP
 CHECKED BY: SM
 DATE: 5/21/07
 REVISION DATE: 3/23/07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	1

REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE
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 OAKLAND, CA 94612
 T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



W-S Mixed Flow Flyover

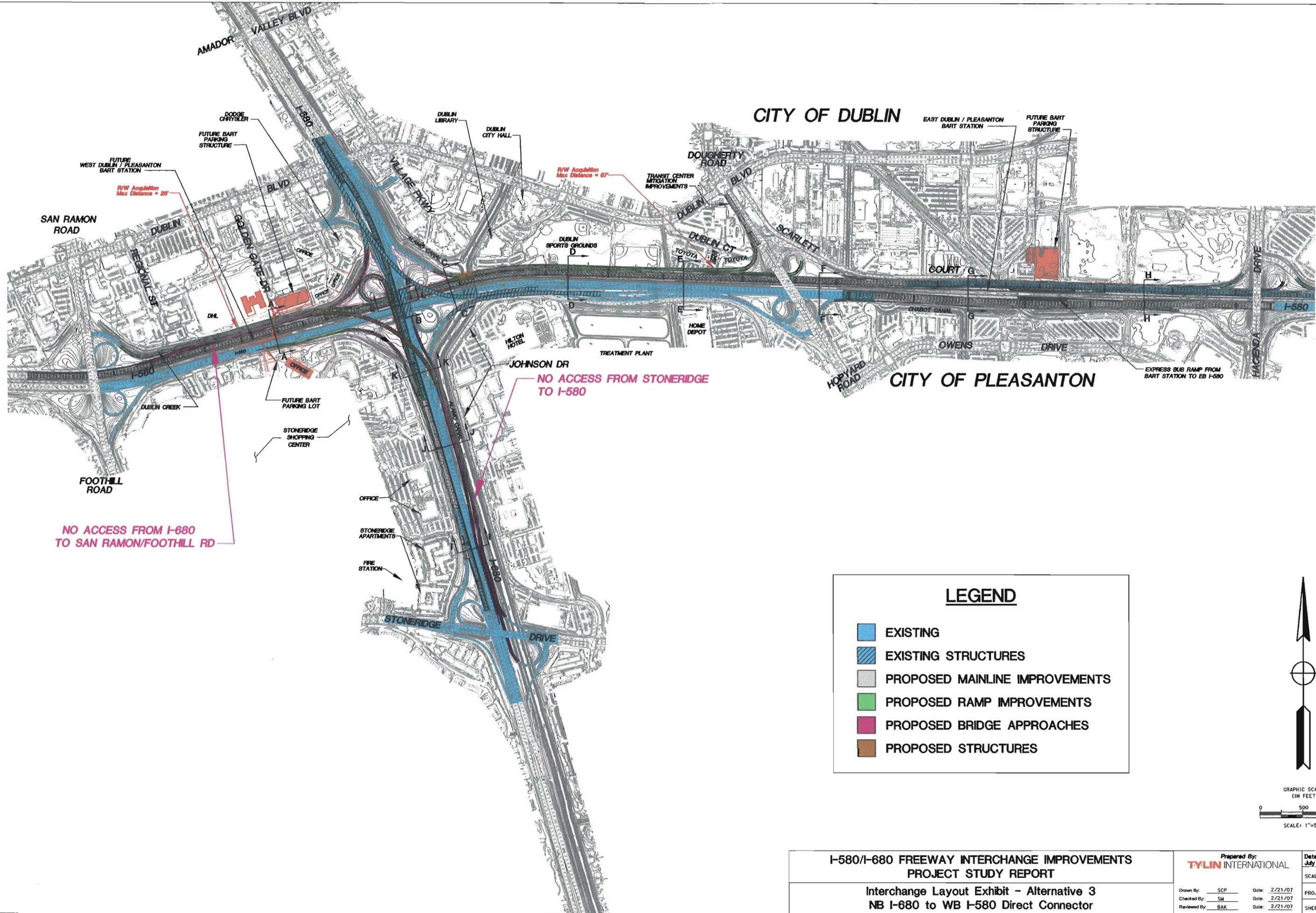


N-E HOV Flyover

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 2
PROFILE
P-1
 Scale: HORIZ 1"=200'
 VERT 1"=20'

ATTACHMENT E

Layout and Profile Sheets (Alternative 3)

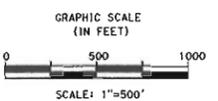


CITY OF DUBLIN

CITY OF PLEASANTON

LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



**I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT**

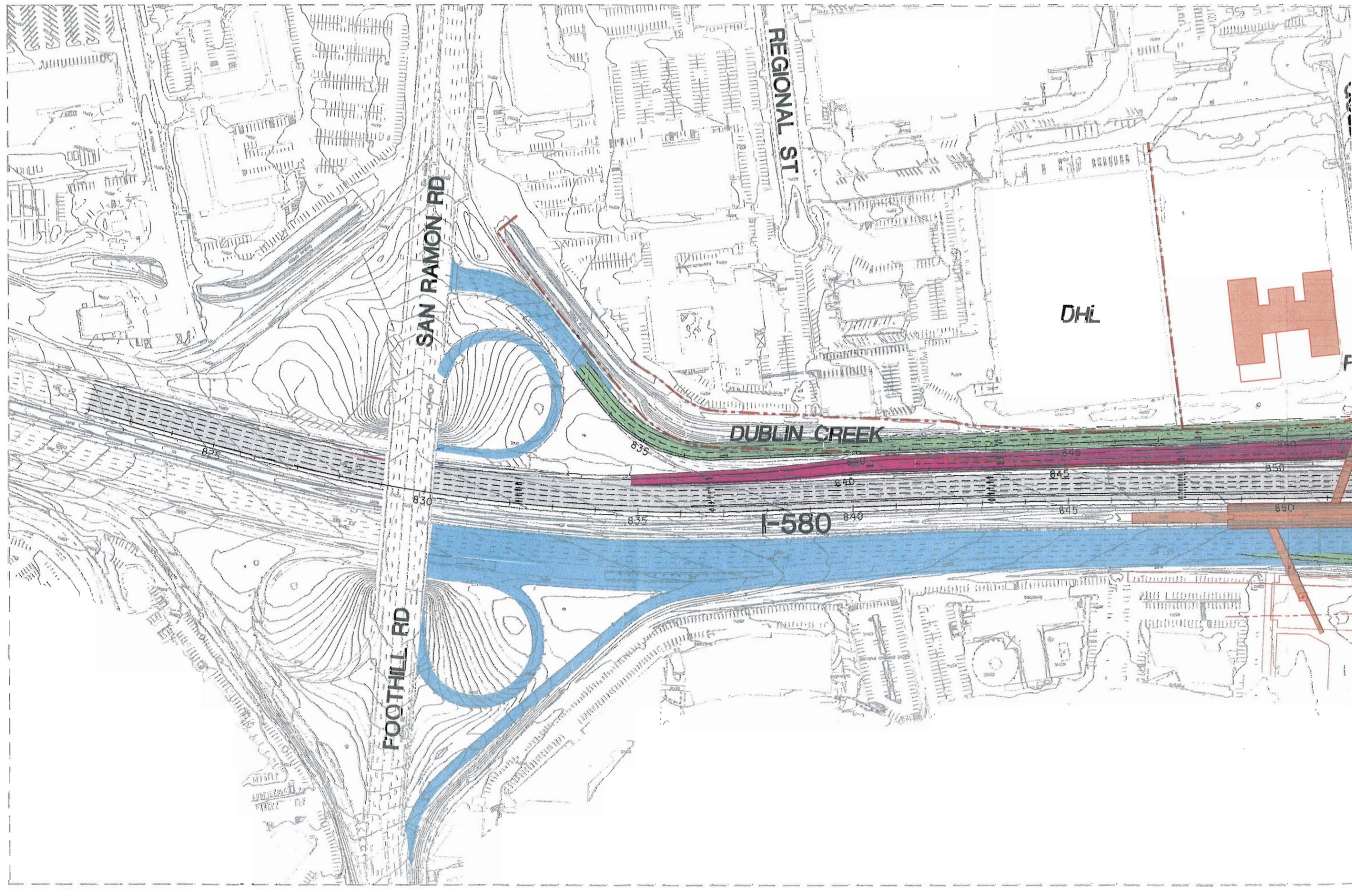
**Interchange Layout Exhibit - Alternative 3
NB I-680 to WB I-580 Direct Connector**

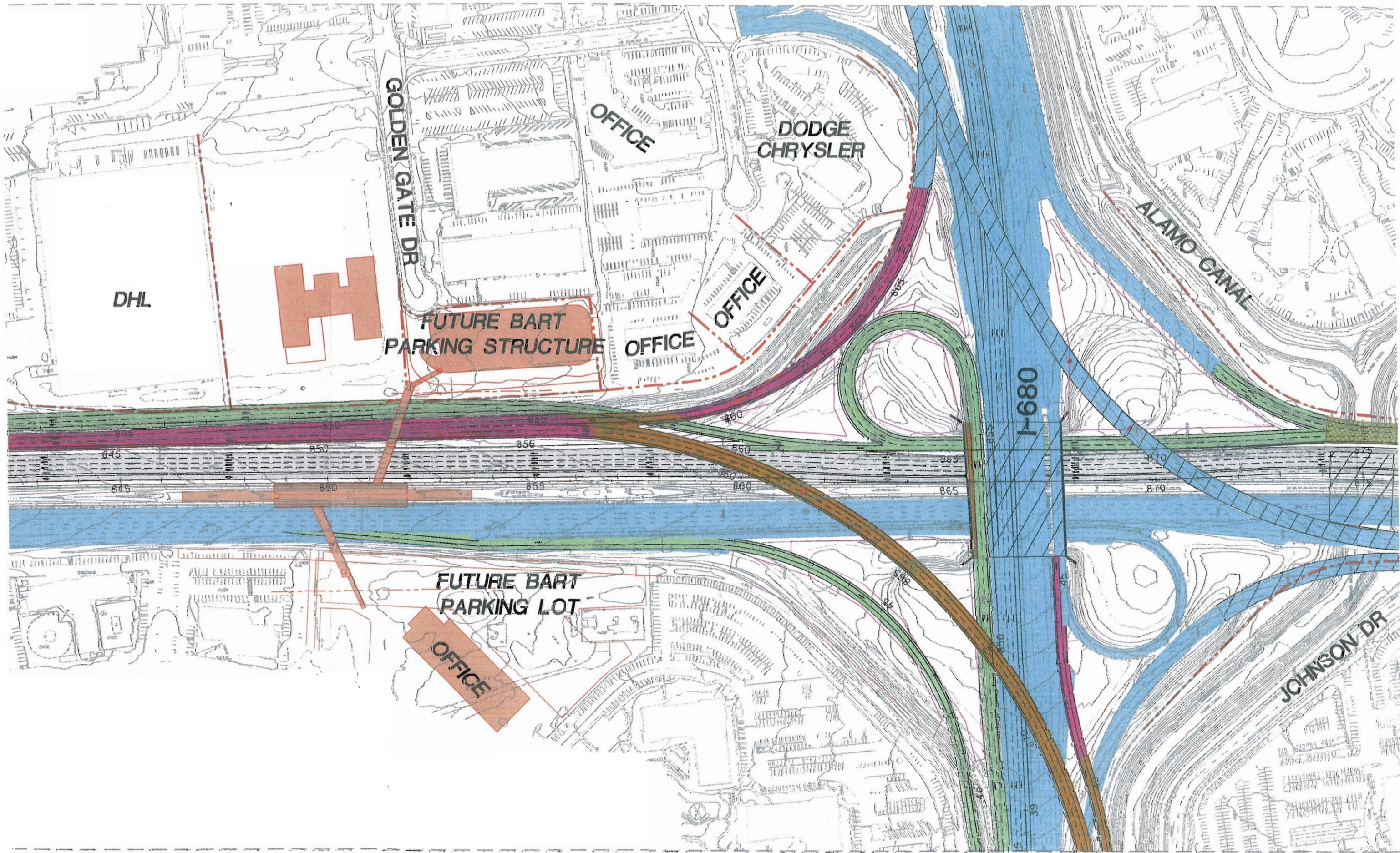
Prepared By:
TYLIN INTERNATIONAL

Date:
July 27, 2007

Drawn By: SCP Date: 2/21/07
Checked By: SM Date: 2/21/07
Reviewed By: BAK Date: 2/21/07

SCALE: 1"=500'
PROJECT NO. 320086
SHEET __ OF __





DHL

GOLDEN GATE DR

OFFICE

DODGE CHRYSLER

FUTURE BART PARKING STRUCTURE

OFFICE

OFFICE

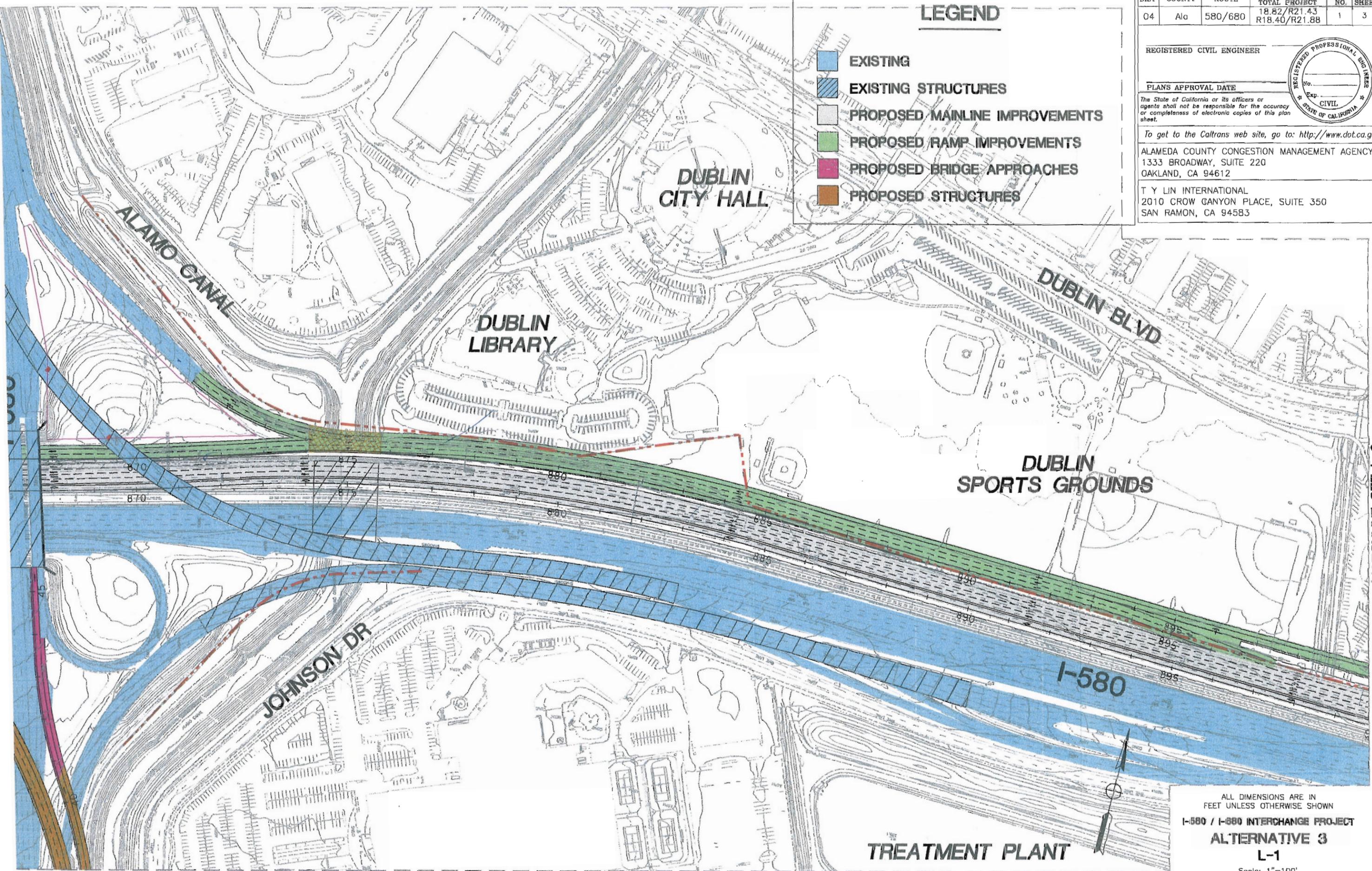
089-1

ALAMO CANAL

FUTURE BART PARKING LOT

OFFICE

JOHNSON DR



LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	1	3

REGISTERED CIVIL ENGINEER

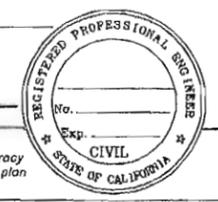
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OAKLAND, CA 94612

T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



MATCHLINE SEE L-2

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

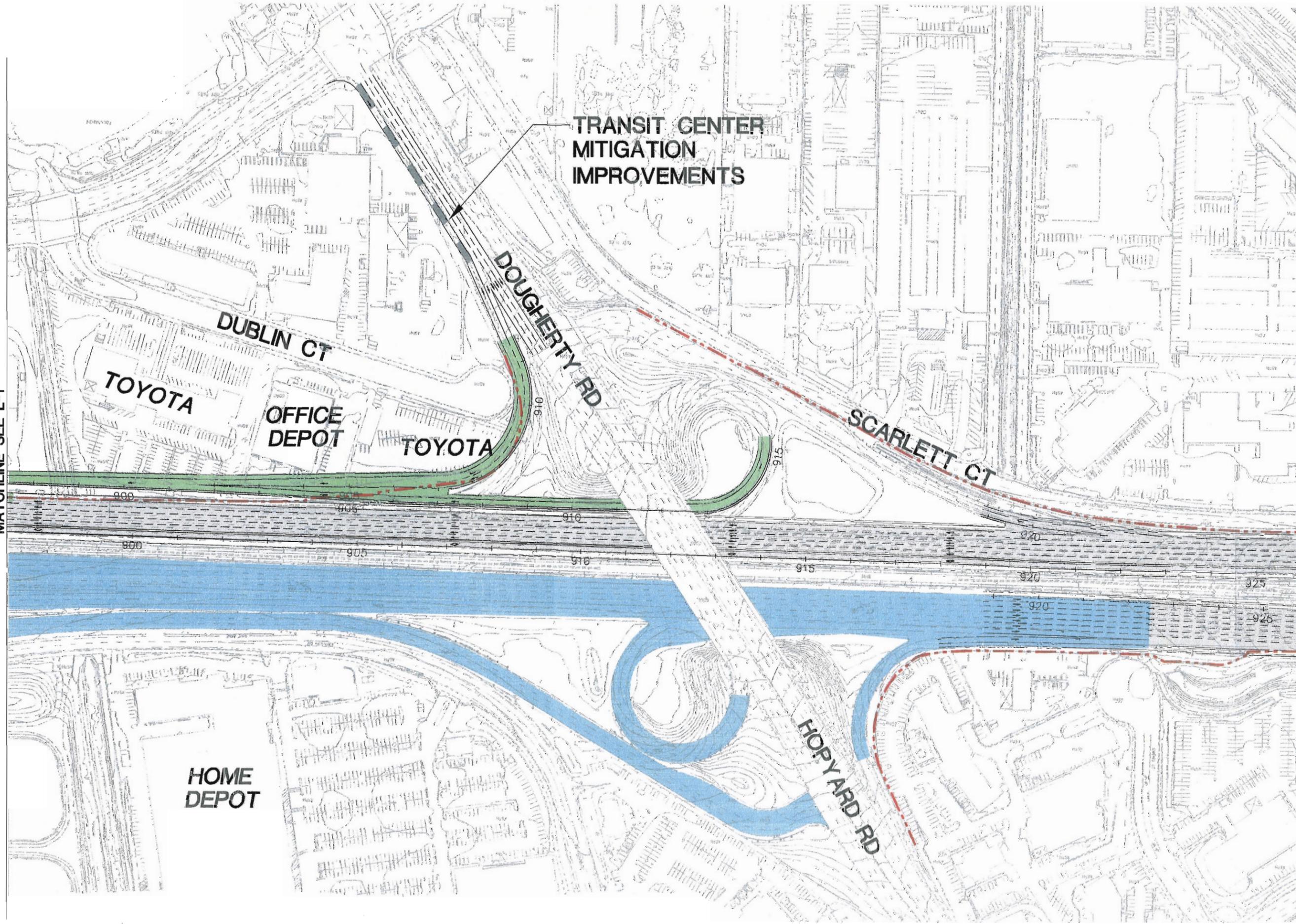
ALTERNATIVE 3

L-1

Scale: 1"=100'

REVISION
-00-00

MATCHLINE SEE L-1



**TRANSIT CENTER
MITIGATION
IMPROVEMENTS**

DUBLIN CT

TOYOTA

OFFICE
DEPOT

TOYOTA

DOUGHERTY RD

SCARLETT CT

HOPYARD RD

HOME
DEPOT

800

805

910

915

920

920

925

925

910

915

910

915

920

925

**EAST DUBLIN/PLEASANTON
BART STATION**

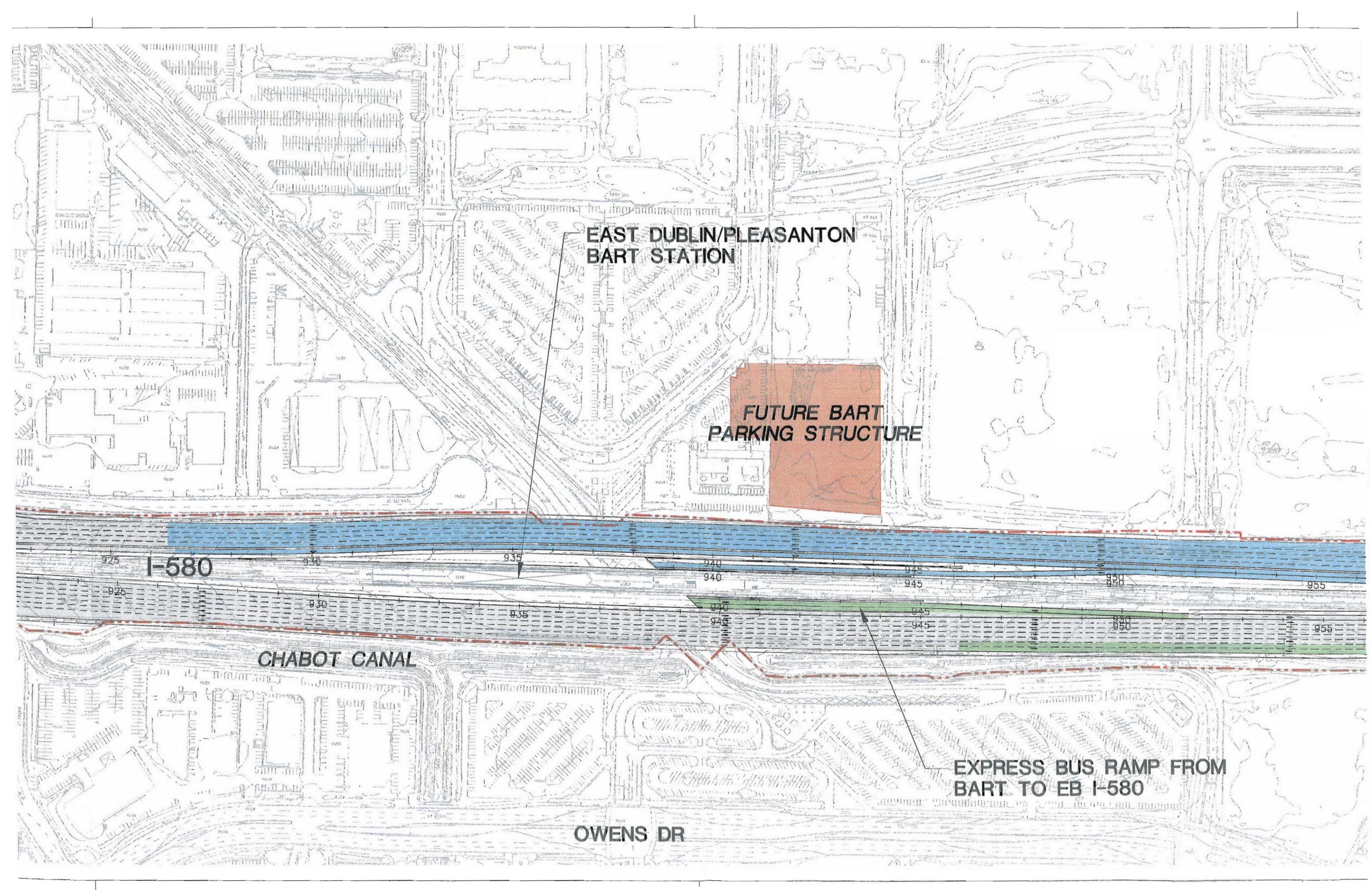
**FUTURE BART
PARKING STRUCTURE**

I-580

CHABOT CANAL

**EXPRESS BUS RAMP FROM
BART TO EB I-580**

OWENS DR



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alc	580/680	18.82/R21.43 R18.40/R21.88	2	3

REGISTERED CIVIL ENGINEER



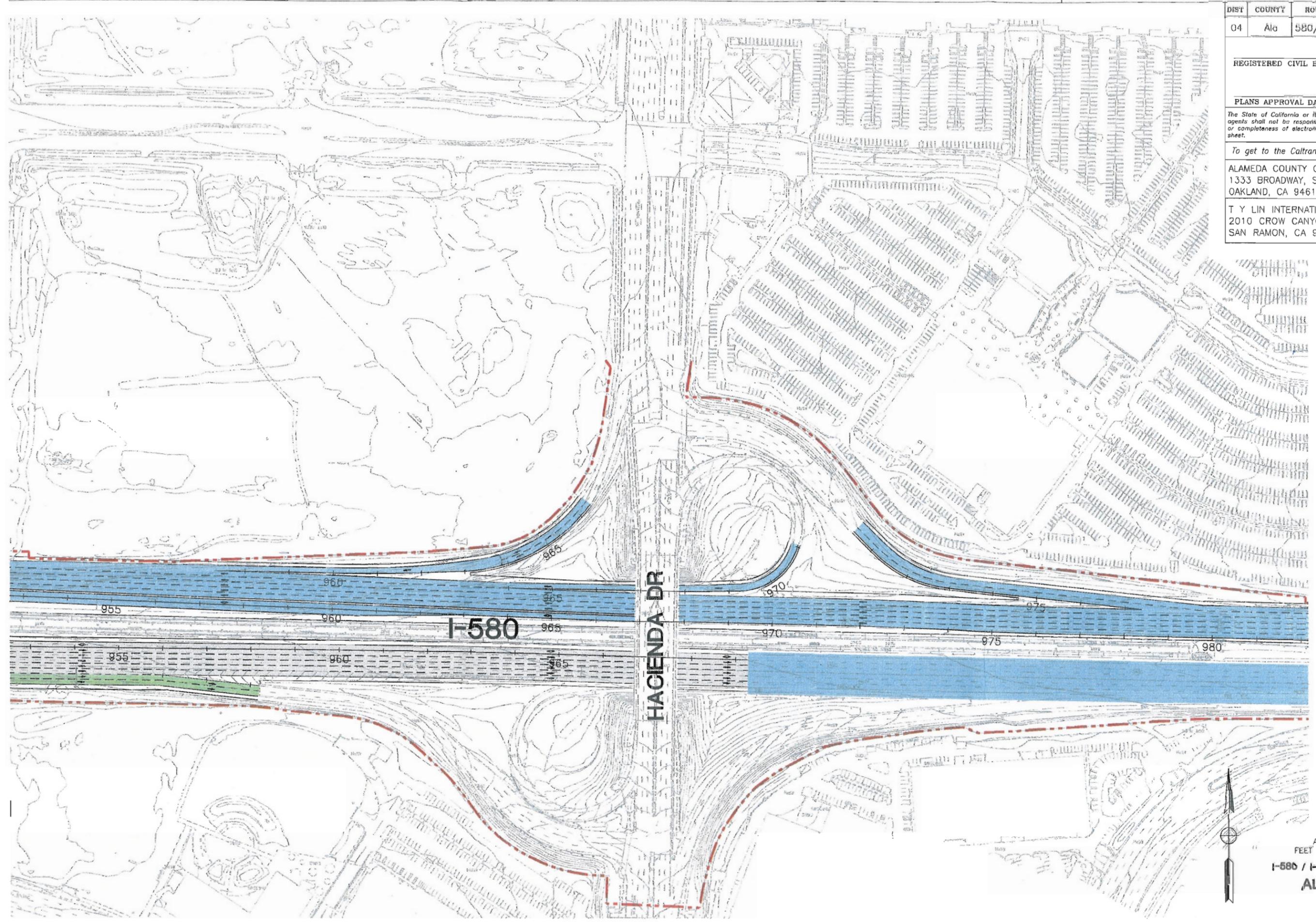
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1333 BROADWAY, SUITE 220
OAKLAND, CA 94612

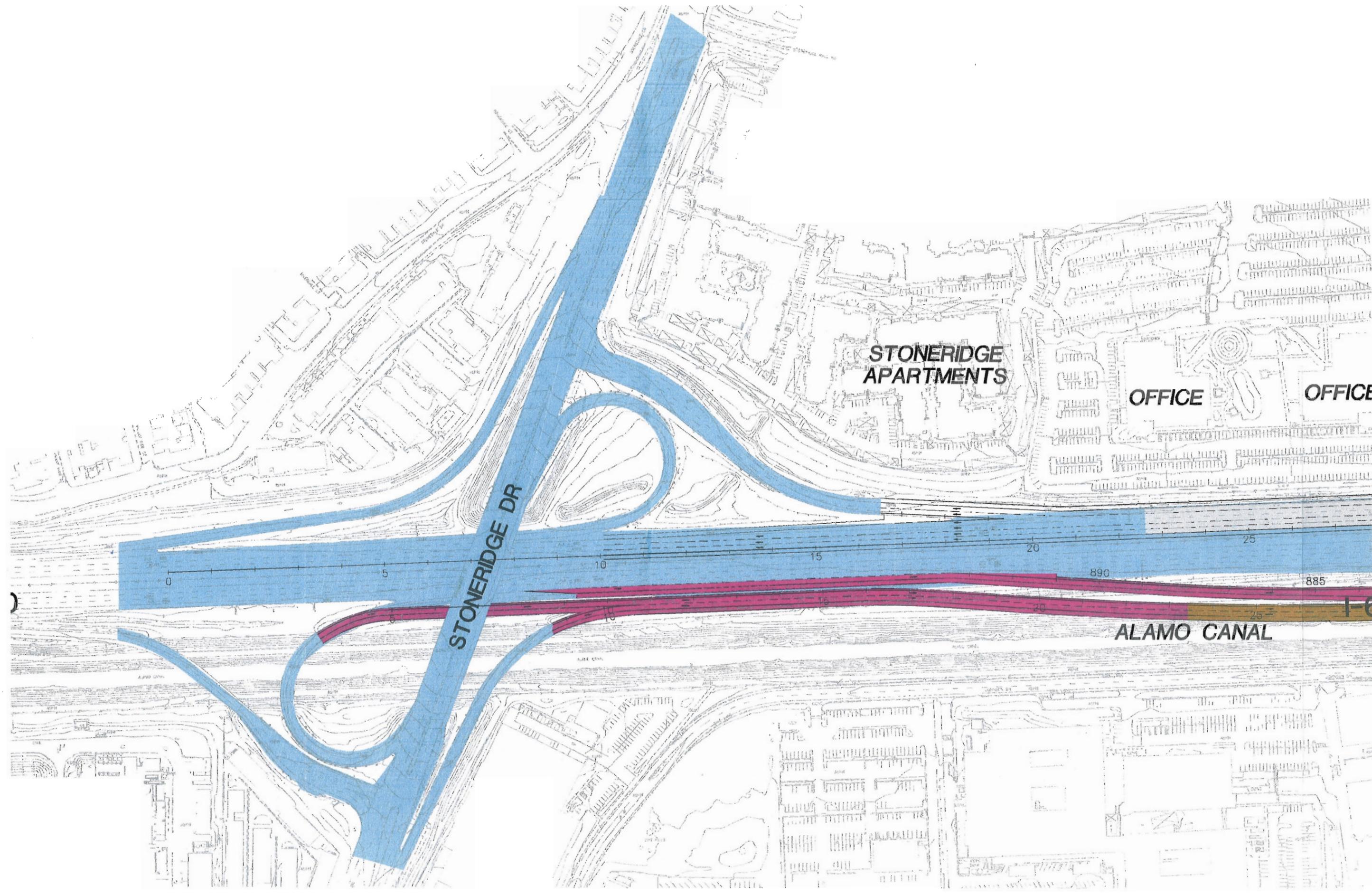
T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 3
L-2
Scale: 1"=100'

T.Y. LIN INTERNATIONAL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION St. Gibbons	PROJECT ENGINEER		CALCULATED/DESIGNED BY		SCP	DATE	REVISD BY
			CHECKED BY		SM	6/15/07	6/18/07



