



Chapter 9: Cost Estimates and Conceptual Design

This chapter focuses on the conceptual design and probable costs for the improvements identified in the Recommended Concept Plan. Conceptual engineering is based on City of San Diego design standards, Street Design Manual, and Traffic Calming Manual. Cost estimates have been prepared in accordance with City of San Diego Cost Estimating guidelines. In addition to estimating the cost to construct the improvement, environmental costs, design costs, construction costs, administrative costs and other project related costs have been estimated as a percentage of the total construction costs.

9.1 RIGHT OF WAY ASSUMPTIONS

Right of way costs are not included in the estimates of costs included in this document. However, it is feasible to assume that right of way will need to be acquired to complete some of the improvements identified in the Recommended Concept Plan. Locations anticipated to affect existing right of way include:

- Improvement B: Sidewalks & Bicycle Lanes on Rosecrans from Old Town to Sports Arena
- Improvement C: Rosecrans & Sports Arena Intersection
- Improvement D: Rosecrans & Midway Intersection
- Improvement E: Bicycle Lanes on Rosecrans (Midway to Lytton) – near the intersection of Lytton
- Improvement Q: Complete Sidewalks on West Side of Rosecrans (south of Talbot)

Since the conceptual engineering is based on limited information pertaining to property lines, utilities and other factors, the true impacts to right of way are unknown. Therefore, it is premature to assume the right of way costs associated with these improvements. Details of the impacts to right of way will be resolved as part of a more detailed design effort when these improvements move forward.

9.2 CONCEPTUAL ENGINEERING DESIGN CRITERIA

The elements of the concept plan are based upon the design standards established in the San Diego Regional Design Drawings and City of San Diego Street Design Manual. As a minimum the following design criteria were established:

Intersection and Road Design Criteria:

- Minimum 11 foot through lanes
- Minimum 10 foot left and right turn lanes
- Minimum 5 foot bicycle lanes
- Raised median nose shall be no less than four (4) feet wide.
- Planting in the medians shall not obstruct line of sight for the side streets



Traffic Signal Design Criteria:

- New or modified traffic signals include the installation of bicycle loops in the pavement where existing or proposed bicycle lanes connect at the intersection.
- New or modified traffic signals shall include the installation of ADA accessible features including audible push button and/or count down timers.
- New or modified traffic signals shall consider the use of highly reflective paint to improve the visibility of pedestrians. The use of highly reflective paint shall be determined based on the volume of pedestrian traffic, volume of vehicular traffic, and visibility of pedestrians at or near the intersection.

Pedestrian Facility Design Criteria

- Minimum 4 foot sidewalks (where new installations occur)
- New directional curb ramps at intersections where sidewalk improvements or intersection improvements are recommended. New curb ramps designed to meet current ADA standards.
- Curb extensions designed to meet Traffic Calming Design Criteria established in the Street Design Manual. All curb extensions include improvements to drainage at the curb extension to reduce the potential for ponding or flooding at the intersection. All curb extensions shall have directional curb ramps that meet current ADA standards.
- Location of transit stops along the corridor is based upon the surrounding land use, existing/future demand and proximity to the intersection. When possible, transit stops were co-located with signalized intersections to improve pedestrian accessibility.

Traffic Calming Design Criteria

- All traffic calming devices proposed for the corridor are designed based on the criteria established in the City's Street Design Manual.

9.3 COST ESTIMATE ASSUMPTIONS

Construction additions and other additions account for contingencies, field orders, environmental, design and administrative costs based on City of San Diego unit costs for preparing cost estimates. As shown in the table, these overhead costs account for a markup of over 96% of the proposed construction costs. The percentages used in this analysis are consistent with City of San Diego's requirements for estimating probable costs. A description of each of these items is provided below. Percentages provided are the percentage of the total construction cost allocated to each additional cost identified.

- ❖ **Mobilization is a construction related cost (2%).** It is the fee the contractor will charge to the City to get the necessary equipment on-site to do the identified work. Four percent of the probable cost has been included in the estimate to account for mobilization.
- ❖ **Contingency is a construction related cost (25%).** It is a buffer that will offset change in unit costs and quantities as the process transitions from conceptual design to final engineering design. It accounts for

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elements of the project that are uncovered in final design cannot reasonably be identified in the conceptual design phase.

- ❖ **Bond Costs are a construction related cost (2%).** These are the costs associated with bonding for the individual projects.
- ❖ **Field Orders are a construction related cost (5%).** It accounts for changes in the field that are necessary to address issues that arise in the field during construction of the project.
- ❖ **Design is an additional, non-construction related cost (25%).** It relates to costs associated with final design engineering.
- ❖ **Administrative cost is an additional, non-construction related cost (25%).** This is the cost associated with plan check fees, inspection services, contract administration and other city related services.
- ❖ **Environmental cost is an additional, non-construction related cost (15%).** It relates to the costs associated with preparing and processing the necessary environmental documents for the project. This includes the processing of environmental permits and coordination with the environmental protection agencies.

9.4 COST ESTIMATES BY STUDY AREA

The project study area was broken into four distinct areas. Table 9-1 summarizes the probable costs for the design, construction and administrative costs associated with the project, in year 2010 dollars for Areas 1 through 4. The total design, construction and administrative costs for the corridor are broken down as follows:

- Area 1: \$7,595,585
- Area 2: \$1,887,084
- Area 3: \$1,997,443
- Area 4: \$1,838,713

Combined, the cost for the improvements along the Rosecrans Corridor is estimated at \$13.3 million, which includes construction, design and administrative costs in year 2010 dollars.



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**Table 9-1.
Area 1 Cost Estimates**

Area	Construction	Contingency (25%)	Bond (2%)	Field Orders (25%)	Mobilization (2%)	Admin (25%)	Design (25%)	Environmental (15%)	Total
Improvement A	\$334,225	\$83,556	\$8,356	\$104,445	\$8,356	\$104,445	\$104,445	\$62,667	\$810,496
Improvement B	\$520,788	\$130,197	\$13,020	\$162,746	\$13,020	\$162,746	\$162,746	\$97,648	\$1,262,912
Improvement C	\$1,550,291	\$387,573	\$38,757	\$484,466	\$38,757	\$484,466	\$484,466	\$290,680	\$3,759,456
Improvement D	\$595,130	\$148,783	\$14,878	\$185,978	\$14,878	\$185,978	\$185,978	\$111,587	\$1,443,191
Improvement E	\$131,765	\$32,941	\$3,294	\$41,177	\$3,294	\$41,177	\$41,177	\$24,706	\$319,530
Total Area 1	\$3,132,200	\$785,175	\$78,517	\$981,469	\$78,517	\$981,469	\$981,469	\$588,881	\$7,616,197

**Table 9-2.
Area 2 Cost Estimates**

Area	Construction	Contingency (25%)	Bond (2%)	Field Orders (25%)	Mobilization (2%)	Admin (25%)	Design (25%)	Environmental (15%)	Total
Improvement F	\$247,886	\$61,971	\$6,197	\$77,464	\$6,197	\$77,464	\$77,464	\$46,479	\$601,123
Improvement G	\$125,112	\$31,278	\$3,128	\$39,098	\$3,128	\$39,098	\$39,098	\$23,459	\$303,397
Improvement H	\$47,040	\$11,760	\$1,176	\$14,700	\$1,176	\$14,700	\$14,700	\$8,820	\$114,072
Improvement I	\$328,141	\$82,035	\$8,204	\$102,544	\$8,204	\$102,544	\$102,544	\$61,526	\$795,742
Improvement J	\$30,000	\$7,500	\$750	\$9,375	\$750	\$9,375	\$9,375	\$5,625	\$72,750
Total Area 2	\$778,179	\$194,545	\$19,454	\$243,181	\$19,454	\$243,181	\$243,181	\$145,909	\$1,887,084



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**Table 9-3.
Area 3 Cost Estimates**

Area	Construction	Contingency (25%)	Bond (2%)	Field Orders (25%)	Mobilization (2%)	Admin (25%)	Design (25%)	Environmental (15%)	Total
Improvement K	\$105,545	\$26,386	\$2,639	\$32,983	\$2,639	\$32,983	\$32,983	\$19,790	\$255,947
Improvement L	\$276,767	\$69,192	\$6,919	\$86,490	\$6,919	\$86,490	\$86,490	\$51,894	\$671,159
Improvement M	\$201,196	\$50,299	\$5,030	\$62,874	\$5,030	\$62,874	\$62,874	\$37,724	\$487,899
Improvement N	\$207,181	\$51,795	\$5,180	\$64,744	\$5,180	\$64,744	\$64,744	\$38,846	\$502,413
Improvement O	\$33,000	\$8,250	\$825	\$10,313	\$825	\$10,313	\$10,313	\$6,188	\$80,025
Total Area 3	\$823,688	\$205,922	\$20,592	\$257,402	\$20,592	\$257,402	\$257,402	\$154,441	\$1,997,443

**Table 9-4.
Area 4 Cost Estimates**

Area	Construction	Contingency (25%)	Bond (2%)	Field Orders (25%)	Mobilization (2%)	Admin (25%)	Design (25%)	Environmental (15%)	Total
Improvement P	\$68,924	\$17,231	\$1,723	\$21,539	\$1,723	\$21,539	\$21,539	\$12,923	\$167,140
Improvement Q	\$151,172	\$37,793	\$3,779	\$47,241	\$3,779	\$47,241	\$47,241	\$28,345	\$366,592
Improvement R	\$167,507	\$41,877	\$4,188	\$52,346	\$4,188	\$52,346	\$52,346	\$31,408	\$406,205
Improvement S	\$36,570	\$9,142	\$914	\$11,428	\$914	\$11,428	\$11,428	\$6,857	\$88,682
Improvement T	\$56,560	\$14,140	\$1,414	\$17,675	\$1,414	\$17,675	\$17,675	\$10,605	\$137,158
Improvement U	\$250,000	\$62,500	\$6,250	\$78,125	\$6,250	\$78,125	\$78,125	\$46,875	\$606,250
Improvement V	\$27,500	\$6,875	\$688	\$8,594	\$688	\$8,594	\$8,594	\$5,156	\$66,688
Total Area 4	\$758,232	\$189,558	\$18,956	\$236,948	\$18,956	\$236,948	\$236,948	\$142,169	\$1,838,713



9.5 COST ESTIMATES BY MODE

Many of the improvements located within the study area improve accessibility or operations for more than one mode. For the purpose of estimating the cost of the improvements by model, the following provides a brief description of the costs allocated to each mode:

- Pedestrian Improvements: Sidewalks, Curb Ramps, Crosswalks, Sidewalk Obstruction Removal, Curb Extensions
- Bicycle Improvements: Bicycle Lane Striping, Parking Removal
- Transit Improvements: Transit Stop Relocation, Transit Priority Measures, Extension of Queue Jump Lane
- Vehicle Circulation Improvements: Signing & Striping, New Traffic Signals, Traffic Signal Modifications, Median Modifications

Cost by mode is allocated in Tables 9-5 through 9-9. As shown, pedestrian improvements account for approximately 25% of the estimated construction cost for the project. Bicycle and transit combined account for approximately 10%. Vehicle improvements account for the remaining 65% of the estimated construction costs for the project. It should be noted that some of the improvements included in the vehicle construction costs would be beneficial to multiple modes. For example, traffic calming improvements improve the safety for vehicles by slowing speeds and reducing the severity of accidents, but also improves the walking and bicycling environment along the corridor. Clearly, the highest cost-benefits to mobility will be realized when access and mobility are improved for more than one mode.