STONERIDGE APARTMENTS

OFFICE

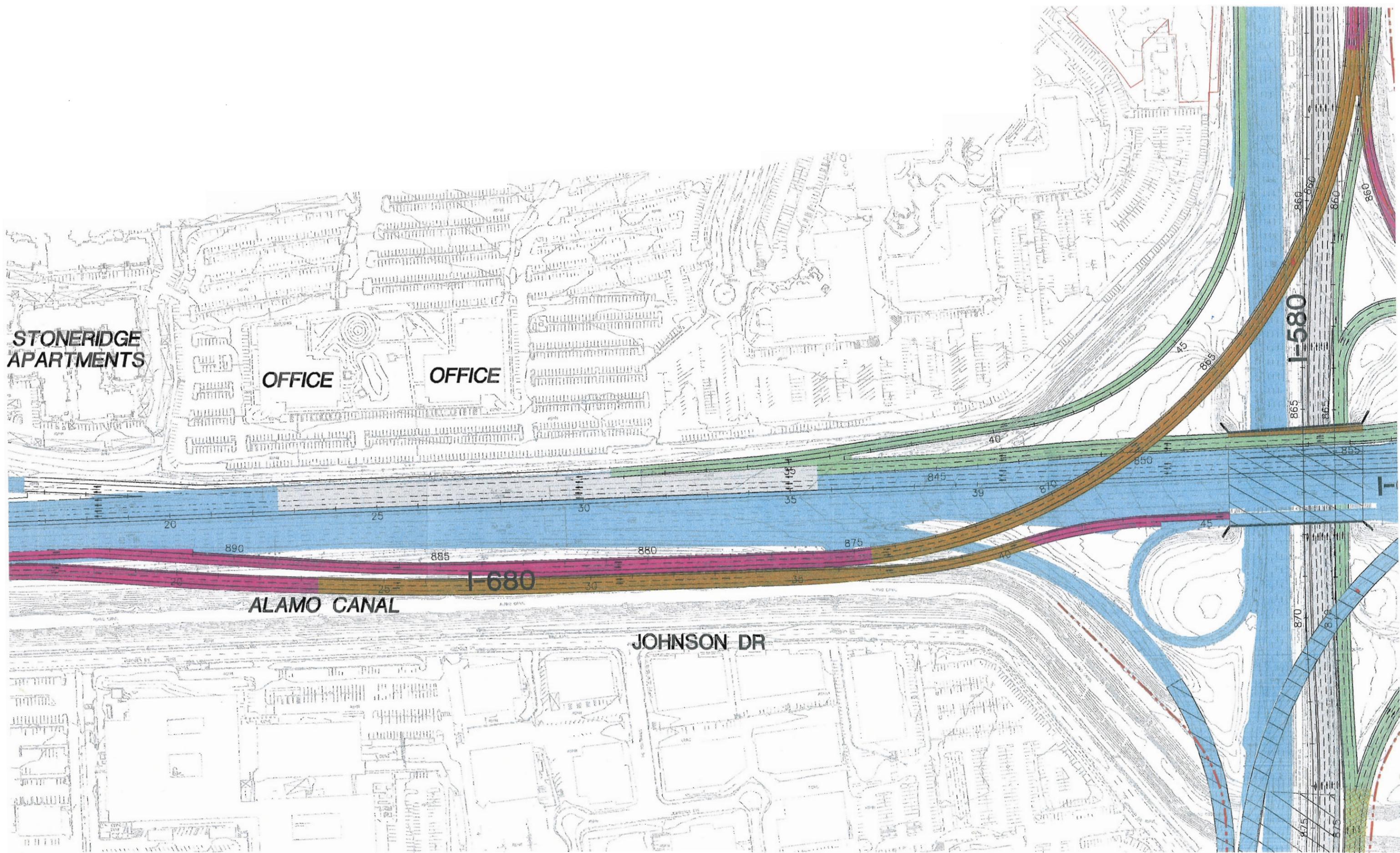
OFFICE

ALAMO CANAL

I-680

JOHNSON DR

I-580



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	3	3

REGISTERED CIVIL ENGINEER

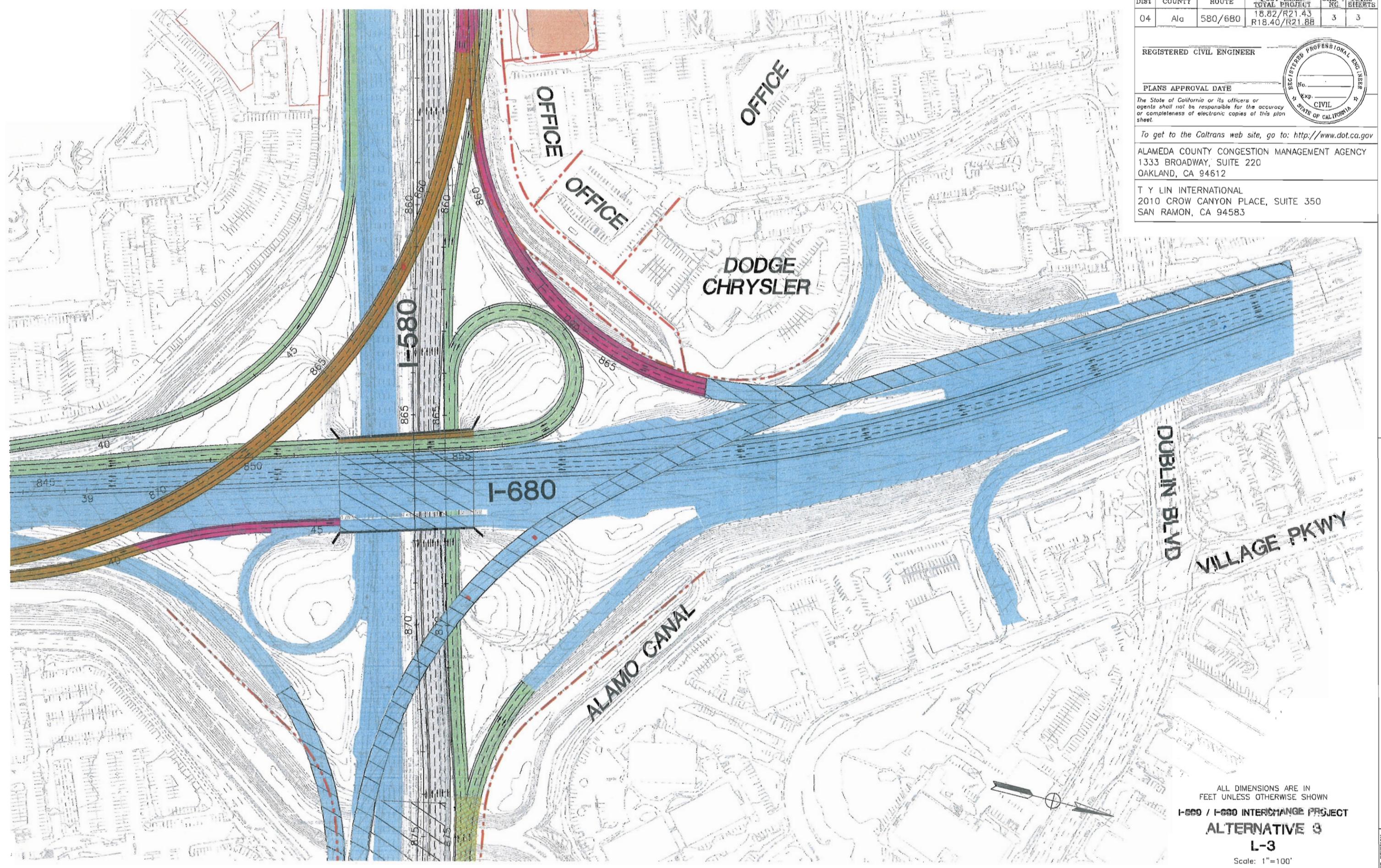
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OAKLAND, CA 94612

T Y LIN INTERNATIONAL
2010 CROW CANYON PLACE, SUITE 350
SAN RAMON, CA 94583



ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

I-580 / I-680 INTERCHANGE PROJECT

ALTERNATIVE 3

L-3

Scale: 1"=100'

LAST REVISION
00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 LMG
 SM
 CHECKED BY
 REVISIONS
 DATE 2/1/07
 REVISOR BY
 DATE 2/1/07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	580/680	18.82/R21.43 R18.40/R21.88	1	1

REGISTERED CIVIL ENGINEER

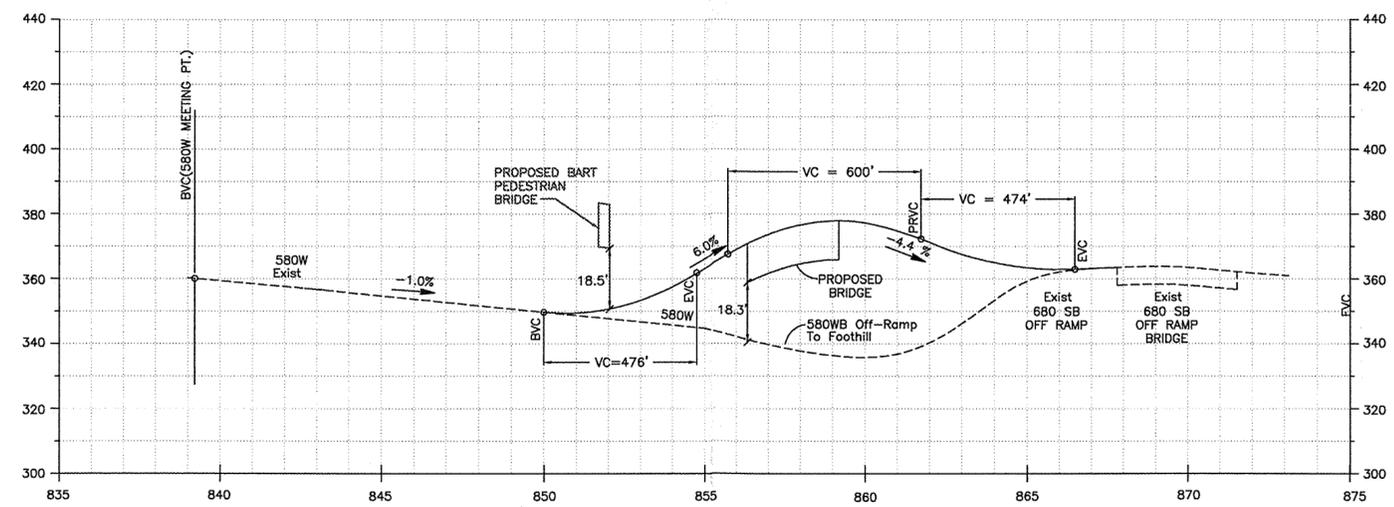
PLANS APPROVAL DATE

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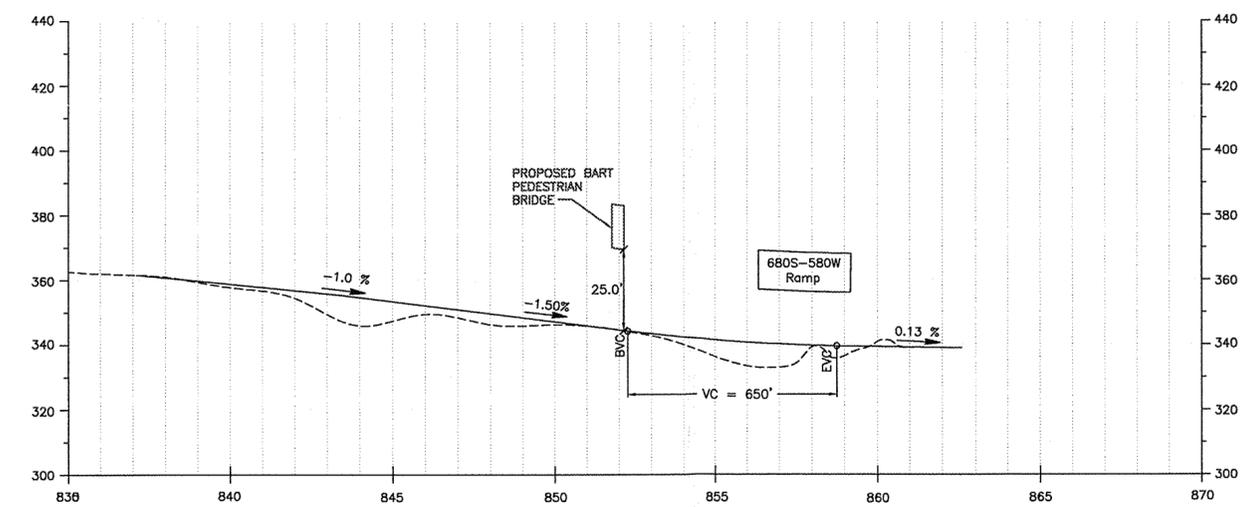
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY
 1333 BROADWAY, SUITE 220
 OAKLAND, CA 94612

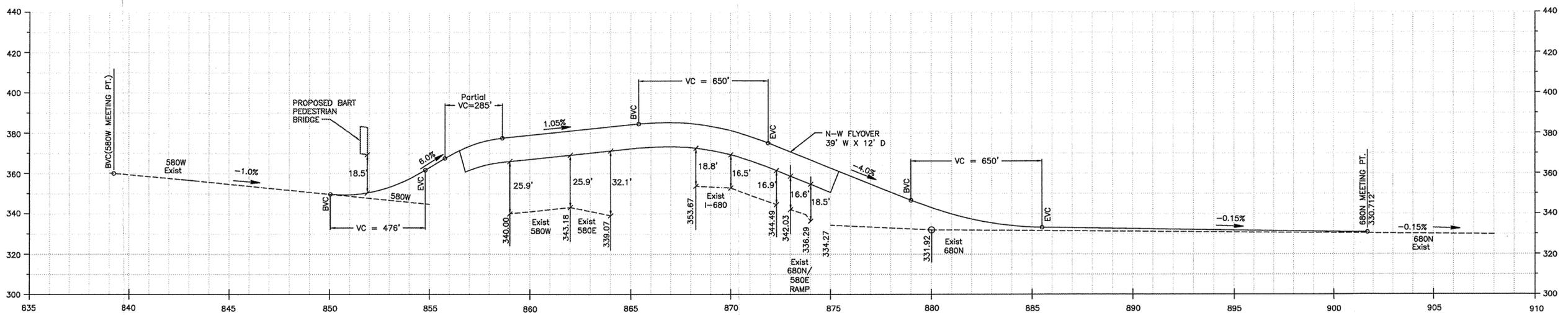
T Y LIN INTERNATIONAL
 2010 CROW CANYON PLACE, SUITE 350
 SAN RAMON, CA 94583



SB 680 TO WB 580



WB 580 OFF RAMP TO Foothill RD/ SAN RAMON RD



NB 680 TO WB 580 FLYOVER

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN
I-580 / I-680 INTERCHANGE PROJECT
ALTERNATIVE 3
PROFILE
P-1
 Scale: HORIZ 1"=200'
 VERT 1"=20'

ATTACHMENT F

PSR (PDS) Cost Estimates (Alternatives 1, 2, & 3)

I-580 / I-680 Interchange Improvements

PRELIMINARY PROJECT COST ESTIMATE

January 23, 2008

DIST - CO - RTE	04-Ala-I-580/I-680 I/C
PSR,PR, etc.	PSR/PDS
Program Code:	0
PM:	I-580: 18.82/R21.43
	I-680: R18.40/R21.88
EA:	04-2A210K
PP No.:	0

Project Description: ALTERNATIVE 1 - HOV Center to Center; Mixed Flow Outside to Outside

Limits: I-580 -- Foothill Road to East of Hacienda Drive
 I-680 -- Stoneridge Drive to Dublin Boulevard

Proposed Improvement:	Construct a northbound I-680 to eastbound I-580 HOV direct connector.
(Scope)	Construct a westbound I-580 to southbound I-680 HOV direct connector.
	Construct a westbound I-580 to southbound I-680 Mixed Flow direct connector.
	Construct EB BART Bus Ramp

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (2008 DOLLARS)	\$213,310,000
TOTAL STRUCTURE ITEMS (2008 DOLLARS)	\$ 285,500,000
 TOTAL CONSTRUCTION COSTS	 \$498,810,000 (1)
ESCALATION TO 2016 (7%)	\$358,240,000
TOTAL ESCALATED CONSTRUCTION COSTS	\$857,050,000
 PLANNING/ ENVIRONMENTAL DOCUMENTS (3% OF (1))	 \$15,000,000
DESIGN ENGINEERING AND MANAGEMENT (10% OF (1))	\$49,890,000
	\$64,890,000
 ESCALATION TO 2012 (3.5%)	 \$9,570,000
TOTAL ESCALATED PLANNING AND ENGINEERING COSTS	\$74,460,000
 CONSTRUCTION ENGINEERING AND MANAGEMENT (12% OF (1))	 \$59,860,000
ESCALATION TO 2015 (3.5%)	\$16,300,000
ESCALATED CONSTRUCTION MANAGEMENT SUPPORT COSTS	\$76,160,000
 LAND, EASEMENTS, RIGHT OF WAY	 \$112,700,000 (2)
RIGHT OF WAY SUPPORT COST (15% OF (2))	\$16,905,000
ESCALATION TO 2014 (3.5%)	\$29,710,000
ESCALATED RIGHT OF WAY COSTS	\$159,315,000
TOTAL CONSTRUCTION, PLANNING, ENGINEERING AND ROW COST	\$1,167,000,000

NOTES

This opinion of probable construction cost is a professional opinion, based upon the Engineer's experience with the design of similar projects. It is prepared as a guide only, is based upon incomplete information and is subject to possible change. T.Y. Lin International makes no warranty, either express or implied, that the actual costs will not vary from these estimated costs and assume no liability for such variances. Further, this estimate is intended to include all construction items, but the possibility exists that certain construction items will neither be included in the estimate nor specifically excluded in these notes.

ROUTE 580/ROUTE 680 PSR/PDS
PRELIMINARY PROJECT COST ESTIMATE
ALTERNATIVE 1

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>
Program Code	<u>0</u>

PROJECT DESCRIPTION: 580/680 Interchange Improvements - ALTERNATIVE 1

Limits I-580 -- Foothill Road to East of Hacienda Drive
I-680 -- Stoneridge Drive to Dublin Boulevard

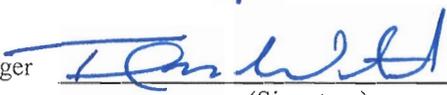
Proposed Improvement (Scope) Construct a northbound I-680 to eastbound I-580 HOV direct connector.
Construct a westbound I-580 to southbound I-680 HOV direct connector.
Construct a westbound I-580 to southbound I-680 Mixed Flow direct connector.
Construct EB BART Bus Ramp

Alternate _____

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (Sections 1 thru 10)	<u>\$213,310,000</u>
TOTAL STRUCTURE ITEMS	<u>\$285,500,000</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$498,810,000</u>
TOTAL RIGHT OF WAY ITEMS	<u>\$ 112,700,000</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$ 611,600,000</u>

Reviewed by District Program Manager 
 (Signature)

Approved by Project Manager 
 (Signature)

Date 1/23/08

Phone No. (925) 365-3960

District-County-Route	04-Ala-I-580/I-680 I/C
PM	I-580: 18.82/R21.43
	I-680: R18.40/R21.88
EA	04-2A210K

<u>Section 6 - Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$ 2,744,300	\$ 2,744,300	
Replacement Planting				\$ -	
Irrigation Modification				\$ -	
Relocate Existing Irrigation Facilities				\$ -	
Irrigation Crossovers				\$ -	
				\$ -	
Subtotal Planting and Irrigation Section					\$ 2,744,300

<u>Section 7 - Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments				\$ -	
Gore Area Pavement	1	LS	\$ 60,000	\$ 60,000	
Pavement beyond the gore area	1	LS	\$ 60,000	\$ 60,000	
Miscellaneous Paving	1	LS	\$ 60,000	\$ 60,000	
Erosion Control	1	LS	\$ 150,000	\$ 150,000	
Slope Protection				\$ -	
Side Slopes/Embankment Slopes				\$ -	
Maintenance Vehicle Pullouts				\$ -	
Off-freeway Access (gates, stairways, etc.)				\$ -	
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)				\$ -	
Relocating roadside facilities/features				\$ -	
				\$ -	
Subtotal Roadside Management and Safety Section					\$ 330,000

TOTAL SECTIONS 6 & 7: \$ 3,074,300

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>

Section 8 - Minor Items

<u>Item Cost</u>	<u>Section Cost</u>
<u>\$125,100,800</u> x <u>10%</u> = <u>\$12,511,000</u>	
(Subtotal Sections 1 thru 7)	
TOTAL MINOR ITEMS	<u><u>\$12,511,000</u></u>

Section 9 - Roadway Mobilization

<u>\$137,612,000</u> x <u>10%</u> = <u>\$13,762,000</u>	
(Subtotal Sections 1 thru 8)	
TOTAL ROADWAY MOBILIZATION	<u><u>\$13,762,000</u></u>

Section 10 - Roadway Additions

Supplemental Work

<u>\$137,612,000</u> x <u>10%</u> = <u>\$13,762,000</u>	
(Subtotal Sections 1 thru 8)	

Contingencies

<u>\$137,612,000</u> x <u>35%**</u> = <u>\$48,165,000</u>	
(Subtotal Sections 1 thru 8)	

TOTAL ROADWAY ADDITIONS	<u><u>\$61,927,000</u></u>
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TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 10)	<u><u>\$213,301,000</u></u>
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Estimate Prepared By	<u>Sheena Patel</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>06/26/07</u>
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Estimate Checked By	<u>Nabaz Saieed</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>07/06/07</u>
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District-County-Route 04-Ala-1-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)	Structure (5)	Structure (6)
Bridge Name	W-S HOV Flyover_1	N-E HOV Flyover_1	W-S & N-E Flyover_1	W-S HOV Flyover_2	N-E HOV Flyover_2	W-S & N-E Flyover_2
Structure Type						
Width (out to out) - (ft)	31	31	62	31	31	62
Span Length (ft)	1,037	1,233	2,700	1,850	1,917	1,176
Total Area (SF)	32,147	38,223	167,400	57,350	59,427	72,912
Footing Type (pile/spread)						
Cost per Sq. Ft. (incl. 10% Mobilization and 25% Contingency)	315	315	315	360	360	315
Total Cost For Structure	\$10,126,305	\$12,040,245	\$52,731,000	\$20,646,000	\$21,393,720	\$22,967,280
SUBTOTAL STRUCTURE ITEMS (Sum of Total Cost for Structure)						<u>\$139,904,550</u>

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K

II. STRUCTURES ITEMS CONTINUED

	Structure (7)	Structure (8)	Structure (9)	Structure (10)	Structure (11)	Structure (12)
Bridge Name	W-S MF Flyover	580W Alamo Canal	580E BART Widening	580W-680N Connector	580E-WS MF Ramp	Dublin Blvd Hook Off Ramp
Structure Type						
Width (out to out) - (ft)	43	124	40	43	31	28
Span Length (ft)	4,705	140	170	2,542	100	300
Total Area (SF)	202,315	17,360	6,800	109,306	3,100	8,400
Footing Type (pile/spread)						
Cost per Sq. Ft. (incl. 10% Mobilization and 25% Contingency)	360	210	300	315	230	230
Total Cost For Structure	\$72,833,400	\$3,645,600	\$2,040,000	\$34,431,390	\$713,000	\$1,932,000
	SUBTOTAL STRUCTURE ITEMS (Sum of Total Cost for Structure)					\$115,595,390
Railroad Related Costs						
	SUBTOTAL RAILROAD ITEMS					\$ 30,000,000
	TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items)					\$285,499,940

COMMENTS: Comparative Bridge Costs, per CT(1/2007), for extrapolation of structures
 Compared to Alternative 3 NB I-680 to WB I-580 Connector.

Estimate Prepared By Sheena Patel Phone# (925)-365-3960 Date 06/26/07
 Estimate Prepared By Nabaz Saieed Phone# (925)-365-3960 Date 07/06/07

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K

III. RIGHT OF WAY ITEMS

ESCALATED VALUE

A. Acquisition, including excess lands, damages to remainder(s), and Goodwill.	<u>\$111,117,060</u>
B. Utility Relocation (State Share)	<u>\$ 990,000</u>
C. Relocation Assistance	<u>\$ 375,000</u>
D. Clearance / Demolition	<u>\$ 200,000</u>
E. Title and Escrow Fees	<u>\$ -</u>
TOTAL RIGHT OF WAY ITEMS (Escalated Value)	<u>\$ 112,682,060</u>

Anticipated Date of Right of Way Certification 2014
 (Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work*

COMMENTS:

Estimate Prepared By Sheena Patel Phone# (925)-365-3960 Date 06/26/07
 Estimate Checked By Nabaz Saieed Phone# (925)-365-3960 Date 07/06/07

I-580 / I-680 Interchange Improvements

PRELIMINARY PROJECT COST ESTIMATE

January 23, 2008

DIST - CO - RTE	04-Ala-I-580/I-680 I/C
PSR,PR, etc.	PSR/PDS
Program Code:	0
PM:	I-580: 18.82/R21.43
	I-680: R18.40/R21.88
EA:	04-2A210K
PP No. :	0

Project Description: ALTERNATIVE 2 - HOV Center to Center; Mixed Flow Outside to Outside

Limits: I-580 -- Foothill Road to East of Hacienda Drive
 I-680 -- Stoneridge Drive to Dublin Boulevard

Proposed Improvement:	Construct a northbound I-680 to eastbound I-580 HOV direct connector.
(Scope)	Construct a westbound I-580 to southbound I-680 Mixed Flow direct connector.
	Construct new I-580/I-680 Separation Structure
	Construct EB BART Bus Ramp

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (2008 DOLLARS)	\$195,610,000	
TOTAL STRUCTURE ITEMS (2008 DOLLARS)	\$ 247,820,000	
 TOTAL CONSTRUCTION COSTS		 \$443,430,000 (1)
ESCALATION TO 2016 (7%)		\$318,470,000
TOTAL ESCALATED CONSTRUCTION COSTS		<u>\$761,900,000</u>
PLANNING/ ENVIRONMENTAL DOCUMENTS (3% OF(1) for the Maximum Alternative meeting CT Standards)	\$15,000,000	
DESIGN ENGINEERING AND MANAGEMENT (10% OF (1))	\$44,340,000	
		\$59,340,000
ESCALATION TO 2012 (3.5%)		\$8,750,000
TOTAL ESCALATED PLANNING AND ENGINEERING COSTS		<u>\$68,090,000</u>
CONSTRUCTION ENGINEERING AND MANAGEMENT (12% OF (1))	\$53,220,000	
ESCALATION TO 2015 (3.5%)		\$14,500,000
ESCALATED CONSTRUCTION MANAGEMENT SUPPORT COSTS		<u>\$67,720,000</u>
LAND, EASEMENTS, RIGHT OF WAY		\$65,700,000 (2)
RIGHT OF WAY SUPPORT COST (15% OF (2))		\$9,855,000
ESCALATION TO 2014 (3.5%)		\$17,330,000
ESCALATED RIGHT OF WAY COSTS		<u>\$92,885,000</u>
TOTAL CONSTRUCTION, PLANNING, ENGINEERING AND ROW COST		<u>\$990,600,000</u>

NOTES

This opinion of probable construction cost is a professional opinion, based upon the Engineer's experience with the design of similar projects. It is prepared as a guide only, is based upon incomplete information and is subject to possible change. T.Y.lin International makes no warranty, either express or implied, that the actual costs will not vary from these estimated costs and assume no liability for such variances. Further, this estimate is intended to include all construction items, but the possibility exists that certain construction items will neither be included in the estimate nor specifically excluded in these notes.

ROUTE 580/ROUTE 680 PSR/PDS
PRELIMINARY PROJECT COST ESTIMATE
ALTERNATIVE 2

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K
 Program Code 0

PROJECT DESCRIPTION: 580/680 Interchange Improvements - ALTERNATIVE 2

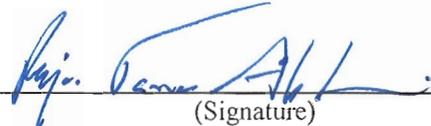
Limits I-580 -- Foothill Road to East of Hacienda Drive
I-680 -- Stoneridge Drive to Dublin Boulevard

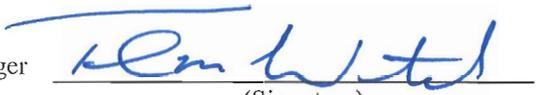
Proposed Improvement (Scope) Construct a northbound I-680 to eastbound I-580 HOV direct connector.
Construct a westbound I-580 to southbound I-680 Mixed Flow direct connector.
Construct new I-580/I-680 Separation Structure
Construct EB BART Bus Ramp

Alternate _____

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (Sections 1 thru 10)	\$195,610,000
TOTAL STRUCTURE ITEMS	\$ 247,820,000
SUBTOTAL CONSTRUCTION COSTS	\$443,430,000
TOTAL RIGHT OF WAY ITEMS	\$ 65,700,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$ 509,200,000

Reviewed by District Program Manager 
 (Signature)

Approved by Project Manager  Date 1/23/08
 (Signature)

Phone No. (925) 365-3960

District-County-Route	04-Ala-1-580/1-680 I/C
PM	1-580: 18.82/R21.43
	1-680: R18.40/R21.88
EA	04-2A210K

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 4 - Specialty Items</u>					
Retaining Walls	199,000	SF	\$ 220	\$ 43,780,000	
Noise Barriers				\$ -	
Barriers and Guardrails	42,000	LF	\$ 110	\$ 4,620,000	
Box Culvert				\$ -	
Relocate Private Irrigation Facilities				\$ -	
Erosion Control	1	LS	\$ 500,000	\$ 500,000	
Prepare SWPPP	1	LS	\$ 20,000	\$ 20,000	
Slope Protection				\$ -	
Water Pollution Control				\$ -	
Construction Site BMP's	1	LS	\$ 4,000,000	\$ 4,000,000	
Hazardous Waste Investigation and/or Mitigation Work				\$ -	
Design Pollution Prevention BMP's	1	LS	\$ 4,000,000	\$ 4,000,000	
Environmental Mitigation				\$ -	
Resident Engineer Office Space	1	LS	\$ 500,000	\$ 500,000	
Storm Water Sampling and Analysis	1	LS	\$ 50,000	\$ 50,000	
					Subtotal Specialty Items
					\$ 57,470,000

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 5 - Traffic Items</u>					
Lighting	1	LS	\$ 1,000,000	\$ 1,000,000	
Traffic Delineation Items	428,000	LF	\$ 4	\$ 1,712,000	
Traffic Signals				\$ -	
Overhead Sign Structures	6	EA	\$ 150,000	\$ 900,000	
Relocate OH Signs & Structure	13	EA	\$ 25,000	\$ 325,000	
Roadside Signs	1	LS	\$ 150,000	\$ 150,000	
Traffic Control Systems	1	LS	\$ 1,000,000	\$ 1,000,000	
Transportation Management Plan	1	LS	\$ 8,000,000	\$ 8,000,000	
Ramp Meter	1	LS	\$ 250,000	\$ 250,000	
Traffic Operations System	1	LS	\$ 2,500,000	\$ 2,500,000	
					Subtotal Traffic Items
					\$ 15,837,000

TOTAL SECTIONS 1 thru 5: \$112,163,000

District-County-Route	04-Ala-I-580/I-680 I/C
PM	I-580: 18.82/R21.43
	I-680: R18.40/R21.88
EA	04-2A210K

<u>Section 6 - Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$ 2,233,400	\$ 2,233,400	
Replacement Planting				\$ -	
Irrigation Modification				\$ -	
Relocate Existing Irrigation Facilities				\$ -	
Irrigation Crossovers				\$ -	
				\$ -	
Subtotal Planting and Irrigation Section					\$ 2,233,400

<u>Section 7 - Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments				\$ -	
Gore Area Pavement	1	LS	\$ 60,000	\$ 60,000	
Pavement beyond the gore area	1	LS	\$ 60,000	\$ 60,000	
Miscellaneous Paving	1	LS	\$ 60,000	\$ 60,000	
Erosion Control	1	LS	\$ 150,000	\$ 150,000	
Slope Protection				\$ -	
Side Slopes/Embankment Slopes				\$ -	
Maintenance Vehicle Pullouts				\$ -	
Off-freeway Access (gates, stairways, etc.)				\$ -	
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)				\$ -	
Relocating roadside facilities/features				\$ -	
				\$ -	
Subtotal Roadside Management and Safety Section					\$ 330,000

TOTAL SECTIONS 6 & 7: \$ 2,563,400

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>

Section 8 - Minor Items

<u>Item Cost</u>	<u>Section Cost</u>
<u>\$114,726,400</u> x <u>10%</u> = <u>\$11,473,000</u> (Subtotal Sections 1 thru 7)	
TOTAL MINOR ITEMS	<u><u>\$11,473,000</u></u>

Section 9 - Roadway Mobilization

<u>\$126,200,000</u> x <u>10%</u> = <u>\$12,620,000</u> (Subtotal Sections 1 thru 8)	
TOTAL ROADWAY MOBILIZATION	<u><u>\$12,620,000</u></u>

Section 10 - Roadway Additions

Supplemental Work

<u>\$126,200,000</u> x <u>10%</u> = <u>\$12,620,000</u> (Subtotal Sections 1 thru 8)	
---	--

Contingencies

<u>\$126,200,000</u> x <u>35%**</u> = <u>\$44,170,000</u> (Subtotal Sections 1 thru 8)	
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TOTAL ROADWAY ADDITIONS	<u><u>\$56,790,000</u></u>
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TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 10)	<u><u>\$195,609,000</u></u>
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Estimate Prepared By	<u>Sheena Patel</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>06/26/07</u>
Estimate Checked By	<u>Nabaz Saieed</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>07/06/07</u>

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K

III. RIGHT OF WAY ITEMS

ESCALATED VALUE

A. Acquisition, including excess lands, damages to remainder(s), and Goodwill.	<u>\$ 64,387,740</u>
B. Utility Relocation (State Share)	<u>\$ 750,000</u>
C. Relocation Assistance	<u>\$ 325,000</u>
D. Clearance / Demolition	<u>\$ 200,000</u>
E. Title and Escrow Fees	<u>\$ -</u>

TOTAL RIGHT OF WAY ITEMS \$ 65,662,740
 (Escalated Value)

Anticipated Date of Right of Way Certification 2014
 (Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work*

COMMENTS:

Estimate Prepared By	<u>Sheena Patel</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>06/26/07</u>
Estimate Checked By	<u>Nabaz Saieed</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>07/06/07</u>

I-580 / I-680 Interchange Improvements

PRELIMINARY PROJECT COST ESTIMATE

January 23, 2008

DIST - CO - RTE	04-A1a-I-580/I-680 I/C
PSR,PR, etc.	PSR/PDS
Program Code:	0
PM:	I-580: 18.82/R21.43
	I-680: R18.40/R21.88
EA:	04-2A210K
PP No. :	0

Project Description: ALTERNATIVE 3 - NORTHBOUND TO WESTBOUND DIRECT CONNECTOR

Limits: I-580 -- Foothill Road to East of Hacienda Drive

I-680 -- Stoneridge Drive to Dublin Boulevard

Proposed Improvement: Construct a northbound I-680 to westbound I-580 direct connector.
(Scope) Widen existing westbound I-580 to southbound I-680 loop ramp to two lanes.
Construct EB BART Bus Ramp

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (2008 DOLLARS)	\$185,790,000
TOTAL STRUCTURE ITEMS (2008 DOLLARS)	\$ 90,900,000
TOTAL CONSTRUCTION COSTS	\$276,690,000 (1)
ESCALATION TO 2016 (7%)	\$198,710,000
<u>TOTAL ESCALATED CONSTRUCTION COSTS</u>	<u>\$475,400,000</u>
PLANNING/ ENVIRONMENTAL DOCUMENTS (3% OF(1) for the Maximum Alternative meeting CT Standards)	\$15,000,000
DESIGN ENGINEERING AND MANAGEMENT (10% OF (1))	\$27,670,000
	<u>\$42,670,000</u>
ESCALATION TO 2012 (3.5%)	\$6,290,000
<u>TOTAL ESCALATED PLANNING AND ENGINEERING COSTS</u>	<u>\$48,960,000</u>
CONSTRUCTION ENGINEERING AND MANAGEMENT (12% OF (1))	\$33,210,000
ESCALATION TO 2015 (3.5%)	\$9,040,000
<u>ESCALATED CONSTRUCTION MANAGEMENT SUPPORT COSTS</u>	<u>\$42,250,000</u>
LAND, EASEMENTS, RIGHT OF WAY	\$42,200,000 (2)
RIGHT OF WAY SUPPORT COST (15% OF (2))	\$6,330,000
ESCALATION TO 2014 (3.5%)	\$11,130,000
<u>ESCALATED RIGHT OF WAY COSTS</u>	<u>\$59,660,000</u>
TOTAL CONSTRUCTION, PLANNING, ENGINEERING AND ROW COST	\$626,300,000

NOTES

This opinion of probable construction cost is a professional opinion, based upon the Engineer's experience with the design of similar projects. It is prepared as a guide only, is based upon incomplete information and is subject to possible change. T.Y.lin International makes no warranty, either express or implied, that the actual costs will not vary from these estimated costs and assume no liability for such variances. Further, this estimate is intended to include all construction items, but the possibility exists that certain construction items will neither be included in the estimate nor specifically excluded in these notes.

ROUTE 580/ROUTE 680 PSR/PDS
PRELIMINARY PROJECT COST ESTIMATE
ALTERNATIVE 3

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
I-680: R18.40/R21.88
 EA 04-2A210K
 Program Code 0

PROJECT DESCRIPTION: 580/680 Interchange Improvements - ALTERNATIVE 3

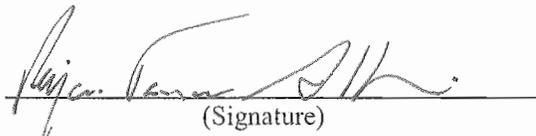
Limits I-580 -- Foothill Road to East of Hacienda Drive
I-680 -- Stoneridge Drive to Dublin Boulevard

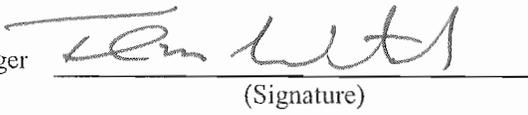
Proposed Improvement (Scope) Construct a northbound I-680 to westbound I-580 direct connector.
Widen existing westbound I-580 to southbound I-680 loop ramp to two lanes.
Construct EB BART Bus Ramp

Alternate _____

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS (Sections 1 thru 10)	\$185,790,000
TOTAL STRUCTURE ITEMS	\$ 90,900,000
SUBTOTAL CONSTRUCTION COSTS	\$276,690,000
TOTAL RIGHT OF WAY ITEMS	\$ 42,200,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$ 318,900,000

Reviewed by District Program Manager 
 (Signature)

Approved by Project Manager 
 (Signature)

Date 1/23/08

Phone No. (925) 365-3960

District-County-Route 04-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
 I-680: R18.40/R21.88
 EA 04-2A210K

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 4 - Specialty Items</u>					
Retaining Walls	158,000	SF	\$ 220	\$ 34,760,000	
Noise Barriers				\$ -	
Barriers and Guardrials	23,000	LF	\$ 110	\$ 2,530,000	
Box Culvert	80,000	SF	\$ 275	\$ 22,000,000	
Relocate Private Irrigation Facilities				\$ -	
Erosion Control	1	LS	\$ 500,000	\$ 500,000	
Prepare SWPPP	1	LS	\$ 20,000	\$ 20,000	
Slope Protection				\$ -	
Water Pollution Control				\$ -	
Construction Site BMP's	1	LS	\$ 2,500,000	\$ 2,500,000	
Hazardous Waste Investigation and/or Mitigation Work				\$ -	
Design Pollution Prevention BMP's	1	LS	\$ 2,500,000	\$ 2,500,000	
Environmental Mitigation				\$ -	
Resident Engineer Office Space	1	LS	\$ 500,000	\$ 500,000	
Storm Water Sampling and Analysis	1	LS	\$ 50,000	\$ 50,000	
					Subtotal Specialty Items
					\$ 65,360,000

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
<u>Section 5 - Traffic Items</u>					
Lighting	1	LS	\$ 1,000,000	\$ 1,000,000	
Traffic Delineation Items	295,000	LF	\$ 4	\$ 1,180,000	
Traffic Signals				\$ -	
Overhead Sign Structures	10	EA	\$ 150,000	\$ 1,500,000	
Relocate OH Signs & Structure	4	EA	\$ 25,000	\$ 100,000	
Roadside Signs	1	LS	\$ 500,000	\$ 500,000	
Traffic Control Systems	1	LS	\$ 1,000,000	\$ 1,000,000	
Transportation Management Plan	1	LS	\$ 8,000,000	\$ 8,000,000	
Ramp Meter	1	LS	\$ 200,000	\$ 200,000	
Traffic Operations System	1	LS	\$ 2,500,000	\$ 2,500,000	
					Subtotal Traffic Items
					\$ 15,980,000

TOTAL SECTIONS 1 thru 5: \$106,873,000

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>

<u>Section 6 - Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$ 1,843,400	\$ 1,843,400	
Replacement Planting				\$ -	
Irrigation Modification				\$ -	
Relocate Existing Irrigation Facilities				\$ -	
Irrigation Crossovers				\$ -	
				\$ -	
Subtotal Planting and Irrigation Section					\$ 1,843,400

<u>Section 7 - Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments				\$ -	
Gore Area Pavement	1	LS	\$ 50,000	\$ 50,000	
Pavement beyond the gore area	1	LS	\$ 50,000	\$ 50,000	
Miscellaneous Paving	1	LS	\$ 50,000	\$ 50,000	
Erosion Control	1	LS	\$ 100,000	\$ 100,000	
Slope Protection				\$ -	
Side Slopes/Embankment Slopes				\$ -	
Maintenance Vehicle Pullouts				\$ -	
Off-freeway Access (gates, stairways, etc.)				\$ -	
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)				\$ -	
Relocating roadside facilities/features				\$ -	
				\$ -	
Subtotal Roadside Management and Safety Section					\$ 250,000

TOTAL SECTIONS 6 & 7: \$ 2,093,400

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>

Section 8 - Minor Items

	<u>Item Cost</u>	
	<u>\$108,966,400</u> x <u>10%</u> = <u>\$10,897,000</u>	
	(Subtotal Sections 1 thru 7)	

TOTAL MINOR ITEMS	<u><u>\$10,897,000</u></u>
-------------------	----------------------------

Section 9 - Roadway Mobilization

	<u>\$119,864,000</u> x <u>10%</u> = <u>\$11,987,000</u>
	(Subtotal Sections 1 thru 8)

TOTAL ROADWAY MOBILIZATION	<u><u>\$11,987,000</u></u>
----------------------------	----------------------------

Section 10 - Roadway Additions

Supplemental Work

	<u>\$119,864,000</u> x <u>10%</u> = <u>\$11,987,000</u>
	(Subtotal Sections 1 thru 8)

Contingencies

	<u>\$119,864,000</u> x <u>35%**</u> = <u>\$41,953,000</u>
	(Subtotal Sections 1 thru 8)

TOTAL ROADWAY ADDITIONS	<u><u>\$53,940,000</u></u>
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TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 10)	<u><u>\$185,790,000</u></u>
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Estimate Prepared By	<u>Sheena Patel</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>06/26/07</u>
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Estimate Checked By	<u>Nabaz Saieed</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>07/06/07</u>
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District-County-Route I-Ala-I-580/I-680 I/C
 PM I-580: 18.82/R21.43
 -680: R18.40/R21.88
 EA 04-2A210K

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)	Structure (5)	Structure (6)
Bridge Name	Stoneridge- 680N	N-W Flyover	WB C-D Alamo Canal	580/680 Separation Widen	680S-NW Flyover	580E BART Widening
Structure Type						
Width (out to out) - (ft)	36	42	59	14	31	29
Span Length (ft)	1,900	2,565	180	325	255	150
Total Area (SF)	68,400	114,365	10,620	4,550	7,905	4,350
Footing Type (pile/spread)						
Cost per Sq. Ft. (incl. 10% Mobilization and 25% Contingency)	260	313	260	260	260	260
Total Cost For Structure	\$17,800,000	\$35,800,000	\$2,800,000	\$1,200,000	\$2,100,000	\$1,200,000
SUBTOTAL STRUCTURE ITEMS (Sum of Total Cost for Structure)						\$60,900,000
Railroad Related Costs						
SUBTOTAL RAILROAD ITEMS						\$ 30,000,000
TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items)						\$90,900,000

COMMENTS: Comparative Bridge Costs, per CT(1/2007), for extrapolation of structures
 Compared to Alternative 3 NB I-680 to WB I-580 Connector.

Estimate Prepared By Sheena Patel Phone# (925)-365-3960 Date 06/26/07
 Estimate Prepared By Nabaz Saieed Phone# (925)-365-3960 Date 07/06/07

District-County-Route	<u>04-Ala-I-580/I-680 I/C</u>
PM	<u>I-580: 18.82/R21.43</u>
	<u>I-680: R18.40/R21.88</u>
EA	<u>04-2A210K</u>

III. RIGHT OF WAY ITEMS

ESCALATED VALUE

A. Acquisition, including excess lands, damages to remainder(s), and Goodwill.	<u>\$ 40,981,400</u>
B. Utility Relocation (State Share)	<u>\$ 1,200,000</u>
C. Relocation Assistance	<u>\$ -</u>
D. Clearance / Demolition	<u> </u>
E. Title and Escrow Fees	<u>\$ -</u>

TOTAL RIGHT OF WAY ITEMS	<u>\$ 42,181,400</u>
(Escalated Value)	

Anticipated Date of Right of Way Certification	<u>2014</u>
(Date to which Values are Escalated)	

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work*

COMMENTS:

Estimate Prepared By	<u>Sheena Patel</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>06/26/07</u>
Estimate Checked By	<u>Nabaz Saieed</u>	Phone#	<u>(925)-365-3960</u>	Date	<u>07/06/07</u>

Structure Cost Estimate Support

Alternative 1

Structure 1 – W-S HOV Flyover_1

Use \$315 /SF – Similar to NW Connector.

Structure 2 – N-E HOV Flyover_1

Use \$315 /SF – Similar to NW Connector.

Structure 3 – W-S & N-E Flyover__1

Use \$315 /SF – Similar to NW Connector.

Structure 4 – W-S HOV Flyover_2

Use \$360 /SF – Similar to NW Connector but more complicate due to falsework over BART and existing SE Connector, and multiple out-rigger Bents will be required. Increase NW Connector APS cost/SF estimate by 15%

Structure 5 – W-S HOV Flyover_2

Use \$360 /SF – Similar to NW Connector but more complicate due to falsework over BART and existing SE Connector, and multiple out-rigger Bents will be required. Increase NW Connector APS cost/SF estimate by 15%

Structure 6 – W-S & N-E Flyover_2

Use \$315 /SF – Similar to NW Connector.

Structure 7 – W-S MF Flyover

Use \$360 /SF – Similar to NW Connector but more complicate due to fourth level connector, falsework over BART and existing SE Connector, and multiple out-rigger Bents will be required. Increase NW Connector APS cost/SF estimate by 15%

Structure 8 – 580W Alamo Canal

Use \$210/SF – CIP RC Slab, use the higher end of the price range due to over Alamo Canal.

Structure 9 – 580E BART Widening

Use \$300/SF – CIP P/S Box Girder, based on the APS done for WB HOV PSR for Dougherty UC.

Structure 10 – 580W-680N Connector

Use \$315 /SF – Similar to NW connector, although don't need falsework over BART but is over Alamo Canal.

Structure 11 – 580E-WS MF Ramp

Use \$230/SF – CIP P/S Box Girder, use the higher end of the price range to be conservative.

Structure 12 – Dublin Blvd Hook Off Ramp

Use \$230/SF – CIP P/S Box Girder, use the higher end of the price range due to over Alamo Creek.

Alternative 2

Structure 1 – W-S Flyover

Use \$360 /SF – Similar to NW Connector but more complicate due to fourth level connector, falsework over BART and existing SE Connector, and multiple out-rigger Bents will be required. Increase NW Connector APS cost/SF estimate by 15%

Structure 2 – N-E Flyover

Use \$315 /SF – Similar to NW Connector but more complicate due to fourth level connector, and falsework over existing SE Connector.

Structure 3 – 580E BART Widening

Use \$300/SF – CIP P/S Box Girder, based on the APS done for WB HOV PSR for Dougherty UC.

Structure 4 – 580/680 Separation (Replacement)

Use \$230/SF – CIP P/S Box Girder, use the higher end of the price range due to falsework over BART.

Structure 5 – 580W-680N Alamo Canal

Use \$230/SF – CIP P/S Box Girder, use the higher end of the price range due to over Alamo Canal.

Structure 6 - 580W-680S Alamo Canal

Use \$210/SF – CIP RC Slab, use the higher end of the price range due to over Alamo Creek.

Alternative 3

Structure 1 – Stoneridge 680 N

Use \$315 /SF – Similar to NW connector, although don't need falsework over BART but is over Alamo Canal.

Structure 2 – N-W Flyover

Use \$315/SF – see APS.

Structure 3 – WB C-D Alamo Canal

Use \$210/SF – CIP RC Slab, use the higher end of the price range due to over Alamo Canal.

Structure 4 – 580/680 Separation (Widen)

Use \$280/SF – PC P/S I Girder, use the higher end of the price range due to widening and over BART facilities.

Structure 5 – 680S-NW Flyover

Use \$230/SF – CIP P/S Box Girder, use the higher end of the price range to be conservative.

Structure 6

Use \$300/SF – CIP P/S Box Girder, based on the APS done for WB HOV PSR for Dougherty UC.

COMPARATIVE BRIDGE COSTS

JANUARY 2007

The following tabular data gives some **general guidelines** for structure type selection and its relative cost. These costs should be used just for **preliminary estimates** until more detailed information is developed.

These costs reflect the '**bridge cost**' only and **do not** include items such as: bridge removal, approach slabs, slope paving, soundwalls or retaining walls.

The following factors *must* be taken into account when determining a price within the cost range:

Factors for Lower end of Price Range

Factors for Higher end of Price Range

Short spans, Low Structure Height, No Environmental Constraints, Large Project, No Aesthetic Issues, Dry Conditions, No Bridge Skew	Long spans, High Structure Height, Environmental Constraints, Small Project, Aesthetic Issues, Wet Conditions (cofferdams required), Skewed Bridges
Urban Location	Remote Location
Seat Abutment	Cantilever Abutment
Spread Footing	Pile Footing
No Stage Construction	2 Stage Construction

Factors that will increase the price over the high end of the Price Range 25%-150%

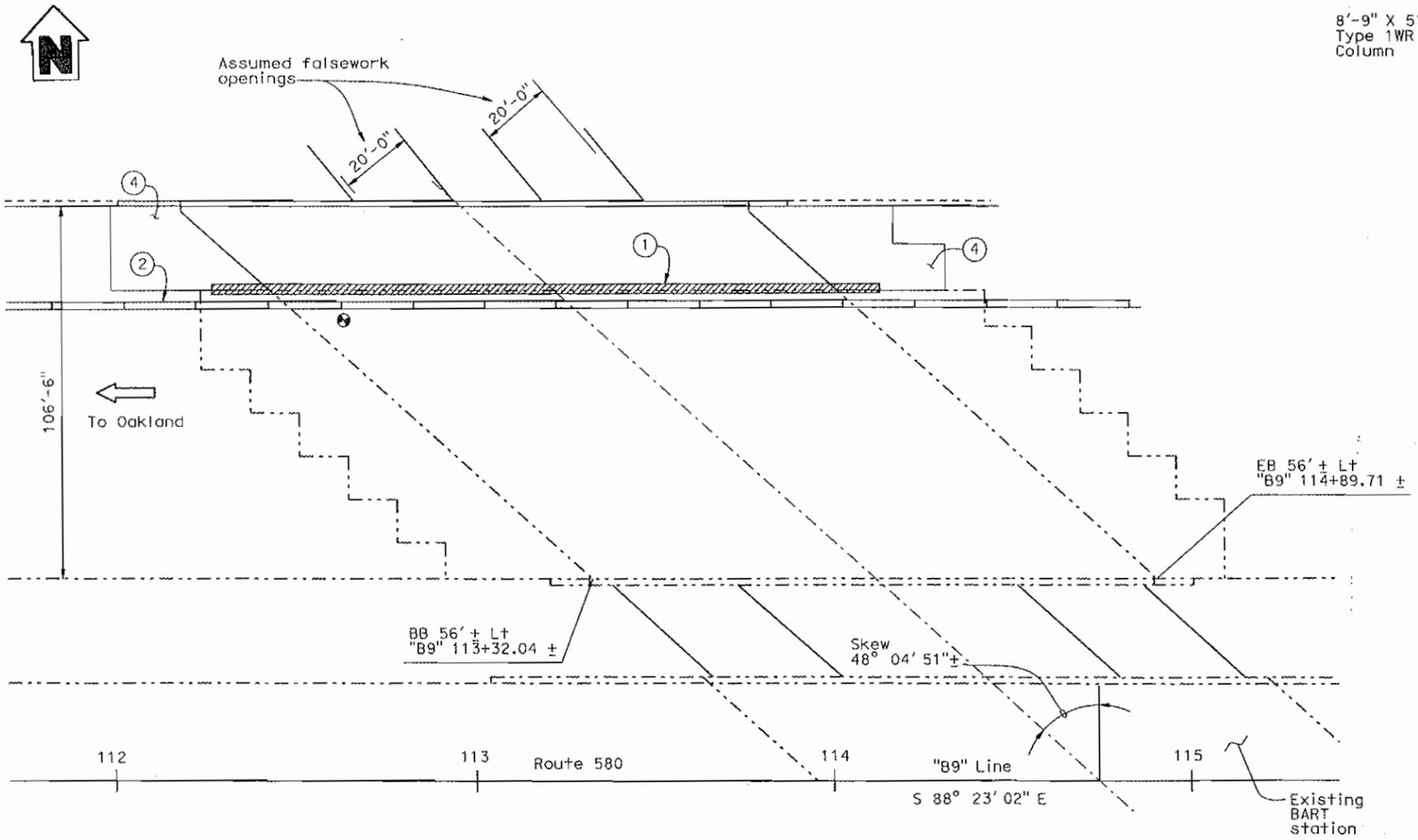
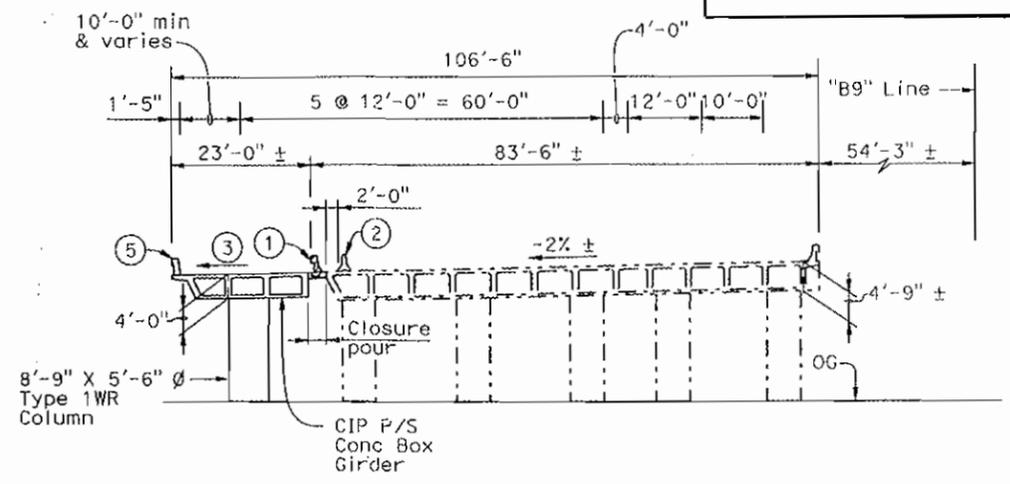
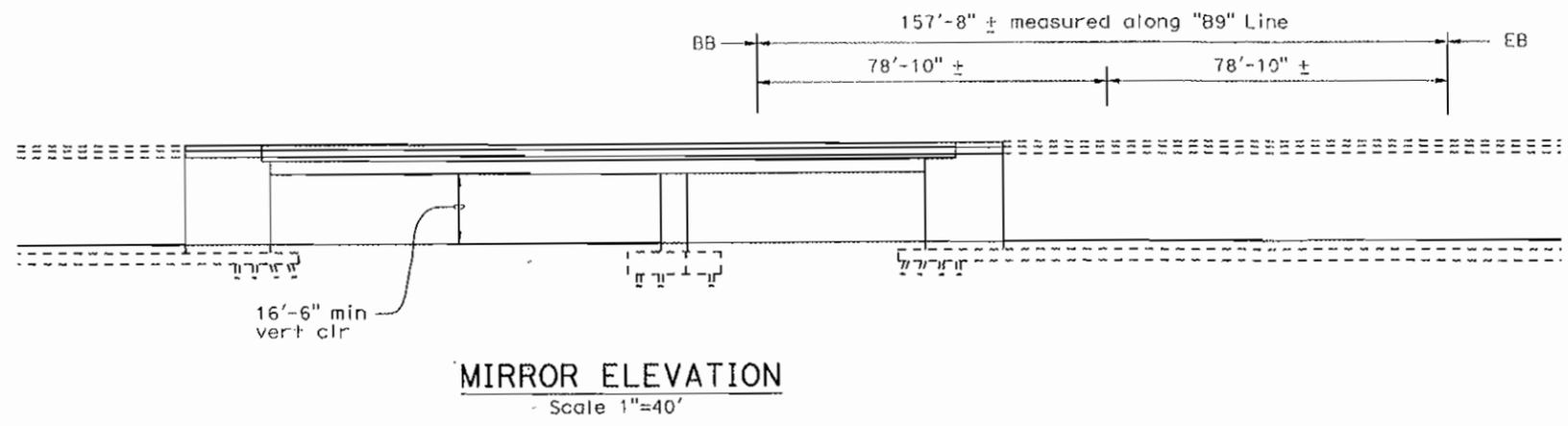
Structures with more than 2 construction stages
Unique substructure construction
Widenings less than 15 Ft.

STRUCTURAL SECTION	(STR. DEPTH / MAX SPAN)		COMMON SPAN RANGE feet	COST RANGE \$ / Square foot	REMARKS
	SIMPLE	CONTINUOUS			
RC SLAB	0.06	0.045	16 - 44	130 - 210	THESE ARE THE MOST COMMON TYPES AND ACCOUNT FOR ABOUT 80% OF BRIDGES ON CALIFORNIA STATE HIGHWAYS.
RC T-BEAM	0.07	0.065	40 - 60	150 - 275	
RC BOX	0.06	0.055	50 - 120	160 - 270	
CIP/PS SLAB	0.03	0.03	40 - 65	160 - 205	
CIP/PS BOX	0.045	0.04	100 - 250	150 - 230	
PC/PS SLAB	0.03 (+3" AC)	0.03 (+3" AC)	20 - 50	195 - 270	NO FALSEWORK REQUIRED.
PC/PS	0.06 (+3" AC)	0.055 (+3" AC)	30 - 120	200 - 270	
BULB T GIRDER	0.05	0.045	90 - 145	180 - 280	
PC/PS I	0.055	0.05	50 - 120	200 - 260	
PC/PS BOX	0.06	0.045	120 - 200	220 - 395	
STRUCT STEEL I GIRDER	0.045	0.04	60 - 300	240 - 370	NO FALSEWORK REQUIRED.

NOTE: Removal of a box girder structure costs from \$15 - \$20 per square foot.

COSTS INCLUDE 10% MOBILIZATION

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
04	Ala	580	
ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY			
T. Y. LIN INTERNATIONAL			



- Legend:**
- ① Remove Exist overhang and Conc Railing Type 25.
 - ② Temporary Railing (Type K).
 - ③ Match Exist cross slope.
 - ④ Structure Approach Type N (30S).
 - ⑤ Conc Barrier Type 732.
 - Indicates Exist Structure.
 - ▨ Indicates Bridge Removal (Portion).
 - ➔ Indicates direction of traffic.
 - ⊙ Indicates min vert clearance
- Note:**
Assume 45 ton pile footings.

Date of Estimate	=	5/11/07
Str Depth	=	4'-0"
Length	=	157' - 8"
Width	=	23'-0"
Area	=	3,626 sq. ft.
Cost/sq ft including 10% Mobilization & 25% Contingency	=	\$301
Total Cost	=	\$1,090,000

DESIGNED BY	Odeon M. Li	DATE	2/07
DRAWN BY	Odeon M. Li	DATE	2/07
CHECKED BY	X	DATE	X
APPROVED	X	DATE	X

PLANNING STUDY	
BRIDGE NO. 33-0150L	CU 04
SCALE: As Shown	EA 29082K

ATTACHMENT G

PDS Design Scoping Checklist

PDS Design Scoping Checklist

Project Information:

Alternative 1

District 4 County Alameda Route I-580 & I-680 Post Mile 580-PM 18.82/R21.43/680-PM 18.40/R21.88/ EA 04-2A 210K

Description Construct I-580/I-680 High Occupancy Vehicle (HOV) connector ramps in the west-to-south and north-to-east direction. Provide a direct express bus ramp from the eastbound direct connector into the East Dublin/Pleasanton BART station. Provide safety and operational improvements in the vicinity of the I-580/I-680 Interchange.

Project Manager

[Signature]

Phone

925-365-3965

Project Engineer

[Signature]

Phone

925 365 3960

Design Functional Manager

Issa Bouri

Phone #

510-286-5220

Project Development Coordinator

Michael W. Thomas

Phone #

510-286-4687

Project Screening

(Attach the project location map to this checklist to show location of all design improvements anticipated)

1. Project Description as Noted in Regional Transportation Plan: Westbound HOV lane on I-580 from east of Greenville Road to west of Santa Rita and HOV direct connectors from WB I-580 to SB I-680 and NB I-680 to EB I-580.
2. Project Setting: The I-580 / I-680 interchange is located between the cities of Pleasanton, Dublin, and Alameda County. I-580 is a major regional east-west freeway connecting the San Joaquin Valley and the San Francisco Bay Area. North of Oakland, I-580 travels across the San Francisco Bay into Marin County, via the Richmond-San Rafael Bridge, terminating in San Rafael. I-680 is a major north-south freeway connecting between the southern San Francisco Bay Area and I-80, near Fairfield. The I-580 / I-680 interchange is a modified full cloverleaf interchange, with a direct connector flyover ramp for the southbound I-680 to eastbound I-580 movement.

Rural or Urban Urban

Current land uses Typical urban/suburban land uses (residential, commercial, light industrial), regional shopping mall, sportspark, and flood control facilities.

Adjacent land uses office, business parks, regional shopping mall, BART station, and residential on the southwest side; commercial business parks, BART station and residential on the northwest side; commercial, government office and sports park on the northeast side, and light industrial, hotel, sewage treatment plant, and commercial on the southeast side.

Existing landscaping/planting: None

3. Route Adoption: Date : I-580 Adopted 10/30/1947. I-680 Adopted 4/27/1960

4. Type of Facility (Freeway, Controlled Access Highway, or Conventional Highway) Freeway

Freeway Agreement: Date: I-580 dated 10/25/1993. I-680 dated 5/17/1988

Description of the Transportation Problem

The June 2007 annual traffic report by MTC ranked the eastbound and westbound commutes on I-580 the top 2nd and 3rd worst commutes on Bay Area highways.

The I-580 / I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a short weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

The combination of slow-moving vehicles and the short weave sections between the I-580 / I-680 interchange loop ramps and between the Dougherty/Hopyard Road interchange and I-680 results in congestion and queue spill back onto westbound I-580.

During the AM peak period, the congestion along I-580 westbound can extend from I-680 into the City of Livermore, easterly of Vasco Road. This leads to long delays, high travel times, and unsafe driving conditions.

During the PM peak period, eastbound sections of I-580 from the I-580/I-680 interchange to east of El Charro Road operate up to LOS F.

Proposed Scope of Work

Alternative 1 provides a standard, mixed-flow lane right exit direct connection from westbound Interstate 580 to southbound Interstate 680. Alternative 1 provides a combined westbound Interstate 580 to southbound Interstate 680 and northbound Interstate 680 to eastbound Interstate 580 median HOV Lane direct connection. In addition, Alternative 1 constructs an express bus lane from the East Dublin/Pleasanton BART station to eastbound I-580.

Bicycle Lane

M = Mixed Flow H = HOV

Median Barrier Existing : None
 Proposed (Concrete Barrier / Thrie Beam / Other) : Concrete Barrier

Roadway Design Scoping

Mainline Operations

Mainline Highway Widening

Existing pavement to be rehabilitated with: Rubberized AC / PCC.

Widen existing 1 lane facility to 3 lanes. R/W acquisition for 3 lanes.

Local street structures to span N/A lanes of highway (for future requirements).

Upgrade existing facility to:

- o Expressway Standards
- o Controlled Access Highway
- o Improve Vertical Clearance
- √ Freeway Standards
- o Traversable Highway
- √ Adequate Falsework Clearance

Ramp / Street Intersection Improvements

- o New Signals
- o Right Turn Lanes
- o Merging Lanes
- o Left Turn Lanes
- o Interchange Spacing
- o Intersection Spacing
- o Single Lane Ramps Exceeding 300 M Widened To Two Lanes
- o Other _____
- o Modify Signals
- o Widening For Localized Through Lanes
- o Deceleration / Acceleration Lanes
- o > 300 VPH Left Turn (Requires Double Left Turn)
- o Ramps Intersect Local Street < 4 % Grade
- o Exit Ramps > 1,500 VPH Designed As Two Lane Exit

Operational Improvements

Truck Climbing Lane

- o Sustained Grade Exceeding 2% And Total Rise Exceeds 15 M.
- √ Other Separation of weaving and merging between interchanges (Hopyard Rd. to I-680)

Auxiliary Lanes

- o When 600 M Between Successive On-Ramps.
- o Two Lane Exit Ramps Have 400 M Auxiliary Lane.
- √ Weaving < 500 M between Off-Ramp and On-Ramp.
- √ Other -Adding Aux Lane on I-580 between Hacienda Dr. and I-680

Right of Way Access Control

- o Existing access control extends at least 15 m beyond end of curb return, radius or taper.

- o New construction access control extends at least 30 m (urban areas) or 100 m (rural areas) beyond end of curb returns, radius or taper.
- o Other _____

Highway Planting

- Replacement
- Median
- √ Mitigation

Safety

- Off-Freeway Access
- Maintenance Vehicle Pull-Out

Roadside Management

- √ Slope paving
- √ Gore paving
- Roadside paving

Stormwater

- √ Erosion control
- √ Drainage
- Slope design

Structures

- √ New Bridge
- Bridge Rehab
- √ Retaining Wall
- Other _____
- On STRAIN list for _____

Additional Studies

Identify additional studies that may be required including resources and schedules.

-Ramp Metering; Connector Metering

Preliminary Evaluation provided by:

Project Engineer Tricia Baxter **Date** 12/31/07

Design Manager Tom Wintch **Date** 12/31/07

Reviewed by:

Project Manager Ray Akkawi **Date** 12/31/07

Design Concept approved by:

Project Development Coordinator Michael W. Thomas **Date** 12/31/07

Conceptual approval in no way implies that any non-standard features currently identified or identified in the future will be approved. Non-standard features will need to be identified, fully analyzed and justified prior to approval (via a design exception fact sheet) of the selected alternative.