9.6 COST ESTIMATES BY IMPROVEMENT LOCATION

Detailed cost estimates for each of the improvement locations provided in this report reflect the estimates reviewed by City of San Diego engineering staff and are based on 2010 cost estimating guidelines. A brief description of the proposed improvement and estimated construction costs are summarized in the following sections. Included with the cost estimate is the conceptual design of the improvement.

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Table 9-5.

Summary of Construction Cost by Mode – Area 1

Area 1	Pedestrian	Bicycle	Transit	Vehicle	TOTAL
Improvement A Median at Moore	\$24,700			\$309,525	\$334,225
Improvement B Sidewalk & Bicycle Lanes	\$288,788	\$27,000	\$5,000	\$200,000	\$520,788
Improvement C Rosecrans & Sports Arena	\$137,485			\$602,006	\$739,491
Improvement D Rosecrans & Midway	\$89,800	\$29,420	\$54,500	\$421,410	\$595,130
Improvement E Bicycle Lanes on Rosecrans	\$30,400	\$92,865	\$8,500		\$131,765
Future Road between Kurtz and Sports Arena				\$305,100	\$305,100
Future Connection of Sports Arena to Pacific Highway				\$506,100	\$506,100
Total Area 1	\$571,173	\$149,285	\$68,000	\$2,344,141	\$3,132,200

Table 9-6.

Summary of Construction Cost by Mode – Area 2

Area 2	Pedestrian	Bicycle	Transit	Vehicle	TOTAL
Improvement F Signal Modifications				\$247,886	\$247,886
Improvement G Medians & Turn Pockets				\$125,112	\$125,112
Improvement H Widen Bicycle Lanes		\$47,040			\$47,040
Improvement I Side Street Curb Extensions	\$328,141				\$328,141
Improvement J Consolidation of Transit Stops			\$30,000		\$30,000
Total Area 2	\$328,141	\$47,040	\$30,000	\$372,998	\$778,179



Table 9-7.
Summary of Construction Cost by Mode – Area 3

Area 3	Pedestrian	Bicycle	Transit	Vehicle	TOTAL
Improvement K Widen Bicycle Lanes		\$105,545			\$105,545
Improvement L Medians & Turn Pockets				\$276,767	\$276,767
Improvement M Signal at Emerson				\$201,196	\$201,196
Improvement N Side Street Curb Extensions	\$207,181				\$207,181
Improvement O Relocate Transit Stops			\$33,000		\$33,000
Total Area 3	\$207,181	\$105,545	\$33,000	\$477,962	\$823,688

Table 9-8.
Summary of Construction Cost by Mode – Area 4

Area 4	Pedestrian	Bicycle	Transit	Vehicle	TOTAL
Improvement P Restripe Rosecrans/Talbot				\$68,924	\$68,924
Improvement Q Complete Sidewalks	\$151,172				\$151,172
Improvement R Curb Extensions	\$167,507				\$167,507
Improvement S Median Islands at Armada				\$36,570	\$36,570
Improvement T Chokers				\$56,560	\$56,560
Improvement U Roundabout at McCall				\$250,000	\$250,000
Improvement V Transit Stop Relocations			\$27,500		\$27,500
Total Area 4	\$318,679	\$0	\$27,500	\$412,054	\$758,233

Table 9-9.
Summary of Cost by Mode for the Corridor (Construction, Design & Administrative Costs)

Area 4	Pedestrian	Bicycle	Transit	Vehicle	TOTAL
Area 1	\$571,173	\$149,285	\$68,000	\$2,344,141	\$3,132,200
Area 2	\$328,141	\$47,040	\$30,000	\$372,998	\$778,179
Area 3	\$207,181	\$105,545	\$33,000	\$477,963	\$823,689
Area 4	\$318,679	\$0	\$27,500	\$412,054	\$758,233
TOTAL FOR CORRIDOR	\$1,425,174	\$301,870	\$158,500	\$3,607,156	\$5,492,301

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A. MOORE STREET MEDIAN CLOSURE

- Construct raised median and restrict access at Moore Street to right turn in and right turn out on northbound and southbound approach.
- Construct southbound left turn pocket at Hancock Street. Provide protected left turn phasing and allow u-turns on southbound approach.
- Allow two-way traffic on Hancock Street between Camino Del Rio and Rosecrans.
- Construct curb extension at Hancock Street/Riley Street.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
IMPROVEMENT A: Moore Street Median Closure				
New Concrete Raised Median	10,100	SF	\$15.00	\$151,500
New Curb and Gutter (Includes Median)	1,200	LF	\$22.00	\$26,400
New Curb Extension (Hancock/Riley)	1	EA	\$8,000.00	\$8,000
New Curb Ramps	4	EA	\$2,800.00	\$11,200
Drainage for Curb Extension	1	EA	\$7,500.00	\$7,500
Proposed Striping	2,940	LF	\$2.00	\$5,880
New Pavement Markings	2	EA	\$100.00	\$200
Demo Existing Median	4,540	SF	\$8.00	\$36,320
Demo Existing Striping	1,475	LF	\$3.00	\$4,425
Demo Existing Pavement Markings	2	EA	\$25.00	\$50
Sawcut	1,830	LF	\$5.00	\$9,150
AC Paving	4,540	SF	\$10.00	\$45,400
Traffic Signal Modification	1	LS	\$25,000.00	\$25,000
Fire Hydrant Relocation	1	EA	\$3,200.00	\$3,200
Subtotal				\$334,225

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- LEGEND**
-  EXISTING TRANSIT STOP
 -  EXISTING TRANSIT STOP TO BE RELOCATED
 -  NEW TRANSIT STOP
 -  REMOVE EXISTING TRANSIT STOP
 -  NEW CURB RAMP
 -  NEW SIDEWALK OR CURB EXTENSION
 -  NEW CURB
 -  RAISED LANDSCAPED MEDIAN
 -  CURB EXTENSIONS (W/OR NO LANDSCAPE)
 -  RAISED MEDIAN (HARDSCAPE)
 -  PROPOSED SIGNAL
 -  PROPOSED STRIPING
 -  EXISTING PARKING TO BE REMOVED
 -  OVERHEAD SIGN
 -  FLASHING BEACON WITH CURVE AHEAD SIGN
 -  HIGHLY REFLECTIVE RPMs
 -  LIGHTED SIDEWALK
 -  ROW
 -  PROPERTY LINES