PDS Design Scoping Checklist

Project Information:

Alternative 2

District 4 County Alameda Route I-580 & I-680 Post Mile 580-PM 18.82/R21.43/680-PM 18.40/R21.88/ EA 04-2A 210K

Description Construct I-580/I-680 High Occupancy Vehicle (HOV) connector ramps in the west-to-south and north-to-east direction. Provide a direct express bus ramp from the eastbound direct connector into the East Dublin/Pleasanton BART station. Provide safety and operational improvements in the vicinity of the I-580/I-680 Interchange.

Project Manager

[Signature]

Phone 925-365-3965

Project Engineer

[Signature]

Phone 925-365-3960

Design Functional Manager Issa Bouri

Phone # 510-286-5220

Project Development Coordinator Michael W. Thomas

Phone # 510-286-4687

Project Screening

(Attach the project location map to this checklist to show location of all design improvements anticipated)

1. Project Description as Noted in Regional Transportation Plan: Westbound HOV lane on I-580 from east of Greenville Road to west of Santa Rita and HOV direct connectors from WB I-580 to SB I-680 and NB I-680 to EB I-580.
2. Project Setting: The I-580 / I-680 interchange is located between the cities of Pleasanton, Dublin, and Alameda County. I-580 is a major regional east-west freeway connecting the San Joaquin Valley and the San Francisco Bay Area. North of Oakland, I-580 travels across the San Francisco Bay into Marin County, via the Richmond-San Rafael Bridge, terminating in San Rafael. I-680 is a major north-south freeway connecting between the southern San Francisco Bay Area and I-80, near Fairfield. The I-580 / I-680 interchange is a modified full cloverleaf interchange, with a direct connector flyover ramp for the southbound I-680 to eastbound I-580 movement.

Rural or Urban Urban

Current land uses Typical urban/suburban land uses (residential, commercial, light industrial), regional shopping mall, sportspark, and flood control facilities.

Adjacent land uses office, business parks, regional shopping mall, BART station,

and residential on the southwest side; commercial business parks, BART station and residential on the northwest side; commercial, government office and sports park on the northeast side, and light industrial, hotel, sewage treatment plant, and commercial on the southeast side.

Existing landscaping/planting: None

3. Route Adoption: Date : I-580 Adopted 10/30/1947. I-680 Adopted 4/27/1960

4. Type of Facility (Freeway, Controlled Access Highway, or Conventional Highway) Freeway

Freeway Agreement: Date: I-580 dated 10/25/1993. I-680 dated 5/17/1988

Description of the Transportation Problem

The June 2007 annual traffic report by MTC ranked the eastbound and westbound commutes on I-580 the top 2nd and 3rd worst commutes on Bay Area highways.

The I-580 / I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a short weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

The combination of slow-moving vehicles and the short weave sections between the I-580 / I-680 interchange loop ramps and between the Dougherty/Hopyard Road interchange and I-680 results in congestion and queue spill back onto westbound I-580.

During the AM peak period, the congestion along I-580 westbound can extend from I-680 into the City of Livermore, easterly of Vasco Road. This leads to long delays, high travel times, and unsafe driving conditions.

During the PM peak period, eastbound sections of I-580 from the I-580/I-680 interchange to east of El Charro Road operate up to LOS F.

Proposed Scope of Work

Alternative 2 provides a median combined mixed-flow lane and HOV lane direct connection from westbound Interstate 580 to southbound Interstate 680. Alternative 2 provides a northbound Interstate 680 to eastbound Interstate 580 HOV median lane direct

connection. In addition, Alternative 2 constructs an express bus lane from the East Dublin/Pleasanton BART station to eastbound I-580.

Design Criteria

Legend:

o Item not needed to be studied in PA/ED

√ Item needed to be studied in PA/ED

Type of facility to be considered? (more than one may apply)

Freeway Expressway _____ Conventional Highway _____ Urban Street _____

Other (specify) _____

Design Speed for highway facilities within the project limit? 75 mph (mainline)

55mph (connectors)

Design Period: Construction Year : 2018 (Completion)

Design Year: 2038

Design Capacity: Level of Service to be maintained over the design period is?

Mainline C Ramp C Local Street N/A Weaving Sections C

Design Vehicle Selection?

STAA California _____ Bus _____

Proposed Roadbed and Structure Widths

Forecasted Average Daily Traffic Volumes: 146,400 Between Hopyard and I-680

Percent Truck Volume: 11%

	Roadbed Width			Structure Width		
	Existing	Proposed	Standard	Existing	Proposed	Standard
State Highway	N/A					
Lane Widths	_____	_____	_____	0	3@12'=36'	36'
Left Shoulder	_____	_____	_____	0	10'	10'
Right Shoulder	_____	_____	_____	0	14'	14'
Median Width	_____	_____	_____	0	0	0
Bicycle Lane	_____	_____	_____	0	0	0
Local Street	N/A					
Lane Widths	_____	_____	_____	_____	_____	_____
Left Shoulder	_____	_____	_____	_____	_____	_____
Right Shoulder	_____	_____	_____	_____	_____	_____
Median Width	_____	_____	_____	_____	_____	_____
Bicycle Lane	_____	_____	_____	_____	_____	_____

Median Barrier Existing : None

Proposed (Concrete Barrier / Thrie Beam / Other) Concrete Barrier

Roadway Design Scoping

Mainline Operations

Mainline Highway Widening

Existing pavement to be rehabilitated with: Rubberized AC / PCC.

Widen existing 1 lane facility to 3 lanes. R/W acquisition for 3 lanes.

Local street structures to span N/A lanes of highway (for future requirements).

Upgrade existing facility to:

- | | |
|---|--|
| <input type="checkbox"/> Expressway Standards | <input checked="" type="checkbox"/> Freeway Standards |
| <input type="checkbox"/> Controlled Access Highway | <input type="checkbox"/> Traversable Highway |
| <input type="checkbox"/> Improve Vertical Clearance | <input checked="" type="checkbox"/> Adequate Falsework Clearance |

Ramp / Street Intersection Improvements

- | | |
|---|---|
| <input type="checkbox"/> New Signals | <input type="checkbox"/> Modify Signals |
| <input type="checkbox"/> Right Turn Lanes | <input type="checkbox"/> Widening For Localized Through Lanes |
| <input type="checkbox"/> Merging Lanes | <input type="checkbox"/> Deceleration / Acceleration Lanes |
| <input type="checkbox"/> Left Turn Lanes | <input type="checkbox"/> > 300 VPH Left Turn (Requires Double Left Turn) |
| <input type="checkbox"/> Interchange Spacing | <input type="checkbox"/> Ramps Intersect Local Street < 4 % Grade |
| <input type="checkbox"/> Intersection Spacing | <input type="checkbox"/> Exit Ramps > 1,500 VPH Designed As Two Lane Exit |
| <input type="checkbox"/> Single Lane Ramps Exceeding 300 M Widened To Two Lanes | |
| <input type="checkbox"/> Other _____ | |

Operational Improvements

Truck Climbing Lane

Sustained Grade Exceeding 2% And Total Rise Exceeds 15 M.

Other Separation of weaving and merging between interchanges (Hopyard Rd. I/C to I-680)

Auxiliary Lanes

When 600 M Between Successive On-Ramps.

Two Lane Exit Ramps Have 400 M Auxiliary Lane.

Weaving < 500 M between Off-Ramp and On-Ramp.

Other -Adding Aux Lane on I-580 between Hacienda Dr. and I-680

Right of Way Access Control

Existing access control extends at least 15 m beyond end of curb return, radius or taper.

New construction access control extends at least 30 m (urban areas) or 100 m (rural areas) beyond end of curb returns, radius or taper.

Other _____

Highway Planting

- Replacement
- Median
- Mitigation

Safety

- Off-Freeway Access
- Maintenance Vehicle Pull-Out

Roadside Management

- Slope paving
- Gore paving
- Roadside paving

Stormwater

- Erosion control
- Drainage
- Slope design

Structures

- New Bridge
- Bridge Rehab
- Retaining Wall
- Other _____
- On STRAIN list for _____

Additional Studies

Identify additional studies that may be required including resources and schedules.

-Ramp Metering, Connector Metering

Preliminary Evaluation provided by:

Project Engineer Tricia Baxter **Date** 12/31/07

Design Manager Tom Wintch **Date** 12/31/07

Reviewed by:

Project Manager Ray Akkawi **Date** 12/31/07

Design Concept approved by:

Project Development Coordinator Michael W. Thomas **Date** 12/31/07

Conceptual approval in no way implies that any non-standard features currently identified or identified in the future will be approved. Non-standard features will need to be identified, fully analyzed and justified prior to approval (via a design exception fact sheet) of the selected alternative.

PDS Design Scoping Checklist

Project Information:

Alternative 3

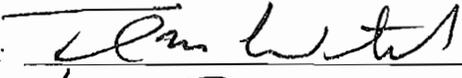
District 4 County Alameda Route I-580 & I-680 Post Mile 580-PM 18.82/R21.43; 680-PM 18.40/R21.88; EA 04-2A 210K

Description:

The project description for this project is to construct I-580/I-680 High Occupancy Vehicle (HOV) connector ramps in the west-to-south and north-to-east direction, provide a direct express bus ramp from the eastbound direct connector into the East Dublin/Pleasanton BART station, and provide safety and operational improvements in the vicinity of the I-580/I-680 Interchange.

Alternative 3 is the Minimum Project Alternative and could be considered an early phase to ultimate improvements to the I-580/I-680 Interchange. This Minimum Project Alternative includes safety and operational improvements, as well as an express bus lane from the East Dublin/Pleasanton BART station to eastbound I-580.

Alternative 3 would provide a mixed flow lane direct connection from northbound Interstate 680 to westbound Interstate 580 and remove the northbound Interstate 680 to westbound Interstate 580 loop ramp connection.

Project Manager	<u></u>	Phone <u>925-365-3965</u>
Project Engineer	<u></u>	Phone <u>925 365 3960</u>
Design Functional Manager	<u>Issa Bouri</u>	Phone # <u>510-286-5220</u>
Project Development Coordinator	<u>Michael W. Thomas</u>	Phone # <u>510-286-4687</u>

Project Screening

(Attach the project location map to this checklist to show location of all design improvements anticipated)

1. Project Description as Noted in Regional Transportation Plan: Westbound HOV lane on I-580 from east of Greenville Road to west of Santa Rita and HOV direct connectors from WB I-580 to SB I-680 and NB I-680 to EB I-580.

2. Project Setting: The I-580 / I-680 interchange is located between the cities of Pleasanton, Dublin, and Alameda County. I-580 is a major regional east-west freeway connecting the San Joaquin Valley and the San Francisco Bay Area. North of Oakland, I-580 travels across the San Francisco Bay into Marin County, via the Richmond-San Rafael Bridge, terminating in San Rafael. I-680 is a major north-south freeway connecting between the southern San Francisco Bay Area and I-80, near Fairfield. The I-580 / I-680 interchange is a modified full cloverleaf interchange, with a direct connector flyover ramp for the southbound I-680 to eastbound I-580 movement.

Rural or Urban Urban

Current land uses Typical urban/suburban land uses (residential, commercial, light industrial), regional shopping mall, sportspark, and flood control facilities.

Adjacent land uses office, business parks, regional shopping mall, BART station, and residential on the southwest side; commercial business parks, BART station and residential on the northwest side; commercial, government office and sports park on the northeast side, and light industrial, hotel, sewage treatment plant, and commercial on the southeast side.

Existing landscaping/planting: None

3. Route Adoption: Date : I-580 Adopted 10/30/1947. I-680 Adopted 4/27/1960

4. Type of Facility (Freeway, Controlled Access Highway, or Conventional Highway) Freeway

Freeway Agreement: Date: I-580 dated 10/25/1993. I-680 dated 5/17/1988

Description of the Transportation Problem

The June 2007 annual traffic report by MTC ranked the eastbound and westbound commutes on I-580 the top 2nd and 3rd worst commutes on Bay Area highways.

The I-580 / I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a short weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

The combination of slow-moving vehicles and the short weave sections between the I-580 / I-680 interchange loop ramps and between the Dougherty/Hopyard Road interchange and I-680 results in congestion and queue spill back onto westbound I-580.

During the AM peak period, the congestion along I-580 westbound can extend from I-680 into the City of Livermore, easterly of Vasco Road. This leads to long delays, high travel times, and unsafe driving conditions.

During the PM peak period, eastbound sections of I-580 from the I-580/I-680 interchange to east of El Charro Road operate up to LOS F.

Proposed Scope of Work

Alternative 3 provides a potentially fundable early phase to planned ultimate improvements to the I-580/I-680 I/C within the foreseeable future.

Alternative 3 provides a mixed flow lane direct connection from northbound Interstate 680 to westbound Interstate 580 and removes the northbound Interstate 680 to westbound Interstate 580 loop ramp connection. Alternative 3 constructs an express bus lane from the East Dublin/Pleasanton BART station to eastbound I-580.

Design Criteria

Legend:

- o Item not needed to be studied in PA/ED
- √ Item needed to be studied in PA/ED

Type of facility to be considered? (more than one may apply)

Freeway Expressway Conventional Highway Urban Street

Other (specify) _____

Design Speed for highway facilities within the project limit? 75 mph (mainline)
55mph (connectors)

Design Period: Construction Year : 2018 (Completion) Design Year: 2038

Design Capacity: Level of Service to be maintained over the design period is?

Mainline C Ramp C Local Street N/A Weaving Sections C

Design Vehicle Selection?

STAA California _____ Bus _____

- o Right Turn Lanes
- o Merging Lanes
- o Left Turn Lanes
- o Interchange Spacing
- o Intersection Spacing
- o Single Lane Ramps Exceeding 300 M Widened To Two Lanes
- o Other _____
- o Widening For Localized Through Lanes
- o Deceleration / Acceleration Lanes
- o > 300 VPH Left Turn (Requires Double Left Turn)
- o Ramps Intersect Local Street < 4 % Grade
- o Exit Ramps > 1,500 VPH Designed As Two Lane Exit

Operational Improvements

Truck Climbing Lane

- o Sustained Grade Exceeding 2% And Total Rise Exceeds 15 M.
- √ Other Separation of weaving and merging between interchanges (Hopyard Rd. to I-680)

Auxiliary Lanes

- o When 600 M Between Successive On-Ramps.
- o Two Lane Exit Ramps Have 400 M Auxiliary Lane.
- o Weaving < 500 M between Off-Ramp and On-Ramp.
- √ Other-Adding Aux Lane between Hopyard Rd and I-680

Right of Way Access Control

- o Existing access control extends at least 15 m beyond end of curb return, radius or taper.
- o New construction access control extends at least 30 m (urban areas) or 100 m (rural areas) beyond end of curb returns, radius or taper.
- o Other _____

Highway Planting

- Replacement
- Median
- √ Mitigation

Safety

- Off-Freeway Access
- Maintenance Vehicle Pull-Out

Roadside Management

- √ Slope paving
- √ Gore paving
- Roadside paving

Stormwater

- Erosion control
- Drainage
- Slope design

Structures

- New Bridge
- Bridge Rehab
- Retaining Wall
- Other _____
- On STRAIN list for _____

Additional Studies

Identify additional studies that may be required including resources and schedules.

-Ramp Metering, Connector Metering _____

Preliminary Evaluation provided by:

Project Engineer Tricia Baxter **Date** 12/31/07

Design Manager Tom Wintch **Date** 12/31/07

Reviewed by:

Project Manager Ray Akkawi **Date** 12/31/07

Design Concept approved by:

Project Development Coordinator Michael W. Thomas **Date** 12/31/07

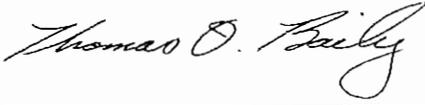
Conceptual approval in no way implies that any non-standard features currently identified or identified in the future will be approved. Non-standard features will need to be identified, fully analyzed and justified prior to approval (via a design exception fact sheet) of the selected alternative.

ATTACHMENT H

Preliminary Environmental Analysis Report (PEAR)

Preliminary Environmental Analysis Report

Project Information

District 04	County Alameda	Rte I-580/680 IC	PM 19.0 – 21.0 (I-580) 18.4 – 22.0 (I-680)	EA 04-2A210K
Project Title		I-580/I-680 Freeway Interchange Improvements		
Project Manager		Issa Bouri	Phone Number	510 286-5220
Project Engineer			Phone Number	
Environmental Manager			Phone Number	
PEAR Prepared by		Thomas O. Baily 	Phone Number	510 874-3166

Project Description

Purpose and Need:

Project Purpose

The purpose of the modification to the I-580 / I-680 Interchange is to:

- Improve capacity, operations, and safety on westbound I-580 between the Hacienda Drive Interchange and the Interstate 580/680 interchange in the Tri-Valley area.
- Meet increasing transportation demand and enhance modal (BART) inter-relationships in the corridor, which is the only major transportation corridor providing a commute route between San Francisco, Oakland, San Jose (via Interstate 680) and the Tri-Valley (Dublin, Pleasanton, and Livermore), and growing Central Valley areas (Tracy, Stockton, and the Interstate 5 Corridor).
- Enhance both mixed flow and HOV system connectivity between I-580 and I-680.

Regional connectivity and people carrying capacity are important to the movement of passengers, goods, and freight. Some local access may be removed as part of the project in need of maintaining that regional connectivity. Specifically, current freeway agreements call for the elimination of Stoneridge Drive and I-580 connections due to the close proximity of the connections to the I-580 / I-680 interchange. Additionally, under these current freeway agreements, the movement of northbound or southbound I-680 to San Ramon Road/Foothill Road would be removed in Alternative 3 in order to fit the proposed connections into existing and planned constraints, including pedestrian access to the new

West Dublin/Pleasanton BART station.

Project Need

Interstate 580 currently experiences serious congestion while carrying substantial traffic volumes through the project area during peak hours. The I-580 / I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a 450-foot weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks, which is exacerbated by the grade change within the loop ramps. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

Interstate 580 westbound is also greatly affected by the short weave section between the Dougherty / Hopyard Road interchange and I-680. During the a.m. peak hour, approximately 3,500 vehicles traveling on I-580 westbound are destined for I-680 northbound and southbound. To access I-680, all the vehicles need to shift to the two right-most lanes on I-580 to take the I-580 to I-680 off-ramp. These vehicles conflict with approximately 4,400 vehicles on I-580 continuing along westbound I-580. During the p.m. peak hour, approximately 3,500 vehicles on I-580 trying to access I-680 conflict with approximately 3,000 vehicles continuing to travel on I-580 eastbound. This conflict during the a.m. and p.m. peak periods is further compounded by the addition of vehicles merging onto the freeway from the Hopyard Road on-ramp.

The combination of slow-moving vehicles and the short weave section between the I-580 / I-680 interchange loop ramps and between the Dougherty / Hopyard Road interchange and I-680 results in heavy congestion and queues that spill back onto westbound I-580. During the a.m. peak period the congestion along I-580 westbound can extend from I-680 into the City of Livermore, leading to long delays, high travel times, and unsafe driving conditions. Similar conditions occur during the p.m. peak period except the level of congestion is lower than the a.m. peak period with the queue extending back through the Hacienda Drive interchange area.

The No-Build alternative would continue to facilitate unacceptable delays and congestion, as well as enhance existing safety issues. As traffic volumes increase, per forecasted projections, traffic issues will continue to worsen and become intolerable within the foreseeable timeframe. Based on the updated Contra Costa Transportation Authority (CCTA) traffic model, 2035 traffic in the Tri-Valley area is projected to increase by approximately 40 percent compared to existing conditions. Using the CCTA model and a focused-area travel demand model (VISUM software), network-wide performance was forecast for 2035 under the No-Build alternative. The results of that analysis are provided in Table 1.

Table 1. Network Performance for Year 2035 No-Build Conditions

Performance Measure	a.m. peak	p.m. peak
Vehicle-Hours of Delay	4,538	2,062
Average Vehicle Speed (mph)	20	35
Vehicle-Miles Traveled	138,000	175,000

Additionally, it is critical to reduce the number of accidents that take place in the project location due to the weaving problems associated with the interchange. Therefore, there is a critical need to decrease existing and projected freeway congestion by improving the people-carrying capacity, as well as meeting the increasing transportation demand of I-580 and the I-580 / I-680 interchange.

Description of Work:

The project is located at the I-580 / I-680 Interchange in Alameda County. The proposed project limits are from 1700 LF east of the Hacienda Drive Overcrossing (PM 18.50) to 2000 LF west of the San Ramon Road Overcrossing (PM 21.81) along I-580, and from the Amador Valley Boulevard Undercrossing (PM 20.73) to 3400 LF south of the Stoneridge Drive Overcrossing (PM 19.94) along I-680.

The proposed project would improve traffic operations from westbound I-580 to northbound and southbound I-680 by altering the geometrics of the freeway ramps for these movements. All of the alternatives would provide four mixed flow lanes on westbound I-580 through the I-580 / I-680 interchange, which would improve operations on mainline westbound I-580 between Hacienda Drive and I-680. Two of the project alternatives would include HOV lane connectors through the interchange from westbound I-580 to southbound I-680 and northbound I-680 to eastbound I-580. These connectors would link HOV lanes planned on I-580 and I-680. All of the alternatives would include an eastbound bus ramp from the HOV lane to the East Dublin / Pleasanton BART Station.

The Stoneridge Drive and I-580 / I-680 interchanges do not meet FHWA standards for interchange spacing. An agreement was signed on May 17, 1988 between FHWA, Caltrans, and the Cities of Dublin and Pleasanton to eliminate access to I-580 via the Stoneridge Drive interchange when modifications were made to the I-580 / I-580 interchange. One of the alternatives for this project eliminates access from I-580 to Stoneridge Drive. Another alternative eliminates access to I-580 from Stoneridge Drive. That alternative also eliminates access to I-680 from the San Ramon Boulevard / Foothill Road interchange because of geometric constraints caused by the pedestrian bridge planned by BART for the proposed West Dublin / Pleasanton BART Station. Limiting freeway access from these interchanges would improve operations of the I-580 / I-680 interchange.

Alternatives:

Three project alternatives in addition to the No Build Alternative have been identified and are described below. All three alternatives have independent utility because they would improve traffic operations on mainline westbound I-580 through the I-580 / I-680 interchange and traffic operations from westbound I-580 to north- and southbound I-680. These operations currently cause substantial congestion on westbound I-580 from the Dougherty / Hopyard interchange through the I-580 / I-680 interchange. Two of the alternatives would also provide HOV connectors through the I-580 / I-680 interchange to HOV lanes planned for I-580 and I-680. All of the alternatives have logical termini, beginning and ending at existing interchanges.

The termini of project alternatives provide a large enough study area to ensure an accurate assessment of the range of environmental issues that may be associated with the project. The study area also encompasses a large enough area to determine the least environmentally damaging alternative.

Alternative 1 – This alternative would provide a two-lane mixed flow exit ramp on the right side of westbound I-580 to north- and southbound I-680 beginning just to the west of the Dougherty Road / Hopyard Road interchange. The ramp would ascend on a structure, splitting to southbound and northbound ramps near the Alamo Canal. The southbound ramp structure would cross over the I-580 / I-680 interchange at the fourth level and descend on the west side of I-680, merging with the freeway at the Stoneridge Drive interchange. The northbound ramp structure would descend on the east side of I-680, merging with the freeway at Amador Valley Boulevard.

Access from I-580 to the Stoneridge Drive interchange would be eliminated with this alternative. Traffic from Dougherty Road would access westbound I-580 from a new lane that would merge with the proposed new northbound I-680 off ramp and the existing westbound I-580 / southbound I-680 loop

connector. Traffic on southbound I-680 would access Stoneridge Drive from a new exit ramp starting at the north end of the I-580 / I-680 interchange, carrying over the interchange on a structure at the second level, and merging with the existing southbound exit ramp at Stoneridge Drive. A hook ramp from northbound I-680 to Village Parkway would also be added, completing the Dublin Boulevard interchange.

Alternative 1 includes HOV connectors from northbound I-680 to eastbound I-580 and westbound I-580 to southbound I-680. The east end of the HOV connectors would ascend from separate eastbound and westbound ramp-up positions adjacent to the median of I-580, straddling the BART tracks at the East Dublin / Pleasanton BART Station. The HOV connector structure would extend west over the BART tracks in the I-580 median, crossing over the center of the Dougherty / Hopyard interchange structure at the third level. The HOV structure would ascend to the fourth structure level to cross above the I-580 / I-680 interchange, and then descend to enter the I-680 median north of Stoneridge Drive. A bus-only ramp would ascend from the bus terminal at the East Dublin / Pleasanton BART Station to the median eastbound HOV lane on I-580.

Alternative 2 – Alternative 2 would provide similar operational improvements to I-580 and I-680 as Alternative 1 but with a different geometric approach that requires less right-of-way than Alternative 1. Mixed flow traffic from westbound I-580 to southbound I-680 would exit from the left side of I-580 on a new structure beginning just west of the Dougherty / Hopyard interchange. This connector structure would cross the I-580 / I-680 interchange at the fourth level and descend on the left side of the southbound I-680 lanes, merging with the freeway north of Stoneridge Drive. The existing westbound I-580 / southbound I-680 loop connector would be maintained for truck traffic and traffic accessing southbound I-680 from the Dougherty / Hopyard interchange. An exit ramp on the right side of westbound I-580 would continue to provide mixed flow access to northbound I-680.

All local access ramps would be maintained with this alternative. Traffic from Dougherty Road would access westbound I-580 with a hook ramp similar to the existing access ramp. The Stoneridge Drive interchange would remain in its current configuration.

Alternative 2 also includes HOV connectors from northbound I-680 to eastbound I-580 and westbound I-580 to southbound I-680. The east end of the HOV connectors would ascend from separate eastbound and westbound ramp-up positions adjacent to the median of I-580. The westbound HOV connector would begin east of the Dougherty / Hopyard interchange, cross under the interchange structure and then be on the same structure as the mixed flow connector lanes between westbound I-580 and southbound I-680. The eastbound HOV connector would begin in the median of northbound I-680 north of Stoneridge Drive, ascend a structure over the I-580 / I-680 interchange at the third level, and descend into the median of eastbound I-580, crossing over the Dougherty / Hopyard interchange and merging with the freeway at the East Dublin / Pleasanton BART Station. A bus-only ramp would ascend from the bus terminal at the East Dublin / Pleasanton BART Station to the median eastbound HOV lane on I-580.

Alternative 3 – This alternative would add an exit lane from the Dougherty / Hopyard interchange through the existing westbound I-580 to southbound I-680 loop connector to provide additional capacity for the westbound I-580 to southbound I-680 traffic movement. A narrower, non-standard shoulder width is proposed on I-580 from west of the Dougherty / Hopyard interchange to east of the I-580 / I-680 separation to avoid replacing the I-580 / I-680 separation structure. The existing northbound I-680 to westbound I-580 loop connector would be eliminated and a new structure would be added to carry northbound I-680 mixed flow traffic over the interchange at the third level to westbound I-580. A bus-only ramp would descend from the median eastbound HOV lane on I-580 to the bus terminal at the East Dublin / Pleasanton BART Station. Access to I-680 from the San Ramon / Foothill interchange on

I-580 and access to I-580 from the Stoneridge Drive interchange on I-680 would be eliminated.

No Build Alternative – Under the No Build Alternative, a westbound HOV lane would be constructed through the I-580 / I-680 interchange to the San Ramon / Foothill interchange. A bus-only ramp would also be built from the westbound HOV lane on I-580 to the bus terminal at the East Dublin / Pleasanton BART Station. Any future mixed-flow facilities at the I-580/I-680 interchange would be built as envisioned in the currently adopted design for the buildout of the interchange.

Anticipated Environmental Approval

- | | |
|---|---|
| <u>CEQA</u> | <u>NEPA</u> |
| <input type="checkbox"/> Categorical Exemption | <input type="checkbox"/> Categorical Exclusion |
| <input type="checkbox"/> Initial Study/Negative Declaration | <input type="checkbox"/> Environmental Assessment with a Finding of No Significant Impact |
| <input checked="" type="checkbox"/> Environmental Impact Report | <input checked="" type="checkbox"/> Environmental Impact Statement |

All three alternatives would result in acquisition of property from the Dublin Sports Grounds, an important 4(f) property in Dublin. It is expected that the acquisition of this property will require the preparation of an Environmental Impact Report/Environmental Impact Statement will be required.

Lead Agency	The California Department of Transportation is the CEQA Lead Agency for this project. If there is federal participation in the project, the Department will have NEPA Lead Agency responsibilities delegated by the Federal Highway Administration.
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Estimated time to obtain environmental approval	36 months
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Estimated person hours to complete environmental document	30,190 consultant / 4,590 Caltrans Oversight
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PSR Summary Statement

A key issue for project alternatives is acquisition of from 1.9 acres (Alternative 3) to 6.6 acres (Alternative 1) of the Dublin Sports Grounds, a major public park in the City of Dublin. This would require a Section 4(f) Evaluation and approval, which is the principal reason why environmental review of the project will require an EIR/EIS.

Another important issue associated with the project is elimination of access to I-580 from the Stoneridge Drive interchange under Alternatives 1 and 3, and elimination of access to I-680 from the San Ramon / Foothill interchange under Alternative 3. This is expected to raise concerns of business owners at Stoneridge Mall and in the commercial area of Dublin in the northwest quadrant of the I-580 / I-680 interchange, and it will raise general public concern regarding the ease of access to these commercial areas.

The connector ramp from westbound I-580 to northbound I-680 for all three project alternatives crosses Alamo Canal near the Dublin Library and closely parallels the western bank of the canal for several hundred feet. It may be necessary to place one or two piers on the western bank of the canal to support the

ramp. This could result in temporary impacts to the canal such as increased sedimentation and turbidity. The total area of impact to the bank would be on the order of 200 square feet.

It is possible that all the project alternatives could encroach on the north bank of Chabot Canal east of the Dougherty / Hopyard interchange with I-580. Potential biological impacts to this canal need to be evaluated at the PA/ED stage of the project.

Alternatives 1 and 2 would have no impact to Dublin Creek. Alternative 3 would require placing 850 feet of the creek in a box culvert. This would essentially eliminate the biological values of that reach of the creek. The total area of waters of the U.S. impacted by this action would be approximately 0.5 acre.

Special Considerations

The property occupied by the Dublin Sports Grounds was deeded to the City of Dublin by the U.S. government through the National Park Service in 1988 for a public park and public recreational area. A covenant of that deed is that the property be used for a public park and recreation area in perpetuity. In the event there is a breach of that or any other condition or covenant of the deed, title and interest to the property shall revert to and become the property of the United States at its option.

The residential and commercial development of the City of Dublin is divided into two separate parts by U.S. government and Alameda County land that lies between Dougherty Road to the west and Tassajara to the east. The Dublin Sports Grounds is the only large developed park and recreation facility located in west Dublin and all remaining land in that portion of the City is approaching buildout. East Dublin is currently going through commercial and residential expansion and park facilities are planned for that portion of the City. As indicated above, the loss of a portion of the Sports Grounds could result in all of it reverting to the U.S. government. Because of a lack of vacant land in west Dublin, the central location of the park, and deed covenants on the land, encroachment by the I-580 / I-680 Freeway Interchange Improvements Project into the Dublin Sports Center would result in a substantial 4(f) impact, and it is not clear that this impact could be mitigated to the satisfaction of the City of Dublin. This issue could result in substantial project schedule delays.

The HOV connector from westbound I-580 to southbound I-680 is included in MTC's Transportation 2003 Plan (reference number 22013). None of the project alternatives are identified in the 2006 STIP or the draft 2007 (February) RTIP. A conformity analysis cannot be done for the project until it is programmed in a conforming STIP. It is important that this step be initiated prior to beginning the NEPA review of the project to avoid schedule delays.

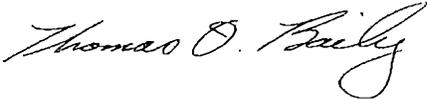
Anticipated Project Mitigation

Mitigation for temporary and permanent impacts to California red legged frog, California tiger salamander, and burrowing owl may be required for any of the three project alternatives depending on impacts to Alamo Canal, Chabot Canal, and Dublin Creek. Mitigation would also be required for temporary impacts to waters of the U.S. under Alternatives 1 and 2, and temporary and permanent impacts to waters of the U.S. under Alternative 3. All three alternatives could remove heritage trees in the City of Pleasanton. This may require a fee from the City. The project would take 1.9 (Alternative 3) to 6.6 (Alternative 1) acres of the Dublin Sports Grounds. Mitigation costs for this impact would be approximately \$1 million per acre. Because of the difference in the acreage of the Dublin Sports Grounds take, differences in impacts to waters of the U.S., and differences in the landscaping area among alternatives, mitigation costs for alternatives would vary as follows: Alternative 1 = \$12,019,000, Alternative 2 = \$7,508,000, and Alternative 3 = \$6,608,000.

Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed project. It is not an environmental document for environmental approval. Preliminary analyses, determinations, and mitigation cost estimates are based on the scope of the project as described in this Project Study Report (PSR). The estimates and conclusions in this PEAR are approximate and based on cursory analyses of probable effects. A re-evaluation of the PEAR will be needed for changes in scope, alternatives, or environmental laws, regulations, and guidelines.

Reviewed by

 Environmental Manager	12/19/07 Date
 Project Manager	1/21/08 Date

Environmental Technical Reports or Studies Required

	Study or Report	Document Text Only	Not Anticipated
Community Impact Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Title VI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 4(f) Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visual Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paleontology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cumulative Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Growth Inducing/Indirect Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural			
Archaeological Survey Report (ASR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaluation Report (HRER)			
Historic Property Survey Report (HPSR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historical Resource Compliance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SHPO / PRC 5024.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other Finding of Effect:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Data Recovery Plan:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Memorandum of Agreement*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(*if Federal Permit is required)			
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PSI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Biological			
Endangered Species (Federal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological Opinion (USFWS, NMFS, State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish Passage Barriers Assessment (for Alternative 3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Environment Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits			
401 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1602 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Permit (402) Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Technical Review

Air and Noise

The proposed project would not result in long-term air quality impacts. It would help reduce air quality impacts by improving traffic operations, and in the case of Alternatives 1 and 2, providing facilities for increased ridesharing and transit use. However, it is recommended that an Air Quality Technical Report be prepared for the project because it is not exempt from local conformity under 40 CFR 93.126 or regional conformity under 40 CFR 93.127, the region is non-attainment for ozone and the California PM₁₀ standards, the region is designated for CO maintenance, and the project does not qualify for a Categorical

Exclusion under NEPA or a Categorical Exemption under CEQA. At least a portion of the project is mentioned in the Bay Area RTP, but it has not yet been programmed in the STIP. A conformity analysis cannot be prepared for the project until it is programmed in a conforming STIP. Mobile Source Air Toxins (MSATs) and global warming will be addressed during PA/ED.

The principal source of outdoor noise within the project limits is vehicular traffic on I-580, I-680, and local roads. Sensitive receptors include public parks, hotels, and residential areas. The modifications to the freeway-to-freeway connector from westbound I-580 to north- and southbound I-680 proposed for all three alternatives, and HOV connectors proposed for Alternatives 1 and 2 would increase noise at the Dublin Sports Grounds. This increase in noise may warrant a sound wall on the north side of I-580 from the Dougherty / Hopyard interchange to I-680 for any of the three project alternatives.

The proposed project is a Type I project as defined in 23 CFR 772.5 because it would alter the vertical and horizontal alignment of an existing highway and it would add through-traffic lanes to the highway. Therefore, a noise analysis is required for the project.

Hazardous Waste/Materials

An Initial Site Assessment identified six sites within one mile of the project boundaries that could pose environmental impairment concerns to the project. All of these are leaky underground storage tank (LUST) sites with open fuel leak cases where soil and groundwater have been impacted. All of the sites have ongoing environmental monitoring. At the PA/ED stage, the regulatory database search should be updated and initial field surveys of these six LUST sites should be conducted to determine the specific location of each site to the three alternative alignments.

Water Quality and Erosion Control

Alamo Canal flows south through the I-580 / I-680 interchange. Dublin Creek flows east adjacent to I-580 from the San Ramon / Foothill interchange to the I-580 / I-680 interchange where it joins with Alamo Canal in the northeast quadrant of that interchange. Chabot Canal flows south, paralleling the south side of I-580 east of the Dougherty / Hopyard interchange before turning south and ultimately joining Alamo Canal near West Las Positas Boulevard. Best Management Practices and design elements of the project should be documented to show project construction and operation will not impact water quality in Chabot Canal, Dublin Creek, Alamo Canal, and surface waters downstream of Alamo Canal including Arroyo de la Laguna and Alameda Creek. The Caltrans District 4 Stormwater Coordination Branch will assess potential water quality impacts of the project alternatives carried through geometric design and investigate the potential incorporation of permanent treatment BMPs into the project. A Storm Water Data Report will be prepared for the project. The Stormwater Coordination Branch will also coordinate the 401 Water Quality Certification that may be required for the project with the San Francisco Regional Water Quality Control Board.

Biological Resources

Vegetation observed within the project boundaries includes ornamental plantings, non-native annual grasses, and non-native ruderal vegetation. Large trees observed near the outer edge of the business park in the southwest quadrant of the I-580 / I-680 interchange may be considered Heritage Trees under the City of Pleasanton Tree Preservation Ordinance (City Ordinance 17.16).

Alamo Canal, Chabot Canal, and Dublin Creek have the potential to contain habitat for the threatened California red-legged frog and California tiger salamander. These waters may also be habitat for the western pond turtle, a state species of concern. Alamo Canal, Chabot Canal, and Dublin Creek are

tributary to Alameda Creek, whose lower reaches are habitat for the federally threatened Central California coastal steelhead. The endangered San Joaquin kit fox and the western burrowing owl (a state species of concern) also have the potential to occupy any burrow habitat in the project area.

An NES should be prepared for the project. Biological surveys should be performed for California red-legged frog, western pond turtle, burrowing owl, kit fox, and California tiger salamander. If habitat for these species would be impacted by project alternatives, a Biological Assessment should be prepared. A biological reconnaissance survey should be done for nesting raptors, rare plants, and heritage trees.

The connector ramp from westbound I-580 to northbound I-680 for all three project alternatives crosses Alamo Canal near the Dublin Library and closely parallels the western bank of the canal for several hundred feet. It may be necessary to place one or two piers on the western bank of the canal to support the ramp. This could result in temporary impacts to the canal such as increased sedimentation and turbidity. The total area of impact to the bank would be on the order of 200 square feet.

Alternatives 1 and 2 would have no impact to Dublin Creek. Alternative 3 would require placing 850 feet of the creek in a box culvert. This would essentially eliminate the biological values of that reach of the creek. The total area of waters of the U.S. impacted by this action would be approximately 0.5 acre. Placement of the creek in a culvert will require completion of a fish passage barrier assessment.

It is possible that the project alternatives could encroach on the north bank of Chabot Canal east of the Dougherty / Hopyard interchange with I-580. Potential biological impacts to this canal need to be evaluated in the PA/ED stage of the project.

Restoration efforts are underway to remove passage barriers to steelhead migration within the Alameda Creek watershed. As indicated above, Alamo Canal, Chabot Canal, and Dublin Creek are tributaries of Alameda Creek. Early coordination with California Department of Fish and Game, and possibly the National Marine Fisheries Service, concerning steelhead usage of the watershed crossed by the project is recommended.

Wetlands

Alamo Canal, Chabot Canal, and Dublin Creek would qualify as jurisdictional waters of the U.S. under Section 404 of the Clean Water Act. Therefore, a delineation of jurisdictional waters needs to be done for these water courses. None of these water courses contain wetlands. All project alternatives may have temporary construction impacts to Alamo Canal from construction of one or two piers on the west bank of the canal to support the connector ramp from I-580 to I-680. It is possible that the project alternatives could encroach on the north bank of Chabot Canal east of the Dougherty / Hopyard interchange with I-580. Potential impacts to this canal need to be evaluated in the PA/ED stage of the project. Alternative 3 would permanently impact about 0.5 acre of Dublin Creek. Mitigation would be required for impacts to all three water courses. The total area of waters of the U.S. impacted by the project would be too small to trigger the need for formal NEPA/404 coordination; however, early coordination with the U.S. Army Corps of Engineers regarding 404 permitting for potential project impacts to jurisdictional waters of the U.S. is recommended.

Visual Quality

I-680 is a designated state scenic highway throughout the project area. I-580 in the project area is eligible for state scenic highway designation. Both freeways have been designated as scenic routes by local jurisdictions. I-580 and I-680 were designated scenic routes by Alameda County in 1966, and they

are City of Dublin-designated scenic routes. The City of Pleasanton draft General Plan designates both I-580 and I-680 as scenic highways as well. Both I-580 and I-680 are principal routes from which people traveling through Dublin and Pleasanton gain their impression of the cities; therefore, it is important to both that the quality of views be protected.

Views from the freeway would not be substantially altered by the I-580 modifications proposed for Alternatives 1 through 3 or the addition of the HOV connectors proposed for Alternatives 1 and 2. The elevated HOV connector structures for Alternatives 1 and 2 would be the most highly visible features of the project. The residents of Pleasanton and Dublin are likely to be more sensitive to the aesthetic characteristics of these structures than motorists on I-580. Blockage of potentially scenic views or vistas would be studied and analyzed.

With the structures proposed, a full Visual Impact Assessment (VIA) is recommended for this project. Because of the potential sensitivity of the Cities of Dublin and Pleasanton to the architectural design of the elevated HOV connector structures, it is recommended that visual simulations be prepared at locations determined in consultation with each of the municipality's planning departments. It is also recommended that simulations be done with the total buildout of the I-580 / I-680 interchange to demonstrate potential cumulative visual impacts. The visual assessment needs to evaluate impacts of sound walls if they are recommended as a result of the noise analysis of the project.

Existing trees in the project area, though sparse, are large and mature. If impacted by the project, the trees would have to be replaced as per Caltrans Policy and the Pleasanton Heritage Tree Ordinance.

The I-580 / I-680 interchange is deficient in landscaping because of past roadway projects that provided little replacement planting. Under Caltrans' policy, planting is warranted in areas impacted by major modifications to the highway where adjacent properties are developed at the time of highway construction contract acceptance.

Highway planting will be completed according to Caltrans' standards up to the maximum cost per acre. Planting along the project's proposed limits will be compatible with adjacent urban development and enhance the visual quality of the corridor. Plant species will be selected for their drought tolerance and disease resistant characteristics. An automated irrigation system compatible with existing electric automatic irrigation systems currently utilized along this corridor will be installed. A tertiary treated reclaimed water source is available from DERWA, a Joint Powers Authority of the Dublin San Ramon Services District and the East Bay Municipal Utility District. The principal reclaimed water transmission line for DERWA crosses I-580 to the east of the Dougherty/Hopyard interchange in the project area. Design for safety items, (such as maintenance vehicle pullouts, walk gates and weed control paving at the base of metal-beam guard rails), irrigation crossovers, vegetation management, electrical service (for future irrigation), water meters, and aesthetic treatments for retaining walls, slope paving, bridge columns and bridge abutments, shall be included in the roadway project estimate.

The estimate for highway planting is over \$200,000. Therefore, landscaping shall be a separate contract, funded by the parent roadway contract, with a three year plant establishment period. If approved by headquarters, an acceptance to this policy can be granted.

Cultural Resources

Existing land uses in the project area include industrial, commercial, mixed commercial and residential, and agriculture open area. None of the area surveyed appeared to contain historic built-environment resources. It is likely that most if not all buildings within the area of potential effects (APE) for architectural/built resources are recent construction, but a qualified architectural historian will be required

to review buildings greater than 30 years old to determine if they can be exempted from further evaluation under the Caltrans Programmatic Agreement (PA), Attachment 4. A request for a records search was submitted to the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) to identify cultural resources within the corridor/project area. Preliminary information shows that there are three previously identified cultural resources located within the corridor/project area and 53 previously identified cultural resources, including built-environment resources within a ½-mile radius. The frequency of previously recorded cultural resources in the immediate project vicinity illustrates the potential to encounter additional resources within the project area.

Several documents should be prepared for project compliance with the January 1, 2007 PA among the FHWA, the Advisory Council on Historic Preservation, the SHPO, and Caltrans. These documents include a Historic Properties Survey Report (HPSR) which is a summary document used by Caltrans as its consultation and decision making document under the Section 106 PA. Caltrans uses this document to request the State Historic Preservation Officer's (SHPO) concurrence on determinations of eligibility for properties evaluated within the project APE) The HPSR includes APE maps signed by the Caltrans Professionally Qualified Staff (PQS) and Project Manager for the project. Early coordination will be conducted with the Caltrans PQS when delineating the APE for both archaeological and architectural resources. Appended to the HPSR, will be an Archaeological Survey Report (ASR) and a Historic Resources Evaluation Report (HRER). The ASR presents the results of archaeological identification efforts conducted for the project. It documents both positive and negative archaeological survey results; however, it does not evaluate archaeological sites. The HRER is used to document identification, recordation, and evaluation efforts for historical archaeological resources and built-environment resources, such as buildings, structures, objects, districts, and linear features. If archaeological resources are identified within the APE of the proposed project, and impacts to the resources cannot be avoided in accordance with Attachment 5 of the PA, then the resources must be evaluated within an Archaeological Evaluation Report (AER). The evaluation of whether or not the resources qualify as historic properties under the National Historic Preservation Act (NHPA), or historic resources under CEQA, would be documented in the AER. Consultation with the SHPO will be conducted by Caltrans Office of Cultural Resources Studies. No mitigation for historic built resources or archaeological resources is anticipated.

Community Impact

There are no environmental justice anticipated for this project. Alternatives 1 and 3 of the project limit access between I-580 and Stoneridge Drive and Alternative 3 limits access between I-580 and Stoneridge Drive and I-680 and the San Ramon Boulevard / Foothill Road interchange. This could result in disproportionate or discriminatory impacts such as diminished access to facilities and services and disruption of people and businesses. The proposed project would not impact community cohesion.

All three Build Alternatives would result in right-of-way acquisition of a portion of the Dublin Sports Grounds which qualifies as 4(f) property, and a portion of the parking lots for the Union 76 Gas Station, Americas Tire Company, United Rentals facilities, and the Dublin Toyota dealership. Each of the alternatives would also require additional right-of-way from the Dublin Library parking area on the north side of I-580 west of Hopyard Road. Alternatives 2 and 3 would require additional right-of-way west of the future BART parking structure on the north side of I-580.

Under Alternatives 1 and 3, access to Stoneridge Drive from I-580 would be eliminated. Under Alternative 3, access to I-680 from the San Ramon / Foothill interchange would also be eliminated. An agreement dated 5/17/1988 was signed between FHWA, Caltrans, and the Cities of Dublin and Pleasanton to eliminate access from I-580 to Stoneridge Drive when modifications were made to the I-580 / I-580 interchange. Other access is readily available to Stoneridge Mall and the commercial area of

Dublin in the northwest quadrant of the I-580 / I-680 interchange. Because of the availability of other access to these commercial areas, and the importance of these retail centers to the entire San Ramon and Dublin valleys, it is not likely that the proposed loss of access to either I-580 or I-680 from the Stoneridge Drive and San Ramon / Foothill interchanges, respectively, will result in significant socioeconomic or community impacts. However, business owners are likely to be concerned about the economic impact of the project to their businesses. The public will also be concerned about inconveniences caused by this loss of access. Therefore, this potential impact needs to be evaluated in the community impact technical study. Public outreach should be conducted early in the Project Approval / Environmental Document phase in order to gauge the level of controversy that may exist over the loss of access.

Context Sensitive Solutions

The following actions were taken early in planning activities to obtain community input on the conceptual design of the proposed project during this initial phase of project development.

The Dublin Sports Grounds is the only large public recreation facility located in west Dublin and all remaining land in that portion of the City is approaching buildout. East Dublin is currently going through commercial and residential expansion and park facilities are planned for that portion of the City. The loss of a portion of the Sports Grounds to a transportation project could significantly reduce the recreational and community value of the Park, and it is not clear that this impact could be mitigated to the satisfaction of the City of Dublin. Several meetings regarding potential encroachments by the I-580/I-680 Freeway Interchange Improvements Project on the Dublin Sports Grounds were held with the City of Dublin Public Works Director and the Parks and Community Services Director.

Cumulative Impacts

The full buildout of the I-580 / I-680 interchange would result in substantial impacts to the commercial development in Dublin and Pleasanton surrounding the interchange. The principal cumulative impacts to be addressed in the environmental document for the I-580/I-680 Freeway Interchange Improvements Project are associated with the full buildout of the interchange. Because of the urban setting, these cumulative impacts will focus on community impacts, community cohesion, access to commercial development by the community, relocations, air quality, noise, 4(f), and visual resources.

Growth Inducing/Indirect Effects

Growth management policies in Livermore, Pleasanton, and Dublin, as well as moderately high housing prices in areas where commuters would realize the greatest potential travel-time savings as a result of the project, would tend to discourage residential growth in excess of the growth envisioned in local land use plans, even with improved travel times that may result from improved traffic operations resulting from the project. Travel-time savings for commuters living in Central Valley communities would be too small to affect the overall growth potential of those areas. In a growth inducement study completed for the I-580 Eastbound HOV Lane Project it was concluded that the project would support planned growth, but it would not induce unplanned growth in the area.

Right of Way

New right-of-way will be required for all project alternatives. Right-of-way acquisition would result in 4(f) impacts. From 1.9 acres (Alternative 3) to 6.6 acres (Alternative 1) of the Dublin Sports Grounds would be taken by the project. Material sites and disposal sites are indicated, but not identified. These areas, which must be identified prior to initiating environmental studies, will require complete environmental evaluation as part of this project.

Utilities

All of the project alternatives may impact utilities along Scarlett Court in Dublin parallel to I-580 immediately east of the Hopyard / Dougherty interchange. The following utilities are located along the Court:

- 8 inch potable water main (Dublin-San Ramon Sanitary District)
- 8 inch sewer line (Dublin-San Ramon Sanitary District)
- Overhead electrical power line (PG&E)
- 12 inch gas feeder distribution line (PG&E)
- 21 kV underground electrical line (PG&E)

The 8-inch sewer line connects to a 36-inch sewer main that crosses I-580 at this location. Therefore, some extension/modification would need to be done to the sewer main. In addition, a 4-wire, 21kV underground electrical line crosses I-580 in the project area. Environmental studies need to evaluate the potential environmental impacts associated with relocating these utilities.

Land acquired from the Dublin Sports Grounds may contain electrical utilities. Environmental impacts of the relocation of these utilities needs to be evaluated for the environmental document.

Section 4(f)

There is one public park and a trail that qualify as 4(f) properties within the project area. These include the Dublin Sports Grounds in the City of Dublin, and the Alamo Canal Trail that runs along Alamo Canal in the project area. The Alamo Canal Trail does not cross the I-580 / I-680 interchange, terminating near the Dublin Library on the north side of the interchange and at Johnson Drive on the south side of the interchange. Project alternatives would not impact this 4(f) property.

The Dublin Sports Grounds covers 24 acres and has baseball and softball diamonds, soccer fields, play equipment, picnic areas and tables, barbecues, and restrooms. One soccer field and the softball diamonds are lighted. The property occupied by the Dublin Sports Grounds was deeded to the City of Dublin by the U.S. government through the National Park Service in 1988 for a public park and public recreational area. A covenant of that deed is that the property be used for a public park and recreation area in perpetuity. In the event there is a breach of that or any other condition or covenant of the deed, title and interest to the property shall revert to and become the property of the United States at its option.

All three project alternatives would require property from the Dublin Sports Grounds. Alternative 1 would take 6.6 acres of the park, Alternative 2 would take 2.6 acres, and Alternative 3 would take 1.9 acres. The take of this property would not interfere with any of the infrastructure for the park (e.g., power and water), but it would take portions of existing baseball diamonds and soccer fields. Because of a lack of appropriate vacant land to mitigate this impact, the central location of the park, and deed covenants on the land, encroachment by the project would result in a substantial 4(f) impact, and it is not clear that this impact could be mitigated to the satisfaction of the City of Dublin. The potential impact of the project on the Dublin Sports Grounds does not meet the criteria for a Programmatic Section 4(f) application; therefore, it will be necessary to prepare a Section 4(f) Evaluation as part of the Environmental Document for the project.

Early interviews with the City of Dublin confirm that existing traffic noise associated with the interchange is often loud enough to interfere with effective communication among the users of the park. There is the potential that the additional noise generated by the proposed new traffic lanes could increase

noise at the park. As stated previous, the proposed project is a Type I project as defined in 23 CFR 772.5 and, therefore, requires further noise analysis. That analysis should be considered in the 4(f) evaluation of the project, as well as impacts from particulate matter emissions.

Floodplains

Alamo Creek, South San Ramon Creek, and several tributary drainages to the west of I-680 including Big Canyon, Koopman Canyon, Clark Canyon, Martin Canyon, and Dublin Creek lead into Alamo Canal in the northeast quadrant of the I-580 / I-680 interchange. Chabot Canal also drains to Alamo Canal south of West Las Positas Boulevard.

The connector ramp from westbound I-580 to northbound I-680 for all three project alternatives crosses Alamo Canal near the Dublin Library and closely parallels the western bank of the canal for several hundred feet. It may be necessary to place one or two piers on the western bank of the canal to support the ramp. This could result in temporary impacts to the canal such as increased sedimentation and turbidity. The total area of impact to the bank would be on the order of 200 square feet. Encroachment on the 100-year floodplain of Alamo Canal by the designed geometric layouts of each alternative should be assessed.

All three alternatives would be close to the north bank of Chabot Canal east of the Dougherty / Hopyard interchange with I-580, and may potentially encroach on the bank. Encroachment on the 100-year floodplain of Chabot Canal by the designed geometric layouts of each alternative should be assessed during the PA/ED stage of the project.

Alternative 3 would require placing 850 feet of Dublin Creek in a box culvert. If this culvert must be placed within the right-of-way for the northbound I-680 to eastbound I-580 connector, it would constitute a longitudinal encroachment and will require Caltrans Headquarters approval.

Farmlands

N/A

Native American Coordination

A request has been made to the NAHC for information regarding local tribal history in the project area. Pending response, it is recommended that the following Native American groups be contacted regarding this project during the preparation of the Environmental Document: Ohlone/Costanoan, Bay Miwok, and Plains Miwok.

Other—Coastal Zone, Wild and Scenic Rivers, Invasive Plant Species, Energy, and Paleontological Resources

Executive Order 13112 requires that any Federal action may not cause or promote the spread or introduction of invasive species. Best Management Practices can prevent impacts associated with invasive species. These practices need to be documented.

The Quarternary Livermore Gravels which underlie portions of the project area are known to contain vertebrate fossils and one known collection site is located in Livermore. Therefore, there is the potential that project construction activities resulting in excavations in this formation, and to a lesser extent in the Panoche Formation, could encounter significant paleontological resources. It is recommended that a field evaluation be conducted when alternatives for environmental review are identified.

An energy study will be prepared during PA/ED.

List of Preparers, Reviewers, and Staff Consulted

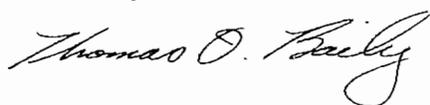
Hazardous Waste	Date
Biology Rosemary Laird	Date 12/18/07
Archaeology Christopher Lee	Date 11/15/07
Built Historical Jason D. Jones	Date 11/15/07
Visual Tom Baily	Date 12/17/07
Floodplain Tom Baily	Date 12/18/07
4(f) Tom Baily	Date 11/15/07
Air Quality Tom Baily	Date 11/15/07
Noise Tom Baily	Date 11/15/07
Socioeconomics Mark Mazzola	Date 11/15/07
Water Quality Tom Baily	Date 12/18/07
Paleontology Robert Horwath	Date 7/20/06

PEAR Mitigation and Compliance Cost Estimate*

District - 4	County - Alameda	Route -- I-580/680 IC	PM	EA
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Description of Work WB HOV/HOT Lane

Project Manager	Issa Bouri	Date	
-----------------	------------	------	--

Prepared by	Thomas Baily 	Date	11/20/07
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Mitigation and Compliance Cost Estimate – Alternative 1

	Mitigation			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1602 Agreement				
Coastal Development Permit				
State Lands Agreement				
NPDES Permit	\$50			
COE 404 Permit- Nationwide	\$100			
COE 404 Permit- Individual				
COE Section 10 Permit				
COE Section 9 Permit				
Other: City of Pleasanton Heritage Tree Permit				\$25
Noise attenuation	\$300			
Special landscaping	\$2,744			
Archaeological				
Biological		\$200		
Wetland/riparian				
Historical				
Scenic resources				
Other: Take of Dublin Sports Grounds			\$6,600	
Take of business parking lots			\$2,000	
TOTAL (Enter zeros if no cost)	\$3,194	\$200	\$8,600	\$25

Costs are to include all costs to complete the commitment including: 1) capital outlay and staff support; 2) cost of right-of-way or easements; 3) long-term monitoring and reporting; and 4) any follow-up maintenance.

¹ Mitigation that Caltrans would normally do if not required by a permit or environmental agreement.

² Mitigation that Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation that Caltrans would not normally do and is not required by a permit or Enviro. Agreement, but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

*Prepare a separate form for each practicable alternative in the PSR.

Mitigation and Compliance Cost Estimate – Alternative 2

	Mitigation			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1602 Agreement				
Coastal Development Permit				
State Lands Agreement				
NPDES Permit	\$50			
COE 404 Permit- Nationwide	\$100			
COE 404 Permit- Individual				
COE Section 10 Permit				
COE Section 9 Permit				
Other: City of Pleasanton Heritage Tree Permit				\$25
Noise attenuation	\$300			
Special landscaping	\$2,233			
Archaeological				
Biological		\$200		
Wetland/riparian				
Historical				
Scenic resources				
Other: Take of Dublin Sports Grounds			\$2,600	
Take of business parking lots			\$2,000	
TOTAL (Enter zeros if no cost)	\$2,683	\$200	\$4,600	\$25

Costs are to include all costs to complete the commitment including: 1) capital outlay and staff support; 2) cost of right-of-way or easements; 3) long-term monitoring and reporting; and 4) any follow-up maintenance.

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² Mitigation that Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation that Caltrans would not normally do and is not required by a permit or Enviro. Agreement, but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

Mitigation and Compliance Cost Estimate – Alternative 3

	Mitigation			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1602 Agreement				
Coastal Development Permit				
State Lands Agreement				
NPDES Permit	\$150			
COE 404 Permit- Nationwide	\$300			
COE 404 Permit- Individual				
COE Section 10 Permit				
COE Section 9 Permit				
Other: City of Pleasanton Heritage Tree Permit				\$25
Noise attenuation	\$300			
Special landscaping	\$1,843			
Archaeological				
Biological		\$200		
Wetland/riparian				
Historical				
Scenic resources				
Other: Take of Dublin Sports Grounds			\$1,900	
Take of business parking lots			\$2,000	
TOTAL (Enter zeros if no cost)	\$2,593	\$90	\$3,900	\$25

Costs are to include all costs to complete the commitment including: 1) capital outlay and staff support; 2) cost of right-of-way or easements; 3) long-term monitoring and reporting; and 4) any follow-up maintenance.

¹ Mitigation that Caltrans would normally do if not required by a permit or environmental agreement.

² Mitigation that Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation that Caltrans would not normally do and is not required by a permit or Enviro. Agreement, but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

Conclusions

District 4	County Alameda	Route I-580	PM 19.0 – 21.0 (I-580) 18.4 – 22.0 (I-680)	EA 04-2A210K
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Project Title	I-580/I-680 Freeway Interchange Improvements
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Description of Work:

The proposed project would improve traffic operations from westbound I-580 to northbound and southbound I-680 by altering the geometrics of the freeway ramps for these movements. All of the alternatives would provide four mixed flow lanes on westbound I-580 through the I-580 / I-680 interchange, which would improve operations on mainline westbound I-580 between Hacienda Drive and I-680. Two of the project alternatives would include HOV lane connectors through the interchange from westbound I-580 to southbound I-680 and northbound I-680 to eastbound I-580. These connectors would link HOV lanes planned on I-580 and I-680. All of the alternatives would include an eastbound bus ramp from the HOV lane to the East Dublin / Pleasanton BART Station.

CALTRANS DISTRICT PROFESSIONALLY QUALIFIED STAFF (PQS) SIGNATURE

- Project does not meet definition of an "undertaking". No further review is necessary under Section 106. ("No" Sec B, #25)
- Project meets the definition of an "undertaking," involves the types of activities listed in Attachment 2 of the Section 106 PA, and, based on the project description above, does not have the potential to affect historic properties. ("No" Sec B, #25)
- Project meets the definition of an "undertaking" and involves the types of activities listed in Attachment 2 of the Section 106 PA, but the following additional procedures or information is needed, to determine the potential for effect: ("To Be Determined" Sec B, #25)
- Records Search _____ _____ _____

The additional procedures conducted or information generated shall occur during PA/ED.

- The proposed undertaking is considered to have the potential to affect historic properties. Further studies for 106 compliance are indicated in this PEAR. ("Yes" Sec B, #25)

Signature: [Signature] Date: 6/8/09 Telephone #: 622-8765

CALTRANS DISTRICT BIOLOGY STAFF SIGNATURE

- Based on the scope of the project and the information generated for the PEAR, the project does not have the potential to affect biological resources.
- The following additional procedures or information is needed, to determine the potential for effect to biological resources:
- Records Search _____ _____ _____
- The proposed undertaking is considered to have the potential to affect biological resources. Further studies are indicated in this PEAR for the PA/ED phase.

Signature: Amy D. Sparto Date: 6/8/09 Telephone #: 510 286-5806

CALTRANS DISTRICT HAZARDOUS WASTE STAFF SIGNATURE

- Based on the information provided in the project description above, the project does not have the potential to be affected by hazardous wastes and materials.
- The following additional procedures or information is needed, to determine the potential for effect:
- Records Search site investigation _____ _____
- The proposed undertaking is considered to have the potential to be affected by hazardous wastes and materials. Further studies are indicated in this PEAR for the PA/ED and PS&E phases.

Signature: Christopher Wilson Date: June 8, 09 Telephone #: 286-5647

ATTACHMENT I

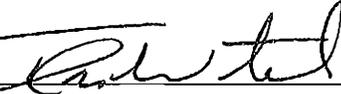
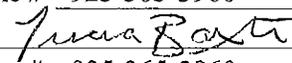
**PDS Traffic Forecasting, Analysis and
Operations Scoping Checklist**

PDS Traffic Forecasting, Analysis and Operations Scoping Checklist

Project Information

District 4 County Alameda Route I-580 & I-680 Post Mile 580-18.82/R21.43; 680-18.40/R21.88
EA 04-2A210K

Description Construct I-580/I-680 High Occupancy Vehicle (HOV) connector ramps in the west-to-south and north-to-east directions. Provide a direct express bus ramp from the East Dublin-Pleasanton BART station to eastbound I-580 and provide safety and operational improvements in the vicinity of the I-580/I-680 Interchange.

Project Manager	Tom Wintch 
	Phone # 925-365-3960
Project Engineer	Tricia Baxter 
	Phone # 925-365-3960
Traffic Forecasting Functional Manager	N/A
	Phone # _____
Traffic Operations Functional Manager	N/A
	Phone # _____

Traffic Forecasting, Traffic Analysis Scoping

Existing year (2003) volumes are based on three sources: 1) available (2003) intersection count data from the cities of Livermore, Pleasanton, and Dublin, 2) supplemental (2005) counts collected for intersection counts that are not available, and 3) count data from Caltrans traffic census count data (2003).

To accurately represent the complex freeway traffic flows that occur within the I-580/I-680 freeway-to-freeway interchange, as well as capture cut-through traffic impacts within the Tri-Valley area, new 2035 forecasts were prepared to represent the project's ability to handle anticipated 20 year growth projections. The Contra Costa Transportation Authority (CCTA) Travel Demand Model was used as the basis for developing future year traffic forecasts with detailed roadway and land-use assumptions for the Tri-Valley area. A calibration/validation memorandum was approved on July 18, 2006. Year 2035 forecasts were submitted to Caltrans on February 6, 2007.

Traffic Operations Scoping

Preliminary analysis of Year 2035 projected AM and PM peak hour traffic shows that, if traffic growth occurs as projected, the existing capacity of the I-580/I-680 interchange will not be able to accommodate Year 2035 peak hour demand.

To address the traffic operational conditions and applicable warrants, the traffic analysis will identify: 1) the expected freeway operations (mainline, weave, merge, diverge) at the micro-simulation level with

and without the HOV ramp connectors; 2) the order-of-magnitude traffic volume shift to/from the freeway as a result of the ramp connectors; 3) the likely local street corridors that traffic will shift to/from; and 4) the areas requiring more study in later stages of the process including the environmental clearance.

Three "Build alternatives and a "No Build" alternatives were evaluated within the PSR(PDS). Two of the "Build" alternatives include HOV lane direct connectors in both the westbound I-580 to southbound I-680 and the northbound I-680 to eastbound I-580 directions. A third "Build" alternative, a northbound to westbound mixed-flow direct connector, addresses safety and operational improvements along westbound I-580 in the vicinity of the I-580/I-680 interchange. This third alternative is proposed as a minimum project alternative (MPA) to alleviate the significant existing and future congestion along this segment of I-580. These alternatives also include a direct express bus lane from the East Dublin-Pleasanton BART Station to eastbound I-580. These HOV facilities are projected to provide substantial benefits to HOV-eligible vehicles.

Project Screening

1. Project Features: New R/W? Yes Excavation or fill? Both

2. Project Setting

The I-580/I-680 interchange is located between the cities of Pleasanton and Dublin in Alameda County. I-580 is a major regional east-west freeway connecting the San Joaquin Valley and the San Francisco Bay Area. North of Oakland, I-580 travels across the San Francisco Bay into Marin County, via the Richmond-San Rafael Bridge, terminating in San Rafael. I-680 is a major north-south freeway connecting between the southern San Francisco Bay Area and I-80, near Fairfield. The I-580/I-680 interchange is a modified full cloverleaf interchange, with a direct connector flyover ramp for the southbound I-680 to eastbound I-580 movement.

Rural or Urban Urban

Current land uses

Typical urban/suburban land uses (residential, commercial, light industrial), regional shopping mall, sports park and flood control facilities

Adjacent land uses

Office, business parks, regional shopping mall, BART station, and residential on the southwest side; commercial business parks, BART station and residential on the northwest side; commercial, government office, and sports park on the northeast side; and light industrial, hotel, sewage treatment plant, and commercial on the southeast side.

Existing Traffic Operational Conditions and Warrants Supporting the Need for the Improvement

Mainline highway

I-580 and I-680 experience substantial congestion in the Tri-Valley area resulting in unacceptable level of service conditions, long travel times, cut-through traffic onto local streets and unsafe driving conditions. Congestion in the AM period is primarily in the westbound direction on I-580 with the

major bottleneck occurring at the I-580/I-680 interchange, creating queues that would extend into Livermore. During the PM peak period, I-580 eastbound experiences heavy congestion, with the primary bottleneck occurring near the Tassajara Road/I-580 interchange, creating queues that extend back to the I-580/I-680 interchange.