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**IMPROVEMENT A:
MEDIAN AT MOORE ST.**

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B. BICYCLE LANES AND SIDEWALKS ON ROSECRANS (Sports Arena to Pacific Highway)

- Reconstruct or construct new sidewalks on northside of Rosecrans on all blocks. Where appropriate, construct curb extensions to reduce crossing distance for pedestrians across Rosecrans.
- Reconstruct sidewalk on southside of Rosecrans from Kurtz Street to Hancock Street.
- Install traffic signal at Hancock Street to improve pedestrian and vehicular access. Provide for protected-permissive phasing, if appropriate, while single left turn lane is provided.
- When warranted, re-stripe eastbound Rosecrans at Hancock Street to provide dual left turn lanes. This will require remove of on-street parking on the south side of Rosecrans and along Hancock Street. Provide protected phasing at the intersection when restriping occurs.
- Extend the existing transit only lane at Pacific Highway.
- Restrict left turn access at Jefferson Street through the installation of delineators
- Reconstruct northwest corner at Pacific Highway/Rosecrans by extending the existing curb to align with the northeast corner of the intersection. In doing so, driveways along Rosecrans immediately west of Pacific Highway would be closed.
- It may be necessary to modify the storm drain inlets in the area to accommodate the curb extensions.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
IMPROVEMENT B: Bicycle Lanes and Sidewalks on Rosecrans (Sports Arena to Pacific Highway)				
New or Reconstructed Sidewalks	14,585	SF	\$8.00	\$116,678
New Curb Extensions	3	EA	\$5,000.00	\$15,000
New Curb and Gutter	1,350	LF	\$22.00	\$29,700
New Curb Ramps	6	EA	\$2,800.00	\$16,800
New Traffic Signal	1	LS	\$200,000.00	\$200,000
Proposed Striping	13,500	LF	\$2.00	\$27,000
New Pavement Markings	15	EA	\$100.00	\$1,500
New Plastic Delineators	6	EA	\$50.00	\$300
Demo Existing Curb and Gutter	740	LF	\$5.00	\$3,700
Demo Existing Sidewalks	5,180	SF	\$2.00	\$10,360
Demo Existing Striping	6,050	LF	\$3.00	\$18,150
Demo Existing Pavement Markings	14	EA	\$25.00	\$350
Sawcut	1,350	LF	\$5.00	\$6,750
AC Paving	650	SF	\$10.00	\$6,500
Storm Drain Improvements (curb extension)	3	EA	\$15,000.00	\$45,000
Utility Relocation/Modification	2	EA	\$1,500.00	\$3,000
Dry Utility Adjustments	2	EA	\$2,500.00	\$5,000
			Subtotal	\$520,788

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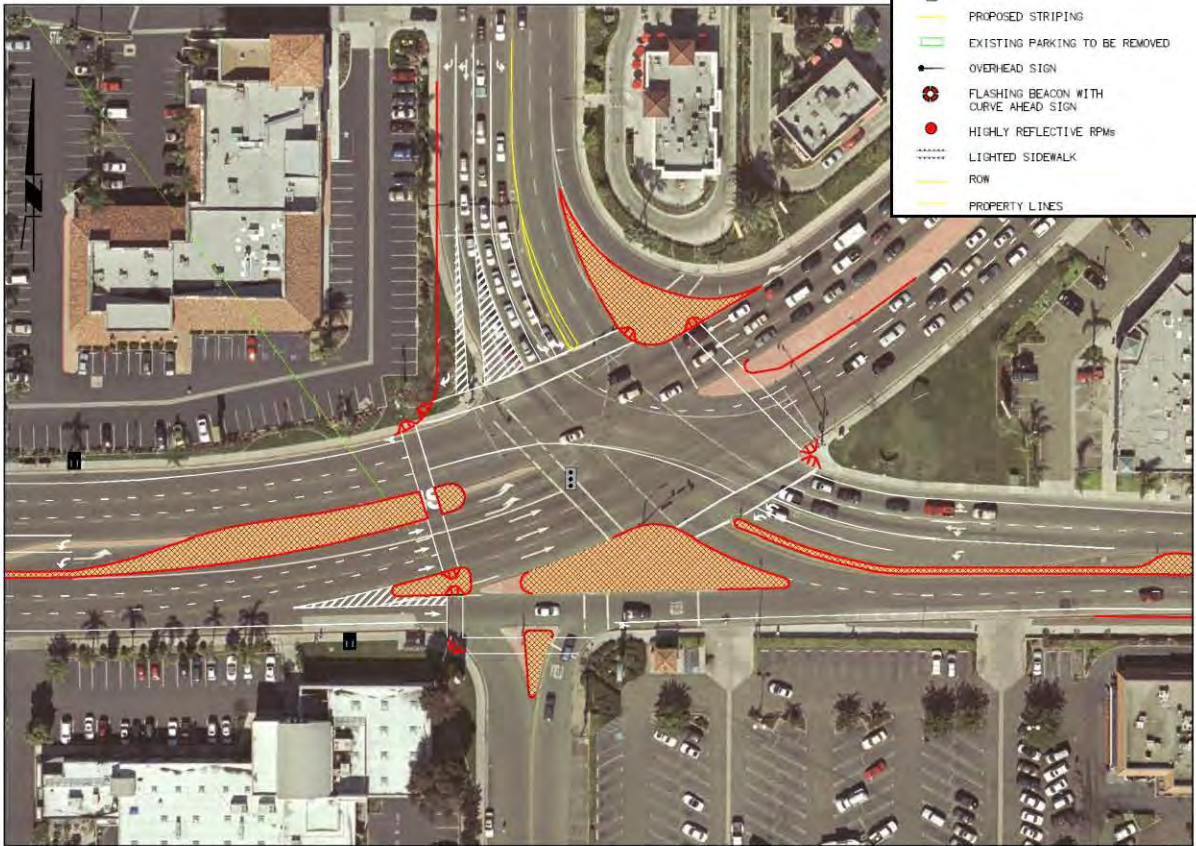