Traffic in the Tri-Valley area is anticipated to grow by 44% and 40% during the AM and PM peak periods respectively, between existing year and Year 2035. The growth in traffic will exacerbate the congested conditions along the mainline, resulting in longer periods of congestion and longer vehicle queues and delays along the mainline. The proposed HOV direct connectors from westbound I-580 to southbound I-680 and northbound I-680 to eastbound I-580 will not eliminate projected traffic congestion. However, these HOV connectors will allow carpools and buses to bypass some of the traffic congestion in the mixed-flow lanes. HOV lane projects will reduce person trip delays, rather than vehicle trip delays and encourage the use of public transit, carpools, and vanpools.

Ramp intersection

Ramp intersections could potentially experience queue spilling back from the freeway due to congested levels on the freeway or due to ramp metering rates implemented to regulate traffic flow onto the freeways.

Merge / diverge

Substantial congestion along I-580 and I-680 discussed above results in unacceptable levels of service and unsafe driving conditions at the merge and diverge areas.

Street intersection

Local street corridors and intersections could experience shifts in traffic due to level of congestion along I-580 and I-680 within the Tri-Valley area where cut-through traffic within the local cities has been identified.

Weaving / merging (spacing)

Traffic weaving and merging operations between the Hopyard Road interchange and the I-580/I-680 interchange are expected to significantly worsen along I-580 from the existing unacceptable levels of service.

Other None known at present.

Traffic Study and Analysis Anticipated

Traffic Modeling Assumptions

- ✓ Use Local Model
 - ✓ Update New Model
 - o New Model
- ✓ Existing Traffic Counts (2003)
 - o New Traffic Counts
 - o Historical Growth
- o General Plan (GP) Buildout
 - o Pro-Rate GP Growth
- ✓ Existing Year (2003)
 - ✓ Design Year (2035)
 - o Interim Year ()

Other Land uses were updated to match Association of Bay Area Governments (ABAG) Projection '05. To develop year 2035 forecasts, year 2030 land use assumptions were extrapolated linearly from year 2030 to year 2035.

Traffic Analysis

- ✓ Mainline LOS
 - ✓ Merge/Diverge LOS
 - ✓ Ramp Int. LOS
- ✓ Adjacent IC LOS
 - ✓ Ramp Metering (open)
 - ✓ Ramp Metering (later)
- o Left/Right Turn Storage
 - o Accident / Safety Analysis
 - o Intersection Queues
- ✓ Construction Staging
 - o Project Staging

Other Identification of mainline bottlenecks and queues; travel times within the study area;

Traffic Operations Scoping

Traffic Operational Improvements

Attach the project location map to this checklist to show location of all traffic operations improvements anticipated.

- ✓ Auxiliary Lanes
 - o Intersection Improvements
 - o Truck Climbing Lane
- o New Signals
 - o Modify Signals
 - ✓ Merging Improvements
- ✓ Weaving Improvements
 - ✓ Deceleration / Acceleration Lanes

Other Additional traffic HOV lanes.

Traffic Management Systems

Attach the project location map to this checklist to show location of all traffic management systems identified.

- ✓ Ramp Meters
 - ✓ HOV Ramp Bypass
 - ✓ Mainline HOV Lanes
- ✓ Detector Loops
 - o Communication Networks (fiber optic, telephone, etc.)
- o Closed Circuit Television
 - o Changeable Message Sign
 - o Highway Advisory Radio

Other _____

Discuss strategies (technical analysis, public outreach, etc.) to secure local agency and public support to implement HOV lanes and ramp metering:

Ongoing local agency/public outreach, supported by preliminary technical analysis, has indicated strong support for improvements to relieve existing congestion at the I-580/I-680 interchange.

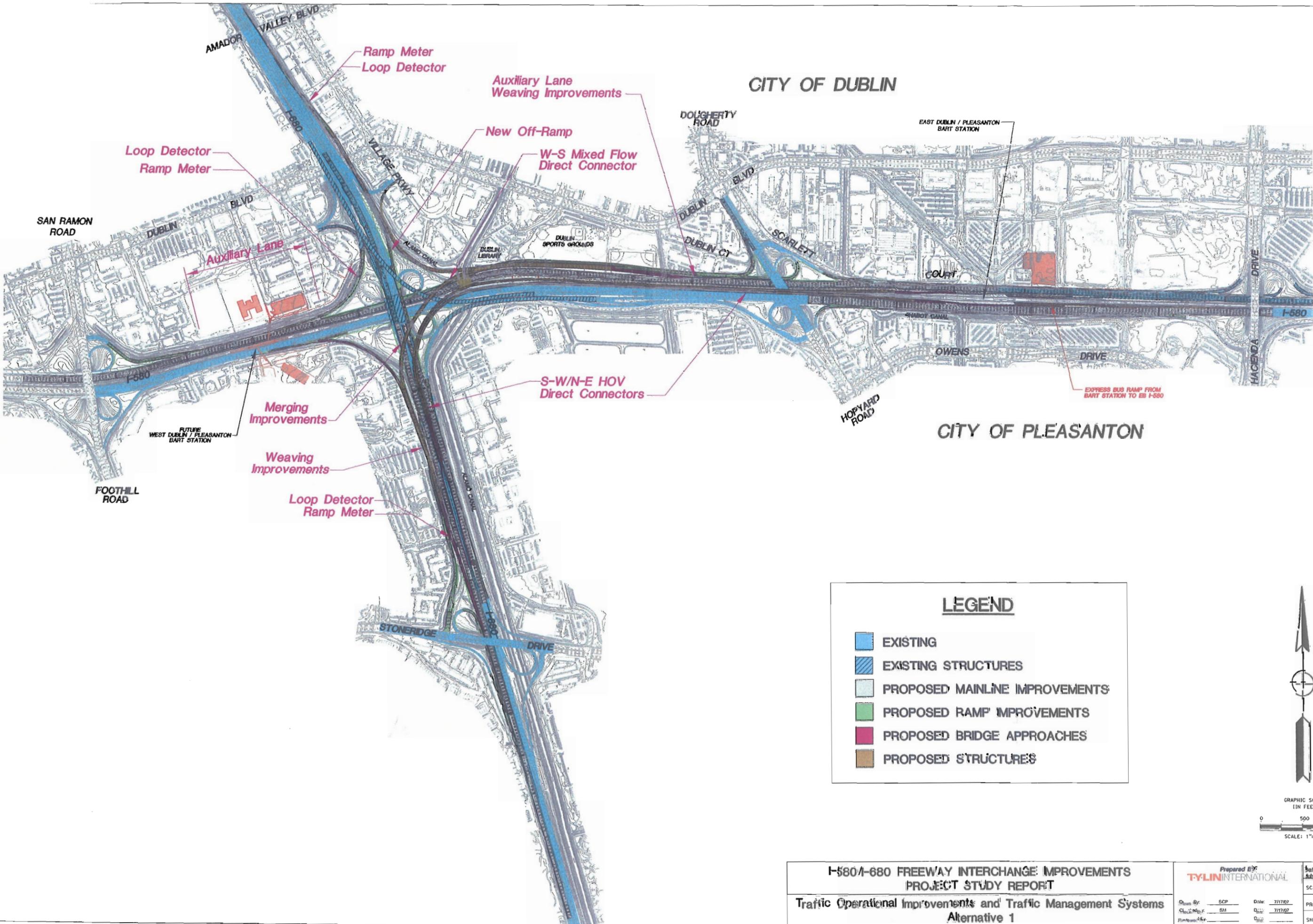
Preliminary Traffic Forecasting Evaluation provided by:

Traffic Forecasting Fehr & Peers Date 7/31/2007

Preliminary Traffic Operations Evaluation provided by:

Traffic Operation Engineer Fehr & Peers Date 7/31/2007

Traffic Electrical Engineer N/A Date _____

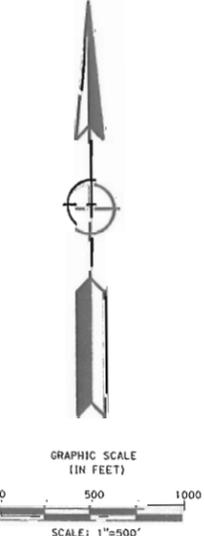


CITY OF DUBLIN

CITY OF PLEASANTON

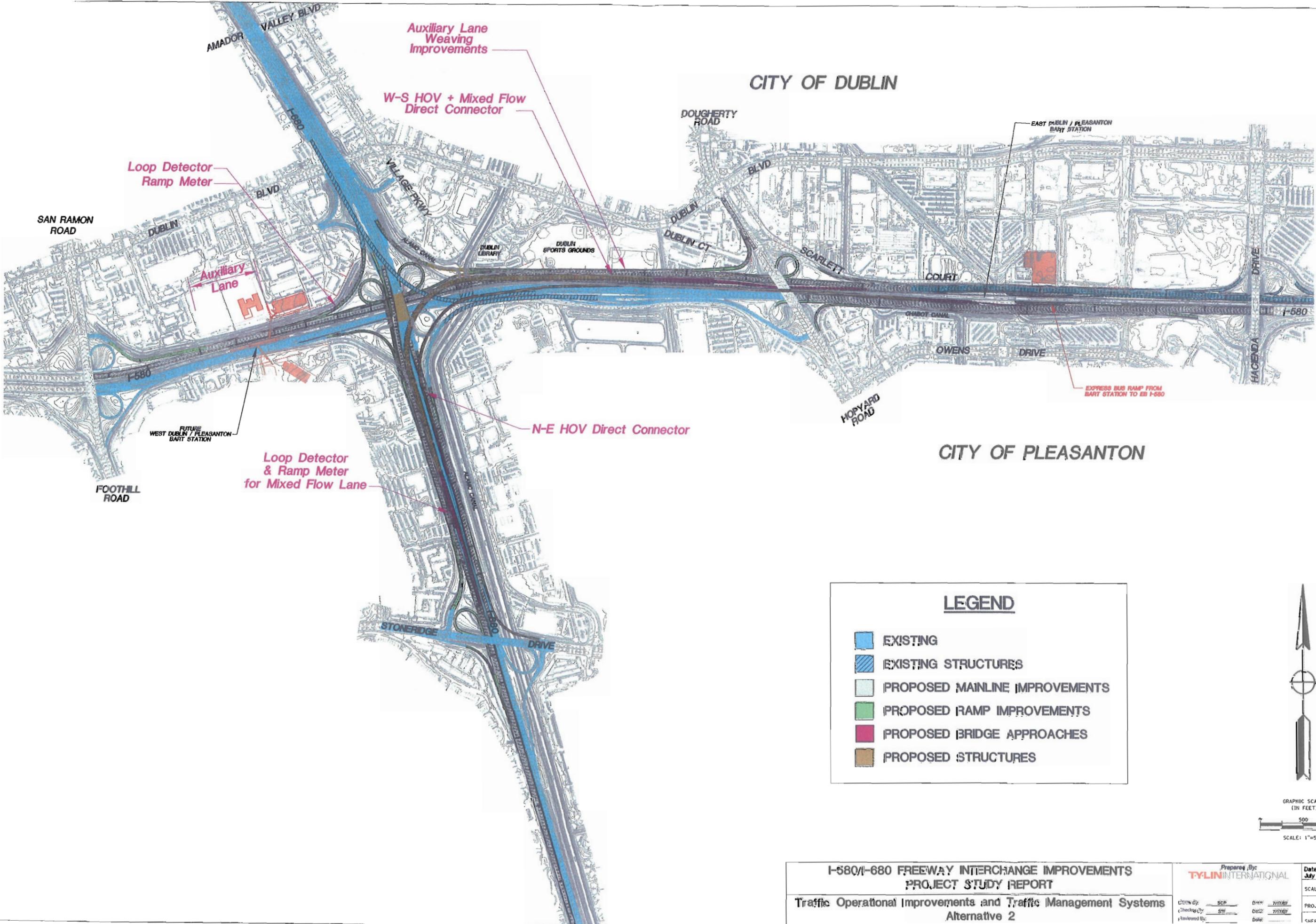
LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



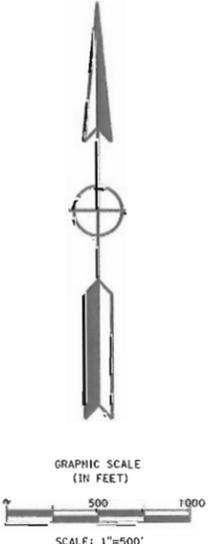
CITY OF DUBLIN

CITY OF PLEASANTON



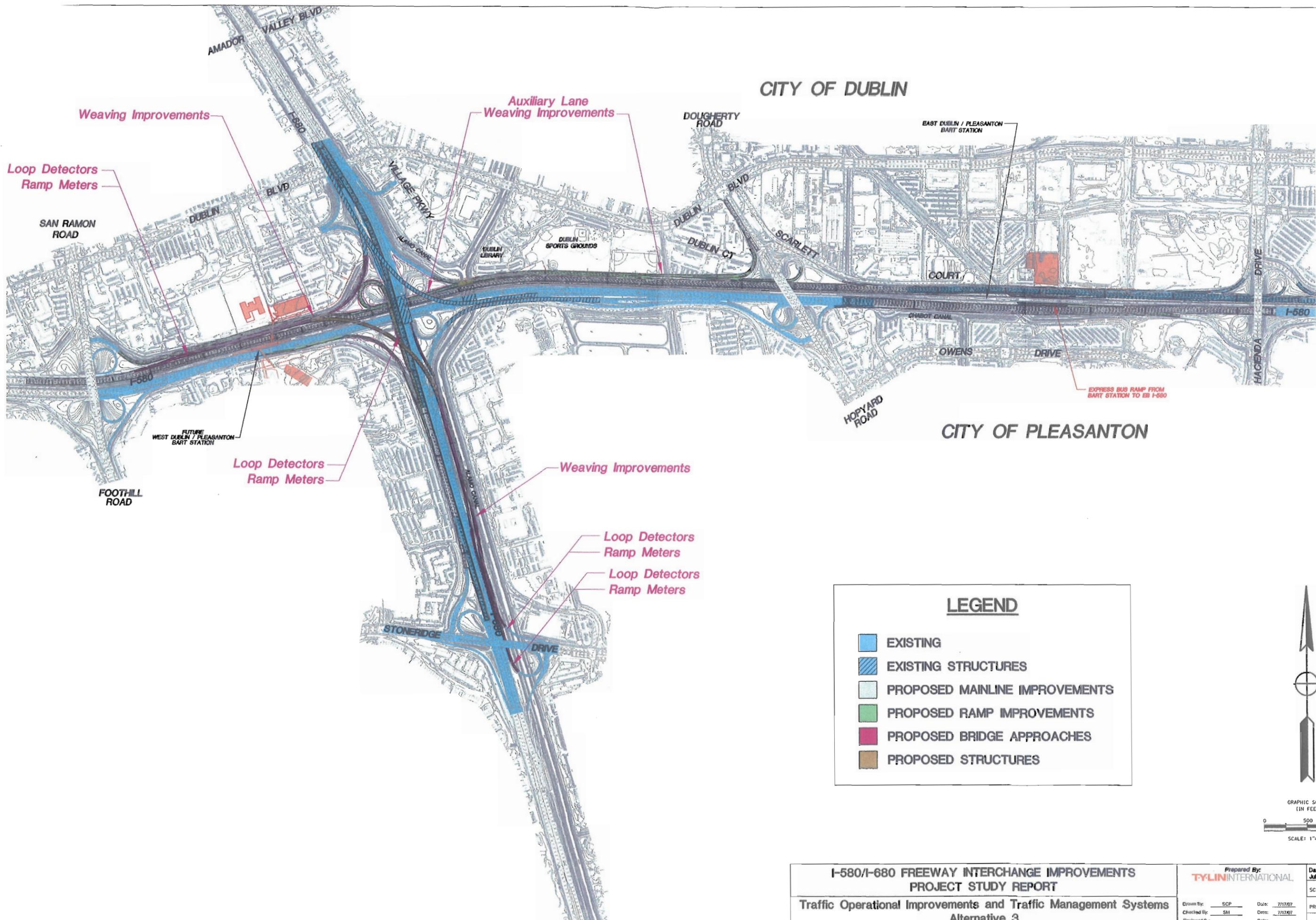
LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



CITY OF DUBLIN

CITY OF PLEASANTON



Weaving Improvements

Auxiliary Lane Weaving Improvements

Loop Detectors
Ramp Meters

Loop Detectors
Ramp Meters

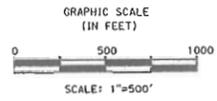
Weaving Improvements

Loop Detectors
Ramp Meters

Loop Detectors
Ramp Meters

LEGEND

- EXISTING
- EXISTING STRUCTURES
- PROPOSED MAINLINE IMPROVEMENTS
- PROPOSED RAMP IMPROVEMENTS
- PROPOSED BRIDGE APPROACHES
- PROPOSED STRUCTURES



**I-580/I-680 FREEWAY INTERCHANGE IMPROVEMENTS
PROJECT STUDY REPORT**

**Traffic Operational Improvements and Traffic Management Systems
Alternative 3**

Prepared By: TYLIN INTERNATIONAL		Date: July 27, 2007
Drawn By: SCP	Date: 7/17/07	SCALE: 1"=500'
Checked By: SM	Date: 7/17/07	PROJECT NO. 320086
Reviewed By:	Date:	SHEET ... OF ...

MEMORANDUM

Date: July 11, 2007

To: Tricia Baxter and Tom Wintch, TY Lin

From: Robert Rees, Julie Morgan and Mike Beattie, Fehr & Peers

Subject: I-580/I-680 Interchange Modification PDS Traffic Operations Analysis
WC05-2270

This memorandum summarizes peak period traffic operations and proposed improvements for the Interstate 580 / Interstate 680 (I-580 / I-680) Interchange Modification PDS. This memo is intended to be attached to the PDS Traffic Forecasting, Analysis and Operations Scoping Checklist.

The I-580 / I-680 interchange is located between the cities of Pleasanton and Dublin, Alameda County. I-580 is a major regional east-west freeway connecting the San Joaquin Valley and the San Francisco Bay Area. North of Oakland, I-580 travels across the San Francisco Bay into Marin County, via the Richmond-San Rafael Bridge, terminating in San Rafael. I-680 is a major north-south freeway connecting between the southern San Francisco Bay Area and I-80, near Fairfield.

The I-580 / I-680 interchange is a modified full cloverleaf interchange, with a direct connector flyover ramp for the southbound I-680 to eastbound I-580 movement. Three alternative improvements to this interchange (Alternative 1, Alternative 2 and Alternative 3, which are described later) have been proposed to address recurring congestion on I-580 during the AM and PM peak periods.

EXISTING CONDITIONS

Interstate 580 is the main east-west interregional freeway connecting Interstates 80, 680, 880, and US 101 in the Bay Area and Interstate 5 in the Central Valley. I-580 also serves as the only major transportation corridor providing a commute route between San Francisco, Oakland, San Jose (via I-680) and the Tri-Valley (Dublin, Pleasanton, and Livermore), and growing Central Valley areas (Tracy, Stockton, and the I-5 Corridor). Additionally, I-580 is a major route for the movement of goods and freight into and out of the region, as well as significant recreational travel throughout the year. I-580 is classified as a "Lifeline Route," facilitating movement between major staging areas and impacted areas following major earthquakes and is the main access to the Homeland Security Organization at Lawrence Livermore National Laboratory.

The I-580 / I-680 interchange has limited capacity to handle vehicles traveling on westbound I-580 to southbound I-680 and vehicles traveling on northbound I-680 to westbound I-580. These movements both occur on loop ramps and are connected by a 450-foot weave section. The constrained capacity is partially a result of slow vehicle speeds, especially for trucks, which is

exacerbated by the grade change within the loop ramps. The other component of the capacity constraint is due to the short weave section between the two loop ramps.

I-580 westbound is also greatly affected by the short weave section between the Dougherty/Hopyard Road interchange and I-680. During the AM peak hour, approximately 3,500 vehicles traveling on I-580 westbound are destined for I-680 northbound or southbound. To access I-680, all the vehicles need to shift to the two right-most lanes on I-580 to take the I-580 to I-680 off-ramp. These vehicles conflict with approximately 4,400 vehicles on I-580 continuing along I-580 westbound. During the PM peak hour, approximately 3,500 vehicles on I-580 trying to access I-680 conflict with approximately 3,000 vehicles continuing to travel on I-580 eastbound. This conflict during the AM and PM peak periods is further compounded by the addition of vehicles merging onto the freeway from the Hopyard Road on-ramp.

The combination of slow-moving vehicles and the short weave sections between the I-580 / I-680 interchange loop ramps and between the Dougherty/Hopyard Road interchange and I-680 results in heavy congestion and queues that spill back onto westbound I-580. During the AM peak period the congestion along I-580 westbound can extend from I-680 into the City of Livermore, leading to long delays, high travel times, and unsafe driving conditions. Similar conditions occur during the PM peak period except the level of congestion is lower than the AM peak period with the queue extending back through the Hacienda Drive interchange area.

PROJECT INTENT

Westbound I-580 currently experiences traffic congestion in both the AM and PM peak periods and other times during the day. This project proposes to provide congestion relief on westbound I-580 during both peak periods by improving the capacity and operations of the westbound I-580 to southbound I-680 traffic movement, and by reducing weaving conflicts on westbound I-580 between the Dougherty/Hopyard Road interchange and the I-580 / I-680 interchange.

Study Purpose: Improve capacity and operations on westbound I-580 between the Hacienda Drive and the Interstate 580/680 interchanges while enhancing HOV system connectivity between I-580 and I-680.

YEAR 2035 TRAFFIC FORECASTS

Development of year 2035 traffic forecasts was accomplished using a combination of the updated Contra Costa Transportation Authority (CCTA) model and a focused-area travel demand model using the VISUM software. It is important to recognize that regional models such as the CCTA model typically only include major components of the roadway network and are calibrated/validated to the level of screenlines and major corridor volumes. These models are designed to forecast macro-level traffic patterns, and usually lack sufficient detail to provide reasonable forecasts at the individual ramp or intersection level. As a result, it is often difficult to capture the local-scale distributional effects of improvements such as the proposed project.

To improve upon the level of detail provided in the CCTA model, the VISUM modeling software was used to extract a sub-area of the regional model and enhance its level of detail. VISUM has the same standard features of travel demand models such as the ability to code number of lanes, vehicle types (SOV, HOV, etc.), and link speeds and capacities. What sets VISUM apart from other modeling software is the ability to reflect a greater level of detail at the link and intersection level such as traffic control (signalized or unsignalized), lane configurations, cycle length and phasing, and turn movement restriction by vehicle type. Therefore, the CCTA model was used as a macro-level planning tool for trip generation, trip distribution, and mode choice, while the VISUM model was used for detailed trip assignment within the project study area.

The 2035 traffic forecasts indicate that peak period traffic volumes will increase by approximately 40 percent within the Tri-Valley area compared to existing conditions.

PROJECT DESCRIPTION

Three project alternatives were evaluated.

Project Alternative 1 provides direct connector flyover ramps from westbound I-580 to southbound I-680. The connectors would include two mixed-flow lanes and one HOV lane. In addition, a northbound I-680 to eastbound I-580 HOV direct connector would be provided. The mixed-flow direct connector would be an outside-to-outside connector, while both HOV direct connectors would be median-to-median connectors. Access to Stoneridge Drive from I-580 westbound would be restricted under this alternative.

While this alternative would eliminate the weaving between the northbound to westbound and westbound to southbound traffic movements currently causing congestion on the C-D road, it does not address the primary capacity constraint at the I-580 westbound to I-680 off-ramp. This two-lane off-ramp would need to accommodate the forecasted 5,900 vehicles traveling on I-580 westbound to access I-680. Forcing 5,900 vehicles to the two right lanes to access I-680 would exceed the capacity of those two lanes by approximately 1,500 vehicles and would cause a bottleneck similar to the one that exists today, resulting in heavy congestion along the mixed-flow lanes on I-580 westbound.

Therefore, the anticipated benefits of this alternative would be limited to HOVs being able to bypass the congestion by using the median-to-median direct connector to southbound I-680. Mixed-flow vehicles would continue to experience heavy congestion along I-580 similar to the No Build conditions. It is anticipated that the benefits of this alternative in terms of system-wide operational characteristics would be limited to no more than a 10% improvement over the No Build scenario.

Project Alternative 2 provides a direct connector flyover ramp from westbound I-580 to southbound I-680. This connector would include two mixed-flow lanes and one HOV lane. In addition, a northbound I-680 to eastbound I-580 HOV direct connector would be provided. The new direct connectors (including both mixed-flow and HOV lanes) would be median-to-median connections.

This alternative would benefit westbound I-580 in that the weaving between the northbound to westbound and westbound to southbound traffic movements currently causing congestion on the C-D road would be reduced, because the westbound to southbound traffic would be removed from the collector-distributor (C-D) road. The median-to-median design would also benefit westbound I-580 because movements to northbound and southbound I-680 would be separated, with northbound traffic exiting from the right and southbound traffic exiting from the left (or median), thereby alleviating existing weaving conflicts between the Dougherty/Hopyard Road interchange and I-680.

Project Alternative 3 provides a direct connector from northbound I-680 to westbound I-580, replacing the existing northbound to westbound loop ramp. In addition, the off-ramp from westbound I-580 for both northbound and southbound I-680 would be relocated to just west of the Dougherty/Hopyard Road interchange.

By removing the existing northbound to westbound loop ramp, this alternative would eliminate the weaving that occurs on the C-D road. Elimination of this weaving issue combined with widening of the westbound to southbound loop ramp would increase the capacity for traffic traveling from westbound I-580 to southbound I-680, thereby reducing the likelihood for queues to extend from the C-D road to mainline I-580 westbound. This alternative also eliminates the weave section between Dougherty Road and I-680 by relocating the I-680 off-ramp upstream of the Dougherty Road on-ramps.

Express Bus Ramp. Each of the three project alternatives would include a direct express bus ramp from the East Dublin-Pleasanton BART station to the eastbound HOV lane.

YEAR 2035 TRAFFIC OPERATIONS

The operations analysis focused on freeway operations around the I-580/I-680 interchange bounded by I-580 west of Foothill Road, I-580 east of El Charro Road, I-680 south of Alcosta Boulevard, and I-680 north of Bernal Avenue. The micro-simulation tool VISSIM was used to model freeway mainline, ramp merge/diverge, and weaving sections. This tool provided network-wide performance measures including:

- **Vehicle-Hours of Delay** – a measure indicating the total amount of delay (defined as travel speeds lower than free-flow conditions) experienced by all vehicles in the system throughout the study period.
- **Average Vehicle Speed** – a measure of the overall travel speed through the system. The average travel speed calculation considers the effect of vehicle queues and overall congestion.
- **Vehicle-Miles Traveled** -- the total distance of vehicle travel on a designated set of roadways.

Table 1 summarizes the network-wide operations performance measures for 2035 No Build, Project Alternative 1, Project Alternative 2, and Project Alternative 3. All Project Alternatives would provide increased capacity for traffic traveling between the I-680 and I-580 corridors such that more vehicles are served during the AM and PM peak periods than the No Build scenario;

the increase in vehicles served compared to the No Build scenario would be minimal for Project Alternative 1, and substantially greater for Project Alternatives 2 and 3. Project Alternative 2 would have the greatest effect in terms of reducing delay and increasing travel speeds along I-580 because it more efficiently addresses the critical westbound to southbound movement. The following summarizes Year 2035 operations results:

- All three proposed Project Alternatives would decrease vehicle-hours of delay during both the AM and PM peak hours, with the largest decrease of 80% occurring with Project Alternative 2 during the AM peak hour.
- All three proposed Project Alternatives would increase average vehicle speeds during both the AM and PM peak hours, with the largest increase from 20 miles per hour to 46 miles per hour (130 percent increase) occurring with Project Alternative 2 during the AM peak hour.
- All three proposed Project Alternatives would increase vehicle-miles traveled during both the AM and PM peak hours, with the largest percent increase (28 percent) occurring with Project Alternative 2 during the AM peak hour.

**TABLE 1
 NETWORK PERFORMANCE FOR YEAR 2035 CONDITIONS**

Performance Measure	No Build		Project – Alternative 1		Project – Alternative 2		Project – Alternative 3	
	AM	PM	AM	PM	AM	PM	AM	PM
Vehicle-Hours of Delay	4,538	2,062	4,084 (-10%)	1,958 (-5%)	859 (-81%)	1,077 (-48%)	2,543 (-44%)	1,853 (-10%)
Average Vehicle Speed (mph)	20	35	23 (+15%)	36 (+3%)	46 (+130%)	44 (+26%)	31 (+55%)	36 (+3%)
Vehicle-Miles Traveled	138,000	175,000	145,000 (+5%)	176,000 (+1%)	177,000 (+28%)	181,000 (+3%)	166,000 (+20%)	177,000 (+1%)

Source: Fehr & Peers, 2007

LIFE-SPAN ANALYSIS

A life-span analysis was conducted on Project Alternative 3 to determine the time frame over which it would provide improved travel times compared to existing conditions. The life-span analysis was based on travel times along I-580 westbound from the El Charro Road interchange through the I-580/I-680 interchange.

Westbound travel times along I-580 during the most congested periods are about 14 minutes today and will increase to about 27 minutes in Year 2035. Project Alternative 3 would reduce the travel time to 20 minutes in Year 2035. A linear-extrapolation analysis concluded that Project Alternative 3 travel times would be equivalent to today's condition (14 minutes) in Year 2020.

ATTACHMENT J

Right-of-Way Data Sheets (Alternatives 1, 2, & 3)

To: District Office Chief
R/W Local Public Agency Services

Date: November 06, 2007 **Alternative One**

Co. Ala Rte. 580 PM R18.8/R21.4
Rte. 680 PM R18.4/R21.88

Attention: District Branch Chief
Local Public Agency Services

Expense Authorization

Subject: **RIGHT OF WAY DATA SHEET- LOCAL PUBLIC AGENCY SERVICES**

Project Description:

Right of way necessary for the subject project will be the responsibility of Alameda County Congestion Management Agency (ACCMA).

The information in this data sheet was developed by Coates Field Service, Inc.

I. Right of Way Engineering

Will right of way engineering be required for this project?

- No _____
- Yes X (Submit a copy of the *Right of Way Engineering, Surveys and Mapping Services checklist for Special Funded Projects*. This checklist includes but is not limited to the following items.)
 - Hard copy (base map)
 - Appraisal map
 - Acquisition Documents
 - Property Transfer Documents
 - R/W Record Map
 - Record of Survey

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?

No _____ Yes X (Complete the following)

2. Datum Requirements

Yes X Project will adhere to the following criteria.

- Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and U.S. customary units.
- Vertical - datum policy is NAVD 88.
- Units - U.S. customary units is required.

No _____ Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes X

No _____ Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	_____	_____	\$ _____
B. Number of Single Family Residential Units	_____	_____	\$ _____
C. Number of Multi-Family Residential Units	_____	_____	\$ _____
D. Number of Commerical/Industrial Parcels	<u>21</u>	_____	\$ <u>50,184,300</u>
E. Number of Farm/Agricultural Parcels	_____	_____	\$ _____
F. Permanent and/or Temporary Easements	_____	_____	\$ _____
G. Other Parcels (define in "Remarks" section)	<u>17</u>	<u>3</u>	\$ <u>60,932,760</u>
Totals	<u>38</u>	<u>3</u>	\$ <u>111,117,060</u>

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes _____ (Complete the following)

Number of dedicated parcels 0

Have the dedication parcel(s) been accepted by the municipality involved ? NOT APPLICABLE

V. Excess Lands / Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes _____ (Provide an explanation on additional page.)

VI. Relocation Information

Are relocation displacements anticipated?

No Yes (Complete the following)

A. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
B. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
C. Number Multi-Family Residential Units	_____	
Estimated RAP Payments		\$ _____
D. Number of Business/NonProfit	<u>8</u>	
Estimated RAP Payments		\$ <u>375,000</u>
E. Number of Farms	_____	
Estimated RAP Payments		\$ _____
F. Other (define in the "Remarks" section)	_____	
Estimated RAP Payments		\$ _____
G. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
Totals	<u>8</u>	\$ <u>375,000</u>

VII. Utility Relocation Information

Anticipate any utility facilities or utility rights of way to be affected?

No _____ Yes X (Complete the following)

Facility	Owner	Estimated Relocation Expense		
		State Obligation	Local Obligation	Utility Owner Obligation
A. 16" Water	DSRSD	\$	\$ 600,000	\$
B. 36" Sewer	DSRSD	\$	\$ 150,000	\$
C. 12" High Pressure Gas	PG&E	\$	\$ 240,000	\$
		\$		\$
		\$		\$
Totals				
Number of facilities <u> 3 </u>		\$ *	\$ 990,000	\$

*This amount reflects the estimated total financial obligation by the State.

Additional information concerning utility involvement on this project?

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No _____ Yes X (Complete the following)

Describe railroad facilities or railroad rights of way affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. Bay Area Rapid Transit District	X	
B.		

Discuss types of agreements and rights required from the railroads. Are grade crossings requiring services contracts, or grade separations requiring construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No _____ Yes X (Complete the following)

A. Number of Structures to be Demolished 1
 Estimated Cost of Demolition \$ 200,000

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None X Yes _____ (Explain in the "Remarks" section)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None _____ Yes X (Explain in the "Remarks" section)

XI. Project Scheduling

	Proposed lead time	Completion date
Preliminary Engineering, Surveys	<u> 18 </u> (months)	<u> 2010 </u>
R/W Engineering Submittal	<u> 18 </u> (months)	<u> 2012 </u>
R/W Appraisals/Acquisition	<u> 18 </u> (months)	<u> 2014 </u>
Proposed Environmental Clearance		<u> 2011 </u>
Proposed R/W Certification		<u> 2014 </u>

XII. Proposed Funding: TO BE DETERMINED

	Local	State	Federal	Other
Acquisition	\$ _____	\$ _____	\$ _____	\$ _____
Utilities	\$ _____	\$ _____	\$ _____	\$ _____
Relocation Assistance Program	\$ _____	\$ _____	\$ _____	\$ _____
R/W Support	\$ _____	\$ _____	\$ _____	\$ _____
Cost (Eng., Appraisals, etc.)	\$ _____	\$ _____	\$ _____	\$ _____

XIII. *Remarks*

Section III “Other Parcels”= Public use parcels:

Public transit	0
City offices, library	2
Public sports fields	2
Drainage canals	8
Trails & access roads	5
Public streets/adjacent land	3

Section VI. Relocation Information

We anticipate the 8 small businesses likely to require relocation benefits in Alternate 1 can be relocated locally. None appear to depend on location specific traffic, so no potential loss of goodwill is anticipated.

Section X. Hazardous Waste

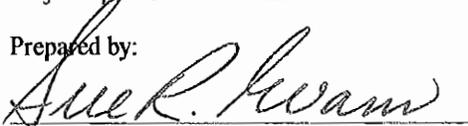
1) **Parcels with Potential for Hazardous waste**

- 941-0210-008 (6900 Village Parkway): auto body shop & towing service
- 941-0210-009 (6900 Village Parkway): Auto body & transmission shop
- 941-1400-007 (6450 Dublin Ct): New car dealer with service bays
- 941-1400-010-02 (6430 Dublin Ct): Used car dealer
- 941-0550-024, -025 (6085 Scarlett Ct): New car dealer with service bays
- 941-0550-028 (5785 Scarlett Ct): Auto body shop

- 2) If this information is to be used for a project study report (PSR) or equivalent, we recommend you include 25% contingency costs, or whatever rate of contingency is typical of the local Caltrans district.
- 3) Please note great exposure from potential severance damages in Alternate 1 (\$40,885,000) due to the impact of loss of parking.
- 4) It may be possible to reduce impact from take of publicly owned canal, trail and road properties by allowing the owner-agency to retain an easement for the facility in the grant to the state.
- 5) We have assumed the design will allow public facilities, such as canals, streets and trails, to remain operative during construction and after completion.
- 6) We have assumed any parcels owned by the State of California will be acquired by the project at no cost.

Project Sponsor Consultant

Prepared by:

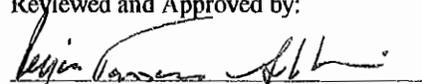


Sue Evans
Coates Field Service, Inc.

Date: 12.21.2007

Project Sponsor

Reviewed and Approved by:



Ray Akkawi, P.E.
Alameda County Congestion Management Agency

Date: 12.21.2007

NA

NA

Date: _____

Date: _____

CALTRANS

Reviewed and approved based on information provided to date:



CalTrans District Branch Chief
Local Public Agency Services

NA

Division of Right of Way

Date: 3/16/08

Date: _____

To: District Office Chief
R/W Local Public Agency Services

Date: November 06, 2007 **Alternative Two**

Co. Ala Rte. 580 PM R18.8/R21.4
Rte. 680 PM R18.4/R21.88

Attention: District Branch Chief
Local Public Agency Services

Expense Authorization

Subject: **RIGHT OF WAY DATA SHEET- LOCAL PUBLIC AGENCY SERVICES**

Project Description:

Right of way necessary for the subject project will be the responsibility of Alameda County Congestion Management Agency (ACCMA).

The information in this data sheet was developed by Coates Field Service, Inc.

I. **Right of Way Engineering**

Will right of way engineering be required for this project?

- No _____
- Yes X (Submit a copy of the *Right of Way Engineering, Surveys and Mapping Services checklist for Special Funded Projects*. This checklist includes but is not limited to the following items.)
 - Hard copy (base map)
 - Appraisal map
 - Acquisition Documents
 - Property Transfer Documents
 - R/W Record Map
 - Record of Survey

II. **Engineering Surveys**

1. Is any surveying or photogrammetric mapping required?

No _____ Yes X (Complete the following)

2. **Datum Requirements**

Yes X Project will adhere to the following criteria.

- Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and U.S. customary units.
- Vertical - datum policy is NAVD 88.
- Units - U.S. customary units is required.

No _____ Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes X

No _____ Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	_____	_____	\$ _____
B. Number of Single Family Residential Units	_____	_____	\$ _____
C. Number of Multi-Family Residential Units	_____	_____	\$ _____
D. Number of Commerical/Industrial Parcels	13	_____	\$ 39,680,040
E. Number of Farm/Agricultural Parcels	_____	_____	\$ _____
F. Permanent and/or Temporary Easements	_____	_____	\$ _____
G. Other Parcels (define in "Remarks" section)	13	3	\$ 24,707,700
Totals	26	3	\$ 64,387,740

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes (Complete the following)

Number of dedicated parcels 0

Have the dedication parcel(s) been accepted by the municipality involved ? NOT APPLICABLE

V. Excess Lands / Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes (Provide an explanation on additional page.)

VI. Relocation Information

Are relocation displacements anticipated?

No Yes (Complete the following)

A. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
B. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
C. Number Multi-Family Residential Units	_____	
Estimated RAP Payments		\$ _____
D. Number of Business/NonProfit	<u>8</u>	
Estimated RAP Payments		\$ <u>325,000</u>
E. Number of Farms	_____	
Estimated RAP Payments		\$ _____
F. Other (define in the "Remarks" section)	_____	
Estimated RAP Payments		\$ _____
G. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
Totals	<u>8</u>	\$ <u>325,000</u>

VII. Utility Relocation Information

Anticipate any utility facilities or utility rights of way to be affected?

No _____ Yes X (Complete the following)

Facility	Owner	Estimated Relocation Expense		
		State Obligation	Local Obligation	Utility Owner Obligation
A. 16" Water	DSRSD	\$	\$ 600,000	\$
B. 36" Sewer	DSRSD	\$	\$ 150,000	\$
		\$		\$
		\$		\$
		\$		\$
Totals				
Number of facilities <u> 3 </u>		\$ *	\$ 750,000	\$

*This amount reflects the estimated total financial obligation by the State.

Additional information concerning utility involvement on this project?

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No _____ Yes X (Complete the following)

Describe railroad facilities or railroad rights of way affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. Bay Area Rapid Transit District	X	
B.		

Discuss types of agreements and rights required from the railroads. Are grade crossings requiring services contracts, or grade separations requiring construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No _____ Yes X (Complete the following)

A. Number of Structures to be Demolished 1
 Estimated Cost of Demolition \$ 200,000

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None X Yes _____ (Explain in the "Remarks" section)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None _____ Yes X (Explain in the "Remarks" section)

XI. Project Scheduling

	Proposed lead time	Completion date
Preliminary Engineering, Surveys	<u> 12 </u> (months)	<u> 2010 </u>
R/W Engineering Submittal	<u> 18 </u> (months)	<u> 2012 </u>
R/W Appraisals/Acquisition	<u> 18 </u> (months)	<u> 2014 </u>
Proposed Environmental Clearance		<u> 2011 </u>
Proposed R/W Certification		<u> 2014 </u>

XII. Proposed Funding: TO BE DETERMINED

	Local	State	Federal	Other
Acquisition	\$ _____	\$ _____	\$ _____	\$ _____
Utilities	\$ _____	\$ _____	\$ _____	\$ _____
Relocation Assistance Program	\$ _____	\$ _____	\$ _____	\$ _____
R/W Support	\$ _____	\$ _____	\$ _____	\$ _____
Cost (Eng., Appraisals, etc.)	\$ _____	\$ _____	\$ _____	\$ _____

XIII. Remarks

Section III “Other Parcels”= Public use parcels:

Public transit	0
City offices, library	2
Public sports fields	1
Drainage canals	7
Trails & access roads	4
Public streets/adjacent land	2

Section VI. Relocation Information

While the Office Depot building in its after condition in Alternate 2 will not be unsuitable for that use, the Resulting building size and layout may not meet franchise requirements. If so, a relocation will be required.

Section X. Hazardous Waste

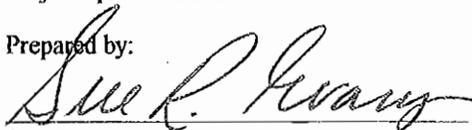
1) Parcels with Potential for Hazardous waste

- 941-0210-008 (6900 Village Parkway): auto body shop & towing service
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- 941-0550-024, -025 (6085 Scarlett Ct): New car dealer with service bays
- 941-0550-028 (5785 Scarlett Ct): Auto body shop

- 2) If this information is to be used for a project study report (PSR) or equivalent, we recommend you include 25% contingency costs, or whatever rate of contingency is typical of the local Caltrans district.
- 3) Please note great exposure from potential severance damages in Alternate 2 (\$17,859,000) due to the impact of loss of parking.
- 4) It may be possible to reduce impact from take of publicly owned canal, trail and road properties by allowing the owner-agency to retain an easement for the facility in the grant to the state.
- 5) We have assumed the design will allow public facilities, such as canals, streets and trails, to remain operative during construction and after completion.
- 6) We have assumed any parcels owned by the State of California will be acquired by the project at no cost.

Project Sponsor Consultant

Prepared by:



Sue Evans
Coates Field Service, Inc.

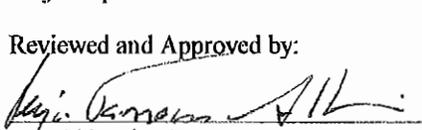
Date:

12-21-2007

Rev 8/98 pgk

Project Sponsor

Reviewed and Approved by:



Ray Akkawi, P.E.
Alameda County Congestion Management Agency

Date:

12-21-2007

NA

NA

Date: _____

Date: _____

CALTRANS

Reviewed and approved based on information provided to date:



CalTrans District Branch Chief
Local Public Agency Services

NA

Division of Right of Way

Date: 3/16/08

Date: _____

To: District Office Chief
R/W Local Public Agency Services

Date: November 06, 2007 **Alternative Three**

Co. Ala Rte. 580 PM R18.8/R21.4
Rte. 680 PM R18.4/R21.88

Attention: District Branch Chief
Local Public Agency Services

Expense Authorization

Subject: **RIGHT OF WAY DATA SHEET- LOCAL PUBLIC AGENCY SERVICES**

Project Description:

Right of way necessary for the subject project will be the responsibility of Alameda County Congestion Management Agency (ACCMA).

The information in this data sheet was developed by Coates Field Service, Inc.

I. Right of Way Engineering

Will right of way engineering be required for this project?

- No _____
- Yes X (Submit a copy of the *Right of Way Engineering, Surveys and Mapping Services checklist for Special Funded Projects*. This checklist includes but is not limited to the following items.)
 - Hard copy (base map)
 - Appraisal map
 - Acquisition Documents
 - Property Transfer Documents
 - R/W Record Map
 - Record of Survey

II. Engineering Surveys

1. Is any surveying or photogrammetric mapping required?

No _____ Yes X (Complete the following)

2. Datum Requirements

Yes X Project will adhere to the following criteria.

- Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and U.S. customary units.
- Vertical - datum policy is NAVD 88.
- Units - U.S. customary units is required.

No _____ Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes X

No _____ Provide explanation on additional page.

III. Parcel Information (Land and Improvements)

Are there any property rights required within the proposed project limits?

No Yes (Complete the following)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	_____	_____	\$ _____
B. Number of Single Family Residential Units	_____	_____	\$ _____
C. Number of Multi-Family Residential Units	_____	_____	\$ _____
D. Number of Commerical/Industrial Parcels	4	_____	\$ 4,658,600
E. Number of Farm/Agricultural Parcels	_____	_____	\$ _____
F. Permanent and/or Temporary Easements	_____	_____	\$ _____
G. Other Parcels (define in "Remarks" section)	16	2	\$ 36,322,800
Totals	20	2	\$ 40,981,400

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

IV. Dedications

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No Yes (Complete the following)

Number of dedicated parcels 0

Have the dedication parcel(s) been accepted by the municipality involved? NOT APPLICABLE

V. Excess Lands / Relinquishments

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No Yes (Provide an explanation on additional page.)

VI. Relocation Information

Are relocation displacements anticipated?

No Yes _____ (Complete the following)

A. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
B. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
C. Number Multi-Family Residential Units	_____	
Estimated RAP Payments		\$ _____
D. Number of Business/NonProfit	_____	
Estimated RAP Payments		\$ _____
E. Number of Farms	_____	
Estimated RAP Payments		\$ _____
F. Other (define in the "Remarks" section)	_____	
Estimated RAP Payments		\$ _____
G. Number of Single Family Residential Units	_____	
Estimated RAP Payments		\$ _____
Totals	_____	\$ _____

VII. Utility Relocation Information

Anticipate any utility facilities or utility rights of way to be affected?

No Yes (Complete the following)

Facility	Owner	Estimated Relocation Expense		
		State Obligation	Local Obligation	Utility Owner Obligation
A. 16" Water	DSRSD	\$	\$ 700,000	\$
B. 36" Sewer	DSRSD	\$	\$ 150,000	\$
C. 12" High Pressure Gas	PG&E	\$	\$ 200,000	\$
D. 12kV Overhead Electric	PG&E	\$	\$ 150,000	\$
		\$		\$
Totals				
Number of facilities <u>3</u>		\$ *	\$ 1,200,000	\$

*This amount reflects the estimated total financial obligation by the State.

Additional information concerning utility involvement on this project?

VIII. Rail Information

Are railroad facilities or railroad rights of way affected?

No Yes (Complete the following)

Describe railroad facilities or railroad rights of way affected.

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. Bay Area Rapid Transit District	X	
B.		

Discuss types of agreements and rights required from the railroads. Are grade crossings requiring services contracts, or grade separations requiring construction and maintenance agreements involved?

IX. Clearance Information

Are there improvements that require clearance?

No Yes _____ (Complete the following)

A. Number of Structures to be Demolished _____
 Estimated Cost of Demolition \$ _____

X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None Yes _____ (Explain in the "Remarks" section)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None Yes _____ (Explain in the "Remarks" section)

XI. Project Scheduling

	Proposed lead time	Completion date
Preliminary Engineering, Surveys	<u>12</u> (months)	<u>2010</u>
R/W Engineering Submittal	<u>18</u> (months)	<u>2012</u>
R/W Appraisals/Acquisition	<u>18</u> (months)	<u>2014</u>
Proposed Environmental Clearance		<u>2011</u>
Proposed R/W Certification		<u>2014</u>

XII. Proposed Funding: TO BE DETERMINED

	Local	State	Federal	Other
Acquisition	\$ _____	\$ _____	\$ _____	\$ _____
Utilities	\$ _____	\$ _____	\$ _____	\$ _____
Relocation Assistance Program	\$ _____	\$ _____	\$ _____	\$ _____
R/W Support	\$ _____	\$ _____	\$ _____	\$ _____
Cost (Eng., Appraisals, etc.)	\$ _____	\$ _____	\$ _____	\$ _____

XIII. *Remarks*

Section III “Other Parcels”= Public use parcels:

Public transit	2
City offices, library	1
Public sports fields	1
Drainage canals	9
Trails & access roads	4
Public streets/adjacent land	1

Section X. Hazardous Waste

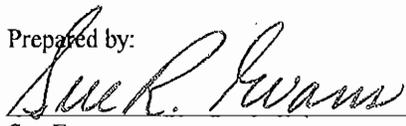
1) Parcels with Potential for Hazardous waste

941-0210-008 (6900 Village Parkway): auto body shop & towing service
941-0210-009 (6900 Village Parkway): Auto body & transmission shop
941-1400-007 (6450 Dublin Ct): New car dealer with service bays
941-1400-010-02 (6430 Dublin Ct): Used car dealer
941-0550-024, -025 (6085 Scarlett Ct): New car dealer with service bays
941-0550-028 (5785 Scarlett Ct): Auto body shop

- 2) If this information is to be used for a project study report (PSR) or equivalent, we recommend you include 25% contingency costs, or whatever rate of contingency is typical of the local Caltrans district.
- 3) It may be possible to reduce impact from take of publicly owned canal, trail and road properties by allowing the owner-agency to retain an easement for the facility in the grant to the state.
- 4) We have assumed the design will allow public facilities, such as canals, streets and trails, to remain operative during construction and after completion.
- 5) We have assumed any parcels owned by the State of California will be acquired by the project at no cost.

Project Sponsor Consultant

Prepared by:

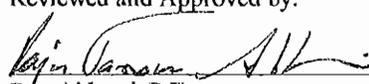

Sue Evans
Coates Field Service, Inc.

Date:

12.21.2007

Project Sponsor

Reviewed and Approved by:


Ray Akkawi, P.E.
Alameda County Congestion Management Agency

Date:

12.21.2007

NA

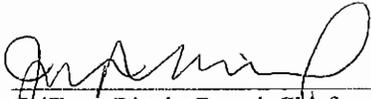
NA

Date: _____

Date: _____

CALTRANS

Reviewed and approved based on information provided to date:



CalTrans District Branch Chief
Local Public Agency Services

NA

Division of Right of Way

Date: 3/16/07

Date: _____

ATTACHMENT K

Project Support Cost Estimate for PA/ED Support

**04-2A210K ALA 580/680 INTERCHANGE - ALTERNATIVE 1
PSR (PDS)
RESOURCE ASSIGNMENT REPORT (1/14/08)**

MILESTONE NAME	DURATION -IN WEEKS	Hours	Cost, \$2007
0.100 PROJ MGMT		7098	\$1,064,700
0 4.005 - RESOURCE_MGMT-1		3	\$450
0 4.044 - BUDGETS-1		18	\$2,700
0 4.108 - PROJ-MGRS-1		3840	\$576,000
0 4.142 - PROJ SCHED-1		538	\$80,700
0 4.146 - PROG MGMT-1		54	\$8,100
0 4.155 - PLNG_EXEC_MGMT-1		117	\$17,550
0 4.176 - ENV_PLNG-1		12	\$1,800
0 4.195 - FORECAST_MODEL-1		24	\$3,600
0 4.200 - PJD_EXEC_MGMT-1		48	\$7,200
0 4.258 - DESIGN-1		604	\$90,600
0 4.281 - ADMIN_EXEC MGMT-1		148	\$22,200
0 4.302 - DRAFTING SRVCS-1		15	\$2,250
0 4.309 - SURVEYS-RW_ENG-1		91	\$13,650
0 4.310 - SURVEYS-1		333	\$49,950
0 4.314 - HYDRAULICS-1		24	\$3,600
0 4.332 - ENV-ENGR-1		297	\$44,550
0 4.336 - ENV_ENGR-1		7	\$1,050
0 4.340 - LNDSCP_ARCH-1		30	\$4,500
0 4.351 - TAF_EXEC_MGMT-1		73	\$10,950
0 4.367 - TRAF_OPS-1		48	\$7,200
0 4.386 - TRAF_ENGR-1		145	\$21,750
0 4.397 - PERMITS-ENCR-1		10	\$1,500
0 4.407 - RAW_PKNG_&_MGMT-1		619	\$92,850

1.150 DEV PROJ INITIATION DOC

COMPLETE

2.160 PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ RPT

62775	\$9,416,250	
4.038 PUBLIC_INFO-1	29	\$4,350
4.183 TECH_SUPP_1	47	\$7,050
4.195 FORECAST_MODEL-1	5890	\$883,500
4.219 PROJ_PLNG-1	588	\$88,200
4.258 DESIGN-1	29316	\$4,397,400

4.301	DRAFTING_SVCS-R/W-1	235	\$35,250
4.309	SURVEYS-R/W_ENG-1	767	\$115,050
4.310	SURVEYS-1	11042	\$1,656,300
4.311	PHOTOGRAMMETRY-1	370	\$55,500
4.314	HYDRAULICS-1	235	\$35,250
4.332	ENV_ENGR-1	6	\$900
4.367	TRAF_OPS-1	6536	\$980,400
4.386	TRAF_ENGR-1	3339	\$500,850
4.390	ELEC_SYS-1	294	\$44,100
4.397	PERMITS-ENCR-1	24	\$3,600
4.407	R/W_PLNG_ & MGMT-1	794	\$119,100
4.544	FIELD_CONST-1	29	\$4,350
4.602	MAINT_ENGR-1	12	\$1,800
59.292	PS&EOE-COST ESTIMATES	62	\$9,300
59.312	HYDRAULICS-ES06.312-1	353	\$52,950
59.317	MATLS_LAB_RIGID PAVE_ &	29	\$4,350
59.318	MATLS_LAB_STRUC_MATLS-E-	15	\$2,250
59.319	MATLS_LAB_TEST_& TECH-E	15	\$2,250
59.321	MATLS_LAB-TECH_SVS-ES08	132	\$19,800
59.323	GEOTECH+RDWY_NORTH-SF03	265	\$39,750
4.176	ENV_PLNG-1	2351	\$352,650

2.180 PREP & APPROVE PROJ RPT & FNL ENVIRO DOC (URS- SEE ATTACHED) 34780 \$3,342,430

4.190	PREP STRUC SITE PLANS	5493	\$823,950
4.258	DESIGN-1	4088	\$613,200
4.314	HYDRAULICS-1	1022	\$153,300
4.343	LNDSCP_ARCH-1	383	\$57,450

6.200	COORDINATE UTIL	2351	\$352,670
4.258	DESIGN-1	316	\$47,400
4.310	SURVEYS-1	318	\$47,700
4.343	LNDSCP_ARCH-1	12	\$1,800
4.397	PERMITS-ENCR-1	32	\$4,800
4.407	R/W_PLNG_ & MGMT-1	1673	\$250,970

TOTAL ESTIMATED LABOR (HOURS) FOR PAIED 112497
TOTAL ESTIMATED COST FOR PAIED \$15,000,000

WBS Activity	EA: 2A210K Description: 580/680 Interchange Modification	Envr Analysis	Bio & Permits	Cultural Res. (Archaeo)	Cultural Res. (Arch Hist)	Haz Waste	Air & Noise	Storm Water /SWC	Storm Water /WPC	Erosion Control	Landscape Arch.	Prog/ Proj Mgmt	Total Hours	Sub Totals	Begin Date	End Date
175	CIRCULATE DED & SELECT PREFERRED PROJECT ALTERNATIVE												6336	3.05		
175.05	Circulate DED												320			
175.05.05	Prepare Master Distribution & Invitation Lists												120			
175.05.10	Prepare Notices Regarding Public Hearing & Availability of DED												80			
175.05.15	Publish & Circulate DED												120			
175.05.20	Obtain Federal Consistency Determination (Coastal Zone)												0			
175.10	Prepare for & Hold Public Hearing												1576			
175.10.05	Determine Need for Public Hearing Process												0			
175.10.10	Arrange for Public Hearing Logistics												260			
175.10.15	Prepare Displays for Public Hearing												360			
175.10.20	Prepare & Publish Notices of Public Hearing & Availability of DED												40			
175.10.25	Conduct Meeting to Review Map Displays & Discuss Public Workshop												32			
175.10.30	Display Public Hearing Maps												24			
175.10.35	Hold Public Hearing												260			
175.10.40	Prepare & Distribute Record of Public Hearing												600			
175.15	Respond to Public Comments & Correspondence												4260			
175.20	Select Preferred Alternative												180			
180	PREPARE & APPROVE PROJECT REPORT & FINAL ENVIRONMENTAL DOCUMENT												4624	2.22		
180.10	Prepare & Approve Final Environmental Document (FED)												4240			
180.10.05	Prepare & Approve FED												4160			
180.10.10	Public Distribution of FED												80			
180.15	Close Out Environmental Process												384			
180.15.05	5 Prepare & Approve Record of Decision (ROD)												360			
180.15.10	Prepare & File Notice of Determination (NOD)												24			
205	OBTAIN PERMITS, AGREEMENTS & ROUTE ADOPTIONS												1590	0.76		
205.05	Determine Required Permits												80			
205.10	Obtain Permits												1510			
205.10.05	Obtain U.S. COE Permit (404)												430			
205.10.10	Obtain U.S. Forest Service Permit												0			
205.10.15	Obtain U.S. Coast Guard Permit												0			
205.10.20	Obtain DFG Permit (1601/1603)												240			
205.10.25	Obtain Coastal Development Permit												0			
205.10.30	Obtain Local Agency Concurrence / Permit												380			
205.10.40	Obtain Waste Discharge Permit (NPDES)												0			
205.10.45	Obtain USFWS Approval												260			
205.10.50	Obtain Regional Water Quality Control Board Permit (401)												200			
235	MITIGATE ENVIRONMENTAL IMPACTS & CLEAN-UP HAZARDOUS WASTE												6200	2.98		
235.05	Perform Environmental Mitigation												1200			
235.10	Perform Detailed Site Investigation for Hazardous Waste												2400			
235.25	Perform Hazardous Waste Clean-Up												2400			
235.35	Perform Long Term Mitigation Monitoring												200			
255	CIRCULATE, REVIEW & PREPARE FINAL DISTRICT PS&E PACKAGE												0	0		
255.15	Perform Environmental Re-evaluation												0			
270	PERFORM CONSTRUCTION ENGINEERING & GENERAL CONTRACT ADMINISTRATION												0	0		
270.05	Prepare Resident Engineer's File												0			
285.10	Environmental Support for Construction												0			
													0			
Total Hours		0	0	0	0	0	0	0	0	0	0	0	30190	14.5 PYS		

Caltrans Oversight Resources by WBS Code

WBS Activity	EA: 2A210K Description: 580/680 Interchange Modification	Envlr Analysis	Bio & Permits	Cultural Res. (Archaeo)	Cultural Res. (Arch Hist)	Haz Waste	Air & Noise	Storm Water /SWC	Storm Water /WPC	Erosion Control	Landscape Arch.	Prog/ Proj Mgmt	Total Hours	Sub Totals	Begin Date	End Date
100	PERFORM PROJECT MANAGEMENT												0	0		
100.05	Develop & Manage Schedule & Support Budget											0	0			
100.05.05	Develop & Manage Initial (PID) Project Schedule												0			
100.05.10	Develop & Manage Baseline Schedule												0			
100.05.15	Develop & Maintain Work Agreements												0			
100.10	Maintain Project Data												0			
100.15	Respond to Internal & External Requests for Information												0			
100.20	Procure External Resources												0			
160	PERFORM PRELIMINARY ENGINEERING STUDIES & PREPARE PROJECT REPORT												0	0		
160.05.30	Review Project Scope												0			
160.15.25	Circulate, Review, & Approve Draft Project Report												0			
165	PERFORM ENVIRONMENTAL STUDIES & PREPARE DRAFT ENVIRONMENTAL DOCUMENT (DED)												0	2500		
165.05	Perform Environmental Scoping & Select Alternatives for Study												0			
165.05.05	Review Project Information												60			
165.05.10	Perform Public & Agency Scoping Process												80			
165.05.15	Select Alternatives for Further Study												60			
165.05.20	Prepare Maps for Environmental Evaluation												20			
165.10	Perform General Environmental Studies												0			
165.10.05	Perform Surveys & Mapping for Environmental Studies												0			
165.10.10	Obtain Right of Permit for Environmental Studies												0			
165.10.15	Perform Socioeconomic, Land Use & Growth Studies												120			
165.10.20	Perform Visual Impact Analysis												120			
165.10.25	Perform Noise Study												120			
165.10.30	Perform Air Quality Study												120			
165.10.35	Perform Water Quality Studies												120			
165.10.40	Perform Energy Studies												40			
165.10.45	Prepare Summary of Geotechnical Report												160			
165.10.50	Perform Preliminary Site Investigation for Hazardous Waste												160			
165.10.55	Prepare Draft Right of Way Relocation Impact Document												60			
165.10.60	Prepare Location Hydraulic / Floodplain Study Report												80			
165.10.65	Perform Paleontology Study												120			
165.15	Perform Biological Studies												0			
165.15.05	Perform Biological Assessment												160			
165.15.10	Perform Wetlands Study												120			
165.15.15	Perform Resource Agency Permit Related Coordination												180			
165.15.20	Prepare Natural Environment Study Report												40			
165.20	Perform Cultural Resource Studies												0			
165.20.05	Perform Archaeological Survey												20			
165.20.10	Perform Extended Phase I Archaeological Studies												0			
165.20.15	Perform Phase II Archaeology Studies												0			
165.20.20	Perform Historical and Architectural Resource Studies												120			
165.20.25	Prepare & Process Cultural Resource Compliance Docs.												160			
165.25	Prepare & Approve Draft Environmental Document												0			
165.25.05	Prepare Draft Environmental Document												160			
165.25.10	Prepare Section 4(f) Evaluation												20			
165.25.15	Prepare Cat. Exemption/Cat. Exclusion (CE) Determination												0			
165.25.20	Conduct Environmental PEER & Other Reviews												0			
165.25.25	Obtain Approval to Circulate												80			

WBS Activity	EA: 2A210K Description: 580/680 Interchange Modification	Envlr Analysis	Blo & Permits	Cultural Res. (Archaeo)	Cultural Res. (Arch Hist)	Haz Waste	Air & Noise	Storm Water /SWC	Storm Water /WPC	Erosion Control	Landscape Arch.	Prog/ Proj Mgmt	Total Hours	Sub Totals	Begin Date	End Date
175 CIRCULATE DED & SELECT PREFERRED PROJECT ALTERNATIVE													0	469		
175.05	Circulate DED												0			
175.05.05	Prepare Master Distribution & Invitation Lists												10			
175.05.10	Prepare Notices Regarding Public Hearing & Availability of DED												24			
175.05.15	Publish & Circulate DED												24			
175.05.20	Obtain Federal Consistency Determination (Coastal Zone)												0			
175.10	Prepare for & Hold Public Hearing												0			
175.10.05	Determine Need for Public Hearing Process												0			
175.10.10	Arrange for Public Hearing Logistics												8			
175.10.15	Prepare Displays for Public Hearing												24			
175.10.20	Prepare & Publish Notices of Public Hearing & Availability of DED												4			
175.10.25	Conduct Meeting to Review Map Displays & Discuss Public Workshop												8			
175.10.30	Display Public Hearing Maps												12			
175.10.35	Hold Public Hearing												10			
175.10.40	Prepare & Distribute Record of Public Hearing												40			
175.15	Respond to Public Comments & Correspondence												225			
175.20	Select Preferred Alternative												80			
180 PREPARE & APPROVE PROJECT REPORT & FINAL ENVIRONMENTAL DOCUMENT													0	271		
180.10	Prepare & Approve Final Environmental Document (FED)												0			
180.10.05	Prepare & Approve FED												240			
180.10.10	Public Distribution of FED												8			
180.15	Close Out Environmental Process												0			
180.15.05	Prepare & Approve Record of Decision (ROD)												15			
180.15.10	Prepare & File Notice of Determination (NOD)												8			
205 OBTAIN PERMITS, AGREEMENTS & ROUTE ADOPTIONS													150	670		
205.05	Determine Required Permits												80			
205.10	Obtain Permits												0			
205.10.05	Obtain U.S. COE Permit (404)												80			
205.10.10	Obtain U.S. Forest Service Permit												0			
205.10.15	Obtain U.S. Coast Guard Permit												0			
205.10.20	Obtain DFG Permit (1601/1603)												80			
205.10.25	Obtain Coastal Development Permit												0			
205.10.30	Obtain Local Agency Concurrence / Permit												80			
205.10.40	Obtain Waste Discharge Permit (NPDES)												0			
205.10.45	Obtain USFWS Approval												120			
205.10.50	Obtain Regional Water Quality Control Board Permit (401)												80			
235 MITIGATE ENVIRONMENTAL IMPACTS & CLEAN-UP HAZARDOUS WASTE													0	680		
235.05	Perform Environmental Mitigation												160			
235.10	Perform Detailed Site Investigation for Hazardous Waste												240			
235.25	Perform Hazardous Waste Clean-Up												240			
235.35	Perform Long Term Mitigation Monitoring												40			
255 CIRCULATE, REVIEW & PREPARE FINAL DISTRICT PS&E PACKAGE													0	0		
255.15	Perform Environmental Re-evaluation												0			
270 PERFORM CONSTRUCTION ENGINEERING & GENERAL CONTRACT ADMINISTRATION													0	0		
270.05	Prepare Resident Engineer's File												0			
285.10	Environmental Support for Construction												0			
Total Hours													0	4590.0 PYS		