C. EXTENSION OF SPORTS ARENA THROUGH ROSECRANS INTERSECTION

- Remove existing northbound left turn movement on Rosecrans Street.
- Provide overhead signage on the northbound approach to Sports Arena directing traffic to Hancock Street for westbound access to Sports Arena.
- Modification to the existing raised median island on the east side of the intersection to allow eastbound traffic through the intersection.
- Modifications to the southwest corner to construct an eastbound through lane and dedicated right turn lane on eastbound Sports Arena Boulevard.
- Modifications to the traffic signal and traffic signal timing.
- Modifications to existing medians on northbound Rosecrans and southbound Camino del Rio.
- Re-stripe crosswalks and bicycle lanes through the intersection.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
IMPROVEMENT C: Extension of Sports Arena through Camino Del Rio-Rosecrans Intersection				
New Concrete Raised Median	13,450	SF	\$15.00	\$201,750
New Curb and Gutter (Includes Median)	2,970	LF	\$22.00	\$65,340
New or Reconstructed Sidewalks	1,180	SF	\$8.00	\$9,442
New Curb Ramps	9	EA	\$2,800.00	\$25,200
Proposed Striping	8,480	LF	\$2.00	\$16,960
New Pavement Markings	12	EA	\$100.00	\$1,200
Demo Existing Median	9,240	SF	\$8.00	\$73,920
Demo Existing Curb and Gutter	265	LF	\$5.00	\$1,327
Demo Existing Sidewalks	1,620	SF	\$2.00	\$3,240
Demo Existing Striping	5,970	LF	\$3.00	\$17,910
Demo Existing Pavement Markings	16	EA	\$25.00	\$400
Sawcut	4,640	LF	\$5.00	\$23,200
AC Paving	4,960	SF	\$10.00	\$49,603
Traffic Signal Modification	1	LS	\$150,000.00	\$150,000
Overhead Signage	2	EA	\$25,000.00	\$50,000
Storm Drain Improvements	1	EA	\$50,000.00	\$50,000
			Subtotal	\$739,491

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**IMPROVEMENT C:
SPORTS ARENA EXTENSION**

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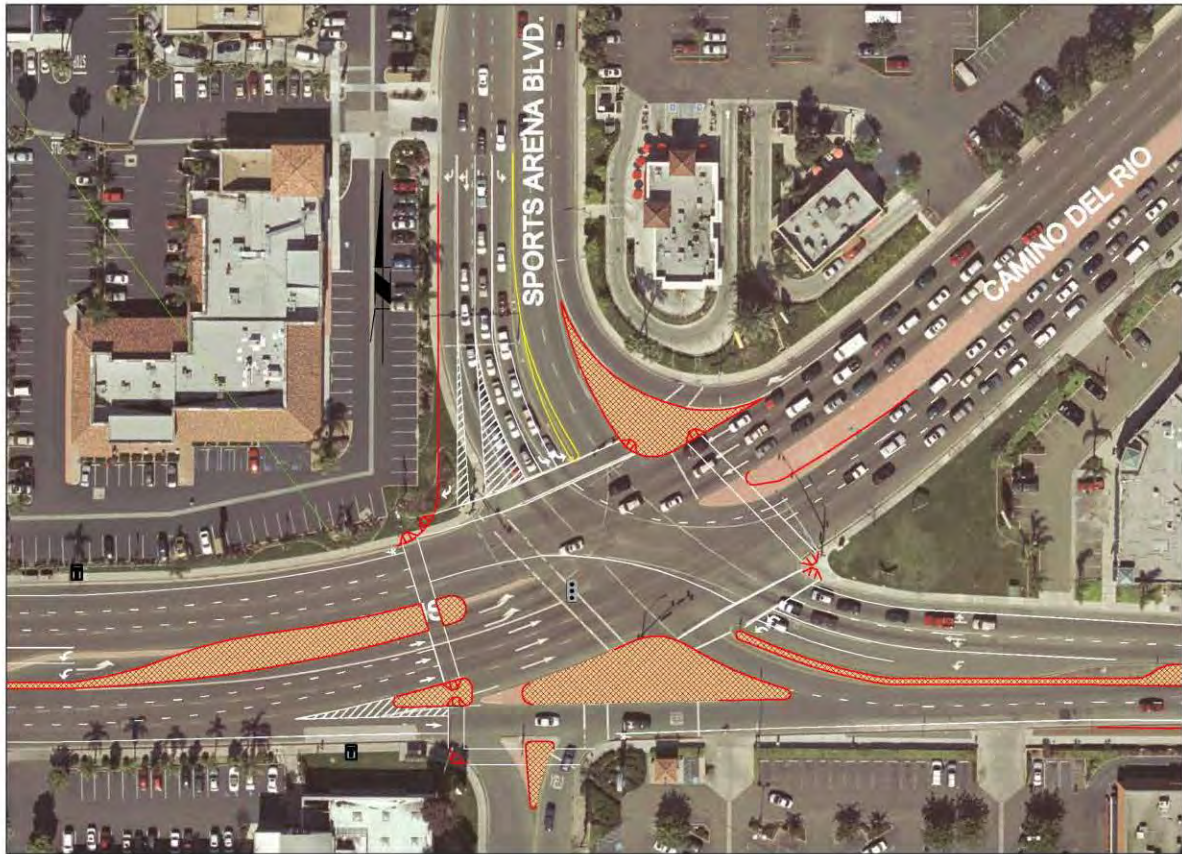
C. EXTENSION OF SPORTS ARENA THROUGH ROSECRANS INTERSECTION (continued)