Resources by WBS Code

WBS Activity	EA: 2A210K Description: 580/680 Interchange Modification	Envir Analysis	Bio & Permits	Cultural Res. (Archaeo)	Cultural Res. (Arch Hist)	Haz Waste	Air & Noise	Storm Water /SWC	Storm Water /WPC	Erosion Control	Landscape Arch.	Prog/ Proj Mgmt	Total Hours	Sub Totals	Begin Date	End Date
100	PERFORM PROJECT MANAGEMENT												0	0		
100.05	Develop & Manage Schedule & Support Budget												0			
100.05.05	Develop & Manage Initial (PID) Project Schedule												0			
100.05.10	Develop & Manage Baseline Schedule												0			
100.05.15	Develop & Maintain Work Agreements												0			
100.10	Maintain Project Data												0			
100.15	Respond to Internal & External Requests for Information												0			
100.20	Procure External Resources												0			
160	PERFORM PRELIMINARY ENGINEERING STUDIES & PREPARE PROJECT REPORT												0	0		
160.05.30	Review Project Scope												0			
160.15.25	Circulate, Review, & Approve Draft Project Report												0			
165	PERFORM ENVIRONMENTAL STUDIES & PREPARE DRAFT ENVIRONMENTAL DOCUMENT (DED)												11440	5.50		
165.05	Perform Environmental Scoping & Select Alternatives for Study												660			
165.05.05	Review Project Information												260			
165.05.10	Perform Public & Agency Scoping Process												160			
165.05.15	Select Alternatives for Further Study												160			
165.05.20	Prepare Maps for Environmental Evaluation												80			
165.10	Perform General Environmental Studies												3970			
165.10.05	Perform Surveys & Mapping for Environmental Studies												80			
165.10.10	Obtain Right of Permit for Environmental Studies												60			
165.10.15	Perform Socioeconomic, Land Use & Growth Studies												280			
165.10.20	Perform Visual Impact Analysis												300			
165.10.25	Perform Noise Study												660			
165.10.30	Perform Air Quality Study												360			
165.10.35	Perform Water Quality Studies												360			
165.10.40	Perform Energy Studies												120			
165.10.45	Prepare Summary of Geotechnical Report												80			
165.10.50	Perform Preliminary Site Investigation for Hazardous Waste												970			
165.10.55	Prepare Draft Right of Way Relocation Impact Document												240			
165.10.60	Prepare Location Hydraulic / Floodplain Study Report												280			
165.10.65	Perform Paleontology Study												180			
165.15	Perform Biological Studies												1320			
165.15.05	Perform Biological Assessment												360			
165.15.10	Perform Wetlands Study												200			
165.15.15	Perform Resource Agency Permit Related Coordination												600			
165.15.20	Prepare Natural Environment Study Report												160			
165.20	Perform Cultural Resource Studies												660			
165.20.05	Perform Archaeological Survey												160			
165.20.10	Perform Extended Phase I Archaeological Studies												0			
165.20.15	Perform Phase II Archaeology Studies												0			
165.20.20	Perform Historical and Architectural Resource Studies												160			
165.20.25	Prepare & Process Cultural Resource Compliance Docs.												340			
165.25	Prepare & Approve Draft Environmental Document												4830			
165.25.05	Prepare Draft Environmental Document												1430			
165.25.10	Prepare Section 4(f) Evaluation												1200			
165.25.15	Prepare Cat. Exemption/Cat. Exclusion (CE) Determination												0			
165.25.20	Conduct Environmental PEER & Other Reviews												2000			
165.25.25	Obtain Approval to Circulate												200			

ATTACHMENT L

Storm Water Data Report



Dist-County-Route: 04-Ala-580/680

Post Mile Limits: 18.82/21.43; 18.40/21.88

Project Type: Interchange Improvements

EA: 2A210K

RU: 04-157

Program Identification: STIP

Phase: PID PA/ED PS&E

Regional Water Quality Control Board(s): San Francisco Bay - Region 2

Is the project required to consider incorporating Treatment BMPs? Yes No

If yes, can Treatment BMPs be incorporated into the project? Yes No

If No, a Technical Data Report must be submitted to the RWQCB

at least 60 days prior to PS&E Submittal. List submittal date: _____

Total Disturbed Soil Area: dependent upon alternative selected

Estimated Construction Start Date: 2014 Construction Completion Date: 2018

Notification of Construction (NOC) Date to be submitted: one-month prior to Construction Start Date

Notification of ADL reuse (if Yes, provide date) Yes Date: not presently known No

Separate Dewatering Permit (if Yes, permit number) Yes Permit #: not presently known No

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Tricia Baxtor 2/10/08
Tricia Baxtor, Registered Project Engineer Date

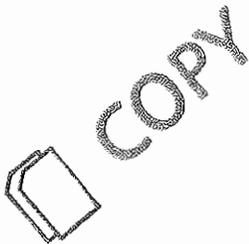
I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:

Issa Bouri 2/29/08
Issa Bouri, Project Manager Date

Robert W. Braga 2/20/08
Bob Braga, Designated Maintenance Representative Date

David Yam 2/25/08
David Yam, Designated Landscape Architect Representative Date

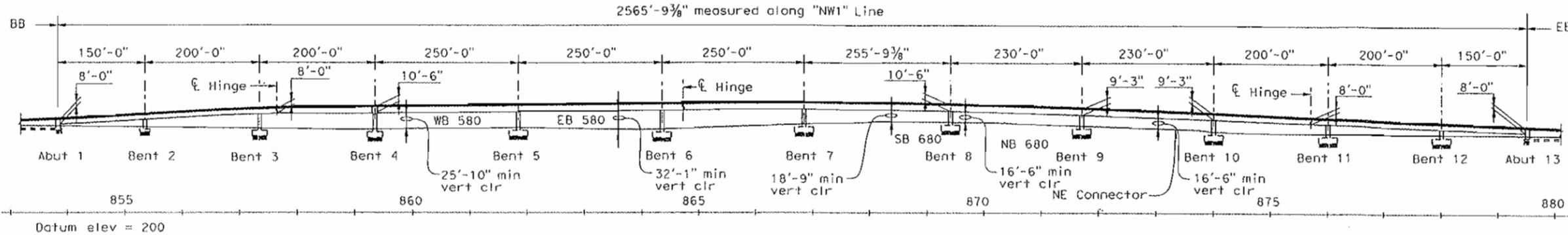
Brian J. Rowley 02/21/08
Brian J. Rowley, Assistant District SW Coordinator Date



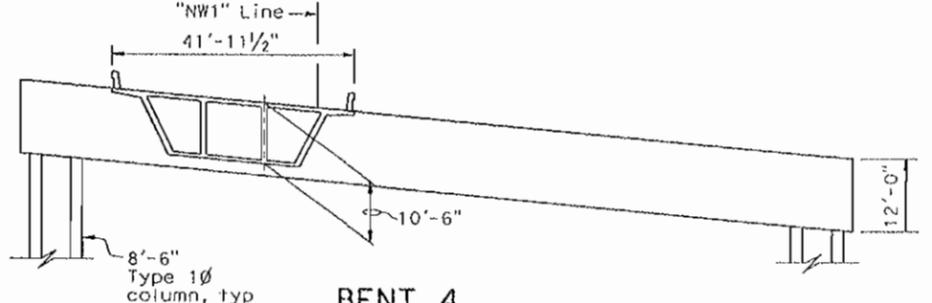
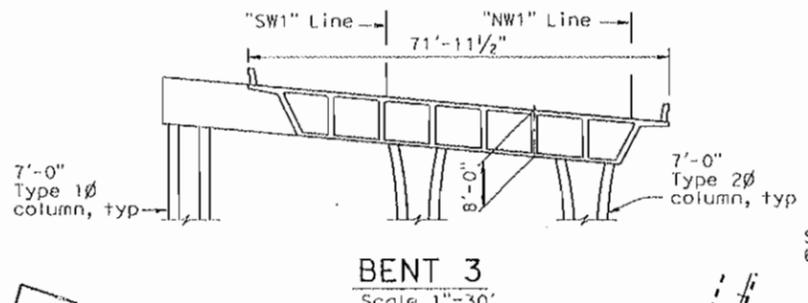
ATTACHMENT M

Structure Advance Planning Study (Alternative 3)

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
04	Ala	580,680	
ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY			
T. Y. LIN INTERNATIONAL			



DEVELOPED ELEVATION
Scale 1"=200'



"SW1" Line
R = 711.97'
Δ = 75° 52' 27"
T = 554.99'
L = 942.83'

"SW1" 855+23.15 POT =
24' Lt "NW1" 855+23.15 POT

"NW1" 855+23.60 BC

N 74° 17' 10" E
BB 853+85.29

SW Connector
"SW1" Line
R=711.97'

N 75° 18' 9" E
"B9" Line
Route 580

Skew 62° 04' 35"

Assumed falsework opening for BART

"NW1" Line
R = 1310'
Δ = 89° 41' 58"
T = 1303.14'
L = 2050.87'

PLAN
Scale 1"=200'

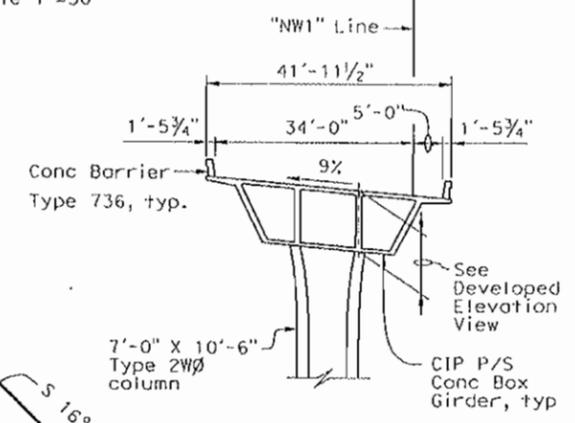
Legend:

- ① Structure Approach Type N (305).
- ➔ Indicates direction of traffic.

Notes:

1. Assume 100 ton pile footings.
2. Traffic will pass through construction (15'-0" min. vert. clearance required under falsework).

Date of Estimate	6/26/07
Str Depth	Varies
Length	2,565'-9 3/8"
Width	41'-11 1/2" min & varies
Area	114,365 sq ft
Cost/sq ft including 10% Mobilization & 25% Contingency	\$313
Total Cost	\$35,800,000



DESIGNED BY	Odeon M. Li	DATE	6/07
DRAWN BY	Odeon M. Li	DATE	6/07
CHECKED BY	Kevin Ross	DATE	6/07
APPROVED		DATE	

PLANNING STUDY	
NW CONNECTOR	
BRIDGE NO.	cu 04
SCALE:	As Shown
	EA 2A210K

ATTACHMENT N

Draft Cooperative Agreement for PA&ED

D-A Pre-approved July 2007
Modified for PA&ED Phase
DRAFT 9/21/07
BL

04-Ala-580 KP 30.29/R34.49 (PM 18.82/R21.43)
04-Ala-680 KP R29.61/R35.21 (PM 18.40/R21.88)
I-580 / I-680 Interchange Modification
04219-2A210K
District Agreement No. 4-2135

COOPERATIVE AGREEMENT

THIS AGREEMENT, ENTERED INTO EFFECTIVE on _____, 2007, is between the STATE OF CALIFORNIA, acting by and through its Department of Transportation, referred to herein as "STATE," and the

ALAMEDA COUNTY CONGESTION
MANAGEMENT AGENCY, a joint powers
Agency, referred herein as "ACCMA."

RECITALS

1. STATE and ACCMA, pursuant to Streets and Highways Code sections 114 and 130, are authorized to enter into a Cooperative Agreement for improvements to the State Highway System (SHS) within ACCMA's jurisdiction.
2. ACCMA desires to construct State Highway improvements consisting of westbound to southbound and northbound to eastbound High Occupancy Vehicle (HOV) direct connectors and/or mixed flow connectors and/or related operational improvements within the Interstate 580/Interstate 680 interchange in Alameda County, referred to herein as "PROJECT."
3. For the purposes of this Agreement, the Project Approval and Environmental Document (PA&ED) phase is defined as the work necessary to carry out engineering studies, prepare a project report (PR), perform environmental studies, and prepare the environmental documentation in order to obtain project approvals and permits for PROJECT.
4. ACCMA is willing to fund one hundred percent (100%) of all PA&ED support costs, except that the costs of STATE's Independent Quality Assurance (IQA) of PROJECT development and STATE's costs incurred as the California Environmental Quality Act (CEQA) Lead Agency and National Environmental Policy Act (NEPA) Lead Agency, if applicable, in the review and approval, if appropriate, of the PROJECT environmental documentation prepared entirely by ACCMA, will be borne by STATE.
5. STATE funds will not be used to finance any of the PA&ED support costs except as set forth in Recital 4 above.
6. The terms of this Agreement shall supersede any inconsistent terms of any prior Memorandum of Understanding (MOU) or agreement relating to PROJECT.
7. PROJECT design, right of way, landscape maintenance and construction will be the subject of a separate future agreement or agreements.

8. This Agreement will define the roles and responsibilities of the CEQA Lead Agency and CEQA Responsible Agency regarding the environmental documentation, studies, and reports necessary for compliance with CEQA. This Agreement will also define roles and responsibilities for compliance with NEPA, if applicable.
9. The parties now define hereinbelow the terms and conditions under which PROJECT PA&ED is to be developed and financed.

SECTION I

ACCMA AGREES:

1. To fund one hundred percent (100%) of all PROJECT PA&ED costs except for costs of STATE's IQA, STATE's review, comment, and approval, if appropriate, of the PROJECT environmental documentation for CEQA, and NEPA if applicable.
2. To not use STATE funds for any PROJECT PA&ED support costs.
3. All PROJECT PA&ED work performed by ACCMA, or performed on ACCMA's behalf, shall be performed in accordance with all State and Federal laws, regulations, policies, procedures, and standards that STATE would normally follow. All such PROJECT work shall be submitted to STATE for STATE's review, comment, and concurrence at appropriate stages of development.
4. All PROJECT work, except as set forth in this Agreement, is to be performed by ACCMA. Should ACCMA request that STATE perform any portion of PROJECT work, except as otherwise set forth in this Agreement, ACCMA shall first agree to reimburse STATE for such work pursuant to an amendment to this Agreement or a separate executed agreement.
5. To have a Project Report (PR), including all necessary environmental documentation (ED), prepared, at no cost to STATE, and to submit each to STATE for STATE's review and concurrence at appropriate stages of development. The PR for PROJECT shall be signed on behalf of ACCMA by a Civil Engineer registered in the State of California.
6. To have all necessary right of way maps and documents used to acquire right of way by ACCMA prepared by or under the direction of a person authorized to practice land surveying in the State of California. Each right of way map and document shall bear the appropriate professional seal, certificate number, expiration date of registration certification and signature of the licensed person in Responsible Charge of Work.
7. To permit STATE to monitor, participate, and oversee the selection of personnel who will prepare the PR, conduct environmental studies and prepare the ED for PROJECT. ACCMA agrees to consider any request by STATE to discontinue the services of any personnel considered by STATE to be unqualified on the basis of credentials, professional expertise, failure to perform, and/or other pertinent criteria.
8. To submit to STATE for review and concurrence all Right of Way Engineering Land-Net Maps and Right of Way Appraisal Maps, Records of Survey, and Right of Way Record Maps in accordance with STATE's Right of Way Manual, Chapter 6, Right of Way Engineering, STATE's Plans Preparation Manual, STATE's Surveys Manual, applicable State laws, and other pertinent reference materials and examples as provided by STATE.

9. Personnel who prepare the environmental documentation, including the investigative studies and technical environmental reports, shall be made available to STATE, at no cost to STATE, through completion of PROJECT construction to discuss problems which may arise during PS&E, right of way acquisition, construction, and/or to make design revisions for contract change orders.
10. Personnel who prepare right of way maps, documents, and related materials shall be made available to STATE, at no cost to STATE, during and after construction of PROJECT until completion and acceptance by STATE of Right of Way Record Maps, Records of Survey, and title to any property intended to be transferred to STATE.
11. To make written application to STATE for necessary encroachment permits authorizing entry of ACCMA onto the SHS right of way to perform surveying and other investigative activities required for preparation of the PR and environmental documentation.
12. To be responsible for, and to the STATE's satisfaction, the investigation of potential hazardous material sites within and outside of the existing SHS right of way that could impact PROJECT as part of performing any preliminary engineering work. If ACCMA discovers hazardous material or contamination within the PROJECT study area during said investigation, ACCMA shall immediately notify STATE.
13. All aerial photography and photogrammetric mapping shall conform to STATE's current standards.
14. A copy of all original survey documents resulting from surveys performed for PROJECT, including original field notes, adjustment calculations, final results, and appropriate intermediate documents, shall be delivered to STATE and shall become property of STATE. For aerial mapping, all information and materials listed in the document "Materials Needed to Review Consultant Photogrammetric Mapping" shall be delivered to STATE and shall become property of STATE.
15. All original recorded land title documents created by PROJECT shall be delivered to STATE and become property of STATE.
16. To submit to STATE a list of STATE horizontal and vertical control monuments which will be used to control surveying activities for PROJECT.
17. Prior to commencing work on PROJECT, to furnish STATE with a proposed time schedule acceptable to STATE to complete PA&ED.
18. To have the final PR and ED and preliminary design documents and drawings of civil, structural, mechanical, electrical, architectural, or other engineering features of PROJECT prepared by or under the direction of engineers or architects registered and licensed in the applicable professional field in the State of California. Any engineering reports for PROJECT shall bear the professional seal, certificate number, registration, classification, expiration date of certificate, and signature of the professional engineer responsible for its preparation.
19. To make written application to STATE for necessary encroachment permits authorizing entry of ACCMA onto the State Highway right of way to perform surveying and other investigative activities required for preparation of the ED and PR.

SECTION II

STATE AGREES:

1. At no cost to ACCMA, to complete STATE's review as CEQA Lead Agency and NEPA Lead Agency, if applicable, of the environmental documents prepared and submitted by ACCMA and to provide IQA of all ACCMA work necessary for completion of the PR for PROJECT done by ACCMA, including, but not limited to, investigation of potential hazardous material sites undertaken by ACCMA or its designee, and provide prompt reviews and concurrence, as appropriate, of submittals by ACCMA, while cooperating in timely processing of documents necessary for completion of the environmental documentation and PR for PROJECT.
2. Upon proper application by ACCMA and by ACCMA's contractor, to issue, at no cost to ACCMA and ACCMA's contractor, the necessary encroachment permits for required work within the SHS right of way as more specifically defined elsewhere in this Agreement.

SECTION III

IT IS MUTUALLY AGREED:

1. All obligations of STATE under the terms of this Agreement are subject to the appropriation of resources by the Legislature, State Budget Act authority and the allocation of funds by the California Transportation Commission (CTC).
2. The parties to this Agreement understand and agree that STATE's IQA is defined as providing STATE policy and procedural guidance through to completion of the PROJECT preliminary engineering, PS&E, and right of way phases administered by ACCMA. This guidance includes prompt reviews by STATE to assure that all work and products delivered or incorporated into the PROJECT by ACCMA conform with then existing STATE standards. IQA does not include any PROJECT related work deemed necessary to actually develop and deliver the PROJECT, nor does it involve any validation to verify and recheck any work performed by ACCMA and/or its consultants or contractors and no liability will be assignable to STATE, its officers and employees by ACCMA under the terms of this Agreement or by third parties by reason of STATE's IQA activities. All work performed by STATE that is not direct IQA shall be chargeable against PROJECT funds as a service for which STATE will invoice its actual costs and ACCMA will pay or authorize STATE to reimburse itself from then available PROJECT funds.
3. The basic design features shall comply with those addressed in the approved PSR, unless modified as required for completion of the PROJECT's environmental documentation and/or if applicable, requested by the Federal Highway Administration (FHWA).
4. The preparation of environmental documentation and related investigative studies and technical environmental reports for PROJECT shall be performed in accordance with all applicable Federal and STATE standards and practices current as of the date of performance. Any exceptions to applicable design standards shall first be considered by STATE for approval via the processes outlined in STATE's Highway Design Manual and appropriate memoranda and design bulletins published by STATE. In the event that STATE proposes and/or requires a change in design standards, implementation of

new or revised design standards shall be done as part of the work on PROJECT in accordance with STATE's current Highway Design Manual Section 82.5, "Effective Date for Implementing Revisions to Design Standards." STATE shall consult with ACCMA in a timely manner regarding the effect of proposed and/or required changes on PROJECT.

5. STATE will be the CEQA Lead Agency and ACCMA will be a CEQA Responsible Agency. STATE will be the Federal Lead Agency for NEPA, if applicable. ACCMA will assess PROJECT impacts on the environment and ACCMA will prepare the appropriate level of environmental documentation and necessary associated supporting investigative studies and technical environmental reports in order to meet the requirements of CEQA and NEPA. If applicable, ACCMA will submit to STATE all investigative studies and technical environmental reports for STATE's review, comment, and approval. The environmental document and/or categorical exemption/exclusion determination, including the administrative draft, draft, administrative final, and final environmental documentation, as applicable, will require STATE's review, comment, and approval prior to public availability.
 - a. If, during preparation of preliminary engineering, preparation of the PS&E, performance of right of way activities, or performance of PROJECT construction, new information is obtained which requires the preparation of additional environmental documentation to comply with CEQA and/or NEPA if applicable, this Agreement will be amended to include completion of these additional tasks by ACCMA.
6. ACCMA agrees to obtain, as a PROJECT cost, all necessary PROJECT permits, agreements and/or approvals from appropriate regulatory agencies, unless the parties agree otherwise in writing. If STATE agrees in writing to obtain said PROJECT permits, agreements, and/or approvals, those said costs shall be paid by ACCMA, as a PROJECT cost.
7. ACCMA shall be fully responsible for complying with and implementing any and all environmental commitments set forth in the environmental documentation, permit(s), agreement(s) and/or environmental approvals for PROJECT. The costs of said compliance and implementation shall be a PROJECT cost.
8. If there is a legal challenge to the environmental documentation, including supporting investigative studies and/or technical environmental report(s), permit(s), agreement(s), environmental commitments and/or environmental approval(s) for PROJECT, all legal costs associated with those said legal challenges shall be a PROJECT cost.
9. STATE, as a PROJECT cost, shall be responsible for preparing, submitting, publicizing and circulating all public notices related to the CEQA environmental process and NEPA environmental process if applicable, including, but not limited to, notice(s) of availability of the environmental document and/or determinations and notices of public hearings. Public notices shall comply with all State and Federal laws, regulations, policies and procedures.
 - a. STATE, as a PROJECT cost, shall be responsible for planning, scheduling and holding of all public meetings/hearings related to the CEQA environmental process and NEPA environmental process if applicable, including, but not limited to, public meetings/hearings on the environmental document. STATE shall provide ACCMA the opportunity to provide comments on any meeting exhibits, handouts or other materials at least ten (10) days prior to any such

meetings/hearings. STATE maintains final editorial control of exhibits, handouts or other material to be used at the public meetings/hearings.

10. In the event ACCMA would like to hold separate and/or additional public meetings regarding the PROJECT, ACCMA must clarify in any meeting notices, exhibits, handouts or other material that STATE is the CEQA Lead Agency and ACCMA is the CEQA Responsible Agency. Such notices, handouts and other materials shall also specify that public comments gathered at such meetings are not part of the CEQA public review process. ACCMA shall provide STATE the opportunity to provide comments on any meeting exhibits, handouts or other materials at least ten (10) days prior to any such meetings/hearings. STATE will maintain final editorial control of exhibits, handouts or other materials to be used at the public meeting/hearing solely with respect to text or graphics that could lead to public confusion over CEQA related roles and responsibilities.
11. All administrative reports, studies, materials, and documentation, including, but not limited to, all administrative drafts and administrative finals, relied upon, produced, created or utilized for PROJECT will be held in confidence pursuant to Government Code section 6254.5(e). The parties agree that said material will not be distributed, released or shared with any other organization, person or group other than the parties' employees, agents and consultants whose work requires that access without the prior written approval of the party with the authority to authorize said release and except as required or authorized by statute or pursuant to the terms of this Agreement.
12. ACCMA's share of all changes in development and construction costs associated with modifications to the basic design features as described above shall be in the same proportion as described in this Agreement, unless mutually agreed to the contrary by STATE and ACCMA in a subsequent amendment to this Agreement.
13. Any hazardous material or contamination of an HM-1 category found within existing SHS right of way during PROJECT shall be the responsibility of STATE. Any hazardous material or contamination of an HM-1 category found within local road right of way during PROJECT shall be the responsibility of ACCMA. For the purpose of this Agreement, hazardous material of HM-1 category is defined as that level or type of contamination which must be remediated by reason of its mere discovery regardless of whether it is disturbed by PROJECT or not. STATE shall sign the HM-1 manifest and pay all costs for remedy or remedial action within existing SHS right of way, except that if STATE determines, in its sole judgment, that STATE's cost for remedy or remedial action is increased as a result of ACCMA's decision to proceed with PROJECT, that additional cost identified by STATE shall be borne by ACCMA. ACCMA shall sign the HM-1 manifest and pay all costs for required remedy or remedial action within local road right of way or other property. While STATE will exert every reasonable effort to fund the remedy or remedial action for which STATE is responsible, in the event STATE is unable to provide funding, ACCMA will have the option to either delay PROJECT until STATE is able to provide that corrective funding or ACCMA may proceed with the remedy or remedial action as a PROJECT expense without any subsequent reimbursement by STATE.
14. Any remedy or remedial action with respect to any hazardous material or contamination of an HM-2 category found within existing SHS right of way shall be the responsibility of ACCMA, who shall sign the HM-2 manifest and management of HM-2 will be a PROJECT cost, if the PROJECT proceeds. Any remedy or remedial action with respect to any hazardous material or contamination of an HM-2 category found within ACCMA right of way shall be the responsibility of ACCMA who shall sign the HM-2

manifest and management of HM-2 will be at ACCMA's cost, if the PROJECT proceeds. For the purposes of this Agreement any hazardous material or contamination of HM-2 category is defined as that level or type of contamination which said regulatory control agencies would have allowed to remain in place if undisturbed had PROJECT not proceeded.

15. If hazardous material or contamination of either HM-1 or HM-2 category is found on new right of way acquired by or on account of ACCMA for PROJECT, ACCMA shall be responsible, at ACCMA's expense, for all required remedy or remedial action and/or protection in the absence of a generator or prior property owner willing and prepared to perform that corrective work.
16. Remedial actions proposed by ACCMA on SHS right of way shall be pre-approved by STATE and shall be performed in accordance with STATE's standards and practices and standards and practices mandated by those Federal and State regulatory agencies.
17. A separate Cooperative Agreement or agreements will be required to address Landscape Maintenance, and to cover responsibilities and funding for the design, right of way and construction phases of PROJECT.
18. Nothing within the provisions of this Agreement is intended to create duties or obligations to or rights in third parties not parties to this Agreement or to affect the legal liability of either party to the Agreement by imposing any standard of care with respect to the development, design, construction, operation, or maintenance of the SHS and public facilities different from the standard of care imposed by law.
19. Neither STATE nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by ACCMA under or in connection with any work, authority or jurisdiction conferred upon ACCMA and arising under this Agreement. It is understood and agreed that ACCMA shall fully defend, indemnify and save harmless STATE and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation and other theories or assertions of liability occurring by reason of anything done or omitted to be done by ACCMA under this Agreement.
20. Neither ACCMA nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by STATE, under or in connection with any work, authority or jurisdiction conferred upon STATE and arising under this Agreement. It is understood and agreed that STATE shall fully defend, indemnify and save harmless ACCMA and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation and other theories or assertions of liability occurring by reason of anything done or omitted to be done by STATE under this Agreement.
21. Prior to the commencement of any work pursuant to this Agreement, either STATE or ACCMA may terminate this Agreement by written notice to the other party.
22. No alteration or variation of the terms of this Agreement shall be valid unless made by a formal amendment executed by the parties hereto and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto.

23. This Agreement shall terminate upon the satisfactory completion of all post-PROJECT construction obligations of ACCMA and the delivery of required PROJECT PA&ED documents, with concurrence of STATE, or on 12/31/2020, whichever is earlier in time, except that the ownership, operation, maintenance, indemnification, environmental commitments, legal challenges, and claims articles shall remain in effect until terminated or modified, in writing, by mutual agreement. Should any construction related or other claims arising out of PROJECT be asserted against one of the parties, the parties agree to extend the fixed termination date of this Agreement, until such time as the construction related or other claims are settled, dismissed or paid.

Signatures are on the next page.

STATE OF CALIFORNIA
Department of Transportation

ALAMEDA COUNTY CONGESTION
MANAGEMENT AGENCY

WILL KEMPTON
Director

By: _____
Deputy District Director

By: _____
Dennis R. Fay
Executive Director

Approved as to form and procedure:

Approved as to form:

Attorney
Department of Transportation

Wendel, Rosen, Black & Dean LLP
ACCMA Counsel

Certified as to budgeting of funds:

District Budget Manager

Certified as to financial terms and
conditions:

Accounting Administrator

ATTACHMENT O

Risk Management Plan

Project Risk Register

DIST- EA		04-2A210K				Project Name: I-580/I-680 Interchange Modifications PSR(PDS))			Project Manager: Issa Bouri(CT) / Ray Akkawi (CMA)			Date Created:	Last Updated:				
						Co - Rte - PM: ALA-580-18.82/R21.43 I-680 R18.40/R21.88			Telephone: 510-836-5220 / 510-836-2560			05/22/07	12/27/07				
ITEM	ID #	Status	Threat / Opportunity	Category	Date Risk Identified	Risk Description	Root Causes	Primary Objective	Overall Risk Rating	Cost/Time Impact Value	Risk Owner	Risk Trigger	Strategy	Response Actions w/ Pros & Cons	Adjusted Cost/Time Impact Value	WBS Item	Status Date and Review Comments
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	04-2A210K-01	Active	Threat	ENV	05/22/07	Lack of consensus with public agencies	Public agencies have different priorities	SCOPE	Probability 4=High (40-59%) High Impact 5 =Very High		Ray Akkawi / Issa Bouri (510) 836-2560 RayAkkawi@accma.ca.gov	Public officials are not supporting alternatives	MITIGATE	(1) Public Agency Participation (2) Prepare Drive-thru Video			
2	04-2A210K-02	Active	Threat	ENV	05/22/07	CT approval of Traffic Operations Report	CT doesn't agree with assumptions/data used for the Traffic Report	TIME	Probability 3=Med (20-39%) High Impact 5 =Very High		Ray Akkawi / Peter Lau 5108362560 RayAkkawi@accma.ca.gov	Schedule for Traffic Report approval is delayed	AVOID	Monthly Coordination to Discuss Issues with CT Traffic Staff			
3	04-2A210K-03	Active	Threat	ENV	05/22/07	Challenge to Environmental Document	Too much agency opposition may influence CT to not approve the PSR/PDS.	TIME	Probability 4=High (40-59%) High Impact 5 =Very High		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Public officials are not supporting alternatives	MITIGATE	Additional Alternative Analysis and Brainstorming Sessions to Develop Every Conceivable Alternative			
4	04-2A210K-04	Active	Threat	ENV	05/22/07	Unforeseen Utility Impacts	Utilities discovered that are not represented on record drawings	COST	Probability 3=Med (20-39%) Med Impact 3 =Med		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Unforeseen Utility Discovered	AVOID	Coordination Meetings with all Utility Owners in the Corridor Early			
5	04-2A210K-05	Active	Threat	ENV	05/22/07	Unforeseen R/W Impacts	As geometrics are studied in more detail, additional R/W Impacts may be discovered.	TIME	Probability 3=Med (20-39%) Med Impact 4 =High		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Additional required Right of Way is identified	MITIGATE	Identify preferred alternative and associated geometrics early to identify accurate ROW Impacts			
6	04-2A210K-06	Active	Threat	ENV	05/22/07	Ability to fund the Project	Funding is not available	TIME	Probability 5=Very High (60-99%) High Impact 5 =Very High		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Funding is not identified	ACCEPT	Develop Low Cost Alternative as an Interim Project			
7	04-2A210K-07	Active	Threat	ENV	05/22/07	Ability to mitigate the impacts to Dublin Sportspark	Land available for mitigation is not available	COST	Probability 4=High (40-59%) High Impact 4 =High		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Discussions with City of Dublin indicate land available for park usage is limited	MITIGATE	Early Coordination with City & FHWA			

Project Risk Register

DIST- EA 04-2A210K					Project Name: I-580/I-680 Interchange Modifications PSR(PDS)			Project Manager: Issa Bouri(CT) / Ray Akkawi (CMA)			Date Created:	Last Updated:					
					Co - Rte - PM: ALA-580-18.82/R21.43 I-680 R18.40/R21.88			Telephone: 510-836-5220 / 510-836-2560			05/22/07	12/27/07					
ITEM	ID #	Status	Threat / Opportunity	Category	Date Risk Identified	Risk Description	Root Causes	Primary Objective	Overall Risk Rating	Cost/Time Impact Value	Risk Owner	Risk Trigger	Strategy	Response Actions w/ Pros & Cons	Adjusted Cost/Time Impact Value	WBS Item	Status Date and Review Comments
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
8	04-2A210K-08	Active	Threat	ENV	05/22/07	Ability to mitigate the impacts to BART during construction	As geometrics are studied in more detail, impact to BART during construction seem to be more extensive.	SCOPE	Probability 3=Med (20-39%) Med Impact 3 =Med		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Design of Preferred Alternative identifies BART impact may not be mitigated	MITIGATE	Frequent Coordination Meeting with BART Staff & Management			
9	04-2A210K-09	Active	Threat	ENV	12/27/07	Placement flood control facility within State RW Requires Longitudinal Encroachment, which requires HQ approval	Alternative 3 requires a portion of Dublin Creek to be enclosed in a culvert.	TIME	Probability 4 =High High Impact 4 =High		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Alternative 3 is chosen as the preferred alternative and further studies of cross sections and geometrics indicate Dublin Creek will be enclosed in a culvert and will be located within the State right of way.	MITIGATE	Relocate facility outside State right of way			
10	04-2A210K-10	Active	Threat	ENV	12/27/07	Impacts to the Dublin Library	As geometrics are studied in more detail, a portion of Dublin library parking lot is eliminated	SCOPE	Probability 5=Very High (80-99%) High Impact 3 =Med		Ray Akkawi / Issa Bouri 5108362560 RayAkkawi@accma.ca.gov	Design of Preferred Alternative indicates a portion of the parking lot will be impacted	MITIGATE	Relocate parking lot within Dublin sportspark			