- Two elements of the Sports Arena improvements would also need to be constructed to complete the circulation improvements in the North Bay area:
- New Road between Kurtz and Sports Arena that would align with Greenwood Street. This extension would require additional right of way that is not included in the estimated cost provided in the table below. Costs estimated include construction of the road and do not include additional drainage or utility requirements. This improvement may be linked to redevelopment of the Sports Arena area. Therefore, such improvements may be part of a larger plan and are premature to estimate at this time.
- Connection to Pacific Highway from Sports Arena Boulevard. This connection will require the acquisition of right of way. There are alignment opportunities through existing parking lots that would allow this improvement to be compatible with existing development. However, there would be implications to parking and access if such improvements were constructed. Further investigation of this improvement is required to full understand the right of way impacts, costs and parking implications. Therefore, the costs summarized in this chapter relate to the construction costs of the road and associated facilities. Additional costs associated with drainage, street lighting, utilities and right of way were unknown at the time this report was prepared.

Future Road between Kurtz and Sports Arena				
New Curb and Gutter	850	LF	\$22.00	\$18,700
New Sidewalks	4,250	SF	\$8.00	\$34,000
Proposed Striping	750	LF	\$2.00	\$1,500
New Stop Signs	2	EA	\$100.00	\$200
Demo Existing AC Paving	17,000	SF	\$3.50	\$59,500
New Curb Ramps	4	EA	\$2,800.00	\$11,200
AC Paving	17,000	SF	\$10.00	\$170,000
Street Lighting	1	LS	\$10,000.00	\$10,000
Subtotal				\$305,100

Future Signalized, Full Access Connection from Sports Arena to Pacific Highway				
New Curb and Gutter	850	LF	\$22.00	\$18,700
New Sidewalks	4,250	SF	\$8.00	\$34,000
Proposed Striping	1,250	LF	\$2.00	\$2,500
New Stop Signs	2	EA	\$100.00	\$400
Demo Existing AC Paving	17,000	SF	\$3.50	\$59,500
New Curb Ramps	4	EA	\$2,800.00	\$11,200
AC Paving	17,000	SF	\$10.00	\$170,000
Street Lighting	1	LS	\$10,000.00	\$10,000
Subtotal				\$506,100

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**IMPROVEMENT C:
SPORTS ARENA EXTENSION
& FUTURE ROAD**

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D. ROSECRANS AND MIDWAY INTERSECTION IMPROVEMENTS

- Provide dual northbound left-turn lanes from Rosecrans onto Midway. (short term City project)
- Extend the existing southbound left-turn pockets. (short term City project)
- Widen to construct a dedicated northbound right-turn pocket. (mid to long term)
- Widen to provide dedicated Class II bicycle lanes. (mid to long term)
- Relocate existing transit stop to new curb location. (mid to long term)
- Allow transit queue jump in northbound and southbound dedicated right turn lane (long term)
- Storm drain improvements will be required to accommodate the proposed modifications to the curb and gutter

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
IMPROVEMENT D: Rosecrans and Midway Intersection Improvements				
New Concrete Raised Median	5,580	SF	\$15.00	\$83,700
New Curb and Gutter (short-term)(Includes Med.)	1,920	LF	\$22.00	\$42,240
New or Reconstructed Sidewalks (short-term)	9,600	SF	\$8.00	\$76,800
New Curb Ramps	1	EA	\$2,800.00	\$2,800
Proposed Striping	7,210	LF	\$2.00	\$14,420
New Pavement Markings	14	EA	\$100.00	\$1,400
Demo Existing Median	7,640	SF	\$8.00	\$61,120
Demo Existing Sidewalks	5,930	SF	\$2.00	\$11,860
Demo Existing Striping	4,730	LF	\$3.00	\$14,190
Demo Existing Pavement Markings	7	EA	\$25.00	\$175
Sawcut	5,500	LF	\$5.00	\$27,500
AC Paving	9,020	SF	\$10.00	\$90,200
Storm Drain Improvements	1	LS	\$100,000	\$100,000
Traffic Signal Modification	1	LS	\$15,000.00	\$15,000
Widening for Transit Queue Jump Lane (long-term)				
New Curb and Gutter (long-term)	200	LF	\$22.00	\$4,400
New or Reconstructed Sidewalks (long-term)	1,000	SF	\$8.00	\$8,000
New Curb Ramps	1	EA	\$2,200.00	\$2,200
Demo Short-Term Curb and Gutter	215	LF	\$5.00	\$1,075
Demo Short-Term Sidewalk	1,075	SF	\$2.00	\$2,150
Sawcut	400	LF	\$5.00	\$2,000
AC Paving	1,920	SF	\$10.00	\$19,200
New Pavement Markings	2	EA	\$100.00	\$200
Traffic Signal Modification (Loops/Bike Loops)	1	LS	\$10,000.00	\$10,000
Utility Relocation	1	EA	\$1,500.00	\$1,500
Dry Utility Relocation	2	EA	\$2,500	\$5,000
			Subtotal	\$595,130

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design



E. BICYCLE LANES ON ROSECRANS & REMOVAL OF PARKING

- Remove existing signage related to existing on-street parking
- Stripe minimum six foot (6') bike lanes between Midway and Lytton
- May require right of way near intersection of Rosecrans/Lytton to accommodate bicycle lane through intersection.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
IMPROVEMENT E: Bicycle Lanes on Rosecrans and Removal of Parking				
New Curb and Gutter (Nimitz)	620	LF	\$22.00	\$13,640
New or Reconstructed Sidewalks	3,100	SF	\$8.00	\$24,800
New Curb Ramps	2	EA	\$2,800.00	\$5,600
Reconstruct Drive Approach	1	EA	\$1,500.00	\$1,500
Proposed Striping	13,420	LF	\$2.00	\$26,840
New Pavement Markings	8	EA	\$100.00	\$800
Demo Existing Striping	9,620	LF	\$3.00	\$28,860
Demo Existing Pavement Markings	5	EA	\$25.00	\$125
Sawcut	620	LF	\$5.00	\$3,100
Traffic Signal Modification (Loops/Bike Loops)	1	LS	\$15,000.00	\$15,000
Utility Relocation	2	EA	\$1,500.00	\$3,000
New Transit Stop	1	EA	\$8,500.00	\$8,500
			Subtotal	\$131,765

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

-  EXISTING TRANSIT STOP
-  EXISTING TRANSIT STOP TO BE RELOCATED
-  NEW TRANSIT STOP
-  REMOVE EXISTING TRANSIT STOP
-  NEW CURB RAMP
-  NEW SIDEWALK OR CURB EXTENSION
-  NEW CURB
-  RAISED LANDSCAPED MEDIAN
-  CURB EXTENSIONS (W/OR W/O LANDSCAPE)
-  RAISED MEDIAN (HARDSCAPE)
-  PROPOSED SIGNAL
-  PROPOSED STRIPING
-  EXISTING PARKING TO BE REMOVED
-  OVERHEAD SIGN
-  FLASHING BEACON WITH CURVE AHEAD SIGN
-  HIGHLY REFLECTIVE RPMs
-  LIGHTED SIDEWALK
-  ROW
-  PROPERTY LINES



Cost Estimates and Conceptual Design



**IMPROVEMENT E:
REMOVE STRIPING &
BIKE LANES**

**ROSECRANS CORRIDOR
MOBILITY STUDY**



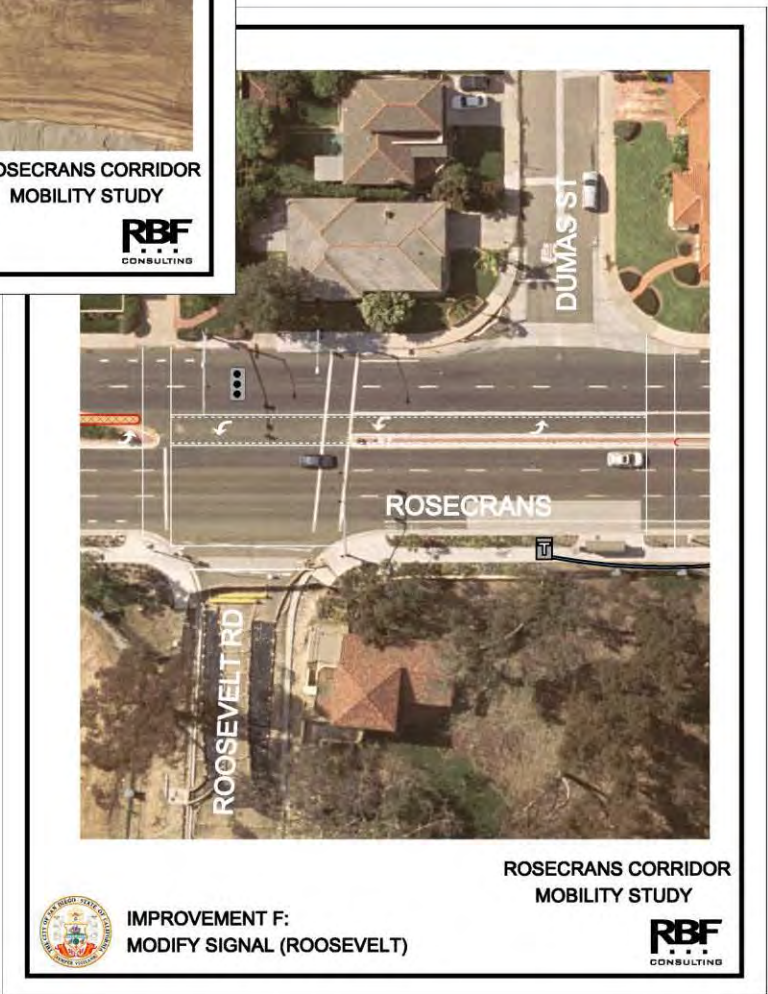
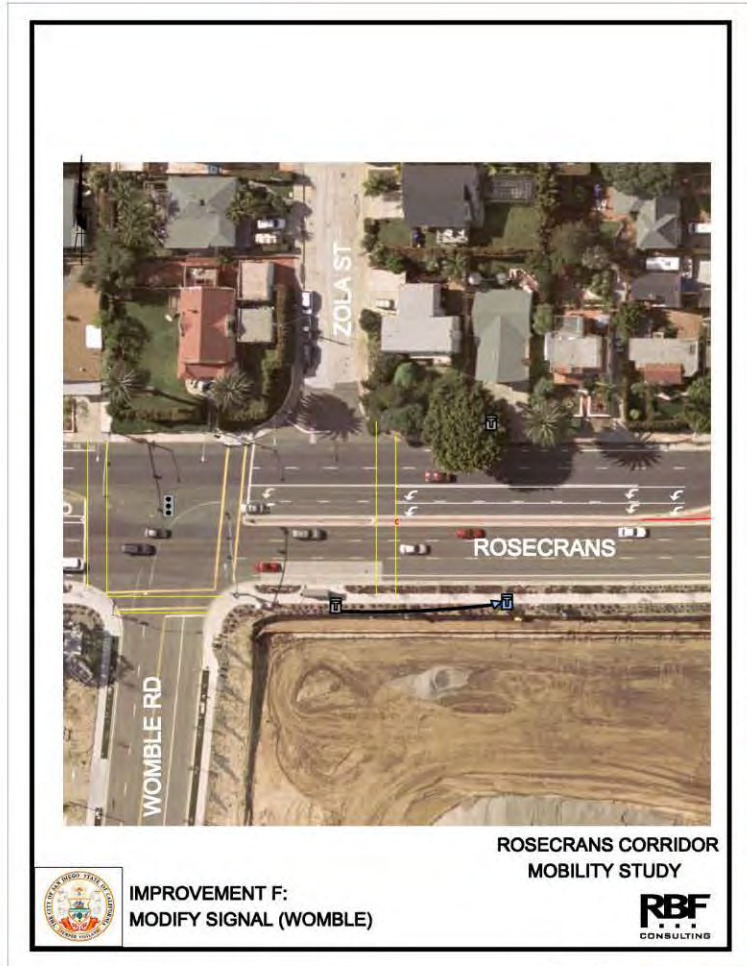


F. MODIFIED SIGNALS AT DUMAS/ROOSEVELT AND ZOLA/WOMBLE

- Modify traffic signal at Rosecrans/Roosevelt to include side street control at Dumas Street. This will require removal of existing raised medians and restriping of the intersection.
- Modify traffic signal at Rosecrans/Womble Road to include side street control at Zola Street. This will require removal of existing raised medians and restriping of the intersection.
- New curb ramps shall be placed at all new pedestrian crossing locations. Curb ramps should meet all current ADA standards

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvements F: Modified Signals at Dumas/Roosevelt and Zola/Womble				
Dumas/Roosevelt				
New Concrete Raised Median	1,510	SF	\$15.00	\$22,650
New Landscaped Raised Median	2,270	SF	\$7.00	\$15,890
New Curb and Gutter (Includes Median)	1,040	LF	\$22.00	\$22,880
New Curb Ramps	4	EA	\$2,800.00	\$11,200
Proposed Striping	1,720	LF	\$2.00	\$3,440
New Pavement Markings	5	EA	\$100.00	\$500
Demo Existing Median	4,480	SF	\$8.00	\$35,840
Demo Existing Striping	1,180	LF	\$3.00	\$3,540
Demo Existing Pavement Markings	3	EA	\$25.00	\$75
Sawcut	2,480	LF	\$5.00	\$12,400
AC Paving	2,340	SF	\$10.00	\$23,400
Traffic Signal Modification	1	LS	\$25,000.00	\$25,000
Subtotal Dumas/Roosevelt				\$176,815
Zola/Womble				
New Curb and Gutter	150	LF	\$22.00	\$3,300
New Curb Ramps	4	EA	\$2,800.00	\$11,200
Proposed Striping	680	LF	\$2.00	\$1,360
New Pavement Markings	4	EA	\$100.00	\$400
Demo Existing Median	1,270	SF	\$8.00	\$10,160
Demo Existing Striping	1,200	LF	\$3.00	\$3,601
Demo Existing Pavement Markings	4	EA	\$25.00	\$100
Sawcut	650	LF	\$5.00	\$3,250
AC Paving	1,270	SF	\$10.00	\$12,700
Traffic Signal Modification (Loops/Bike Loops)	1	LS	\$25,000.00	\$25,000
Subtotal Zola/Womble				\$71,071
Subtotal of Both Intersections				\$247,886

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design



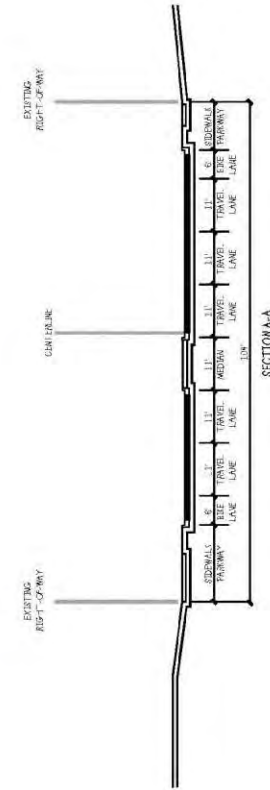
G. INTERMITTENT MEDIANS WITH NORTHBOUND LEFT-TURN ACCESS

- Install intermittent medians along Rosecrans between Lytton and Freeman to reduce the potential for conflict by consolidating the number of side-street access points.
- Install curb extensions to reduce the pedestrian crossing distance and enhance the pedestrian environment on the west side of the street.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement G: Intermittent Medians with Northbound Left-Turn Access				
New Concrete Raised Median	1,010	SF	\$15.00	\$15,150
New Landscaped Raised Median	7,110	SF	\$7.00	\$49,770
New Curb and Gutter	1,360	LF	\$22.00	\$29,920
Demo Existing Median	1,815	SF	\$8.00	\$14,522
Sawcut	2,240	LF	\$5.00	\$11,200
AC Paving	455	SF	\$10.00	\$4,550
			Subtotal	\$125,112

ROSECRANS CORRIDOR MOBILITY STUDY

- LEGEND**
- EXISTING TRANSIT STOP
 - EXISTING TRANSIT STOP TO BE RELOCATED
 - NEW TRANSIT STOP
 - REMOVE EXISTING TRANSIT STOP
 - NEW CURB RAMP
 - NEW SIDEWALK OR CURB EXTENSION
 - NEW CURB
 - RAISED LANDSCAPED MEDIAN
 - CURB EXTENSIONS (W/ OR NO LANDSCAPE)
 - RAISED MEDIAN (HARDSCAPE)
 - PROPOSED SIGNAL
 - PROPOSED STRIPING
 - EXISTING PARKING TO BE REMOVED
 - OVERHEAD SIGN
 - FLASHING BEACON WITH CURVE AHEAD SIGN
 - HIGHLY REFLECTIVE RPMs
 - LIGHTED SIDEWALK
 - ROW
 - PROPERTY LINES



ROSECRANS CORRIDOR MOBILITY STUDY



**IMPROVEMENT G:
INTERMITTENT MEDIAN
AND TURN POCKETS**



Cost Estimates and Conceptual Design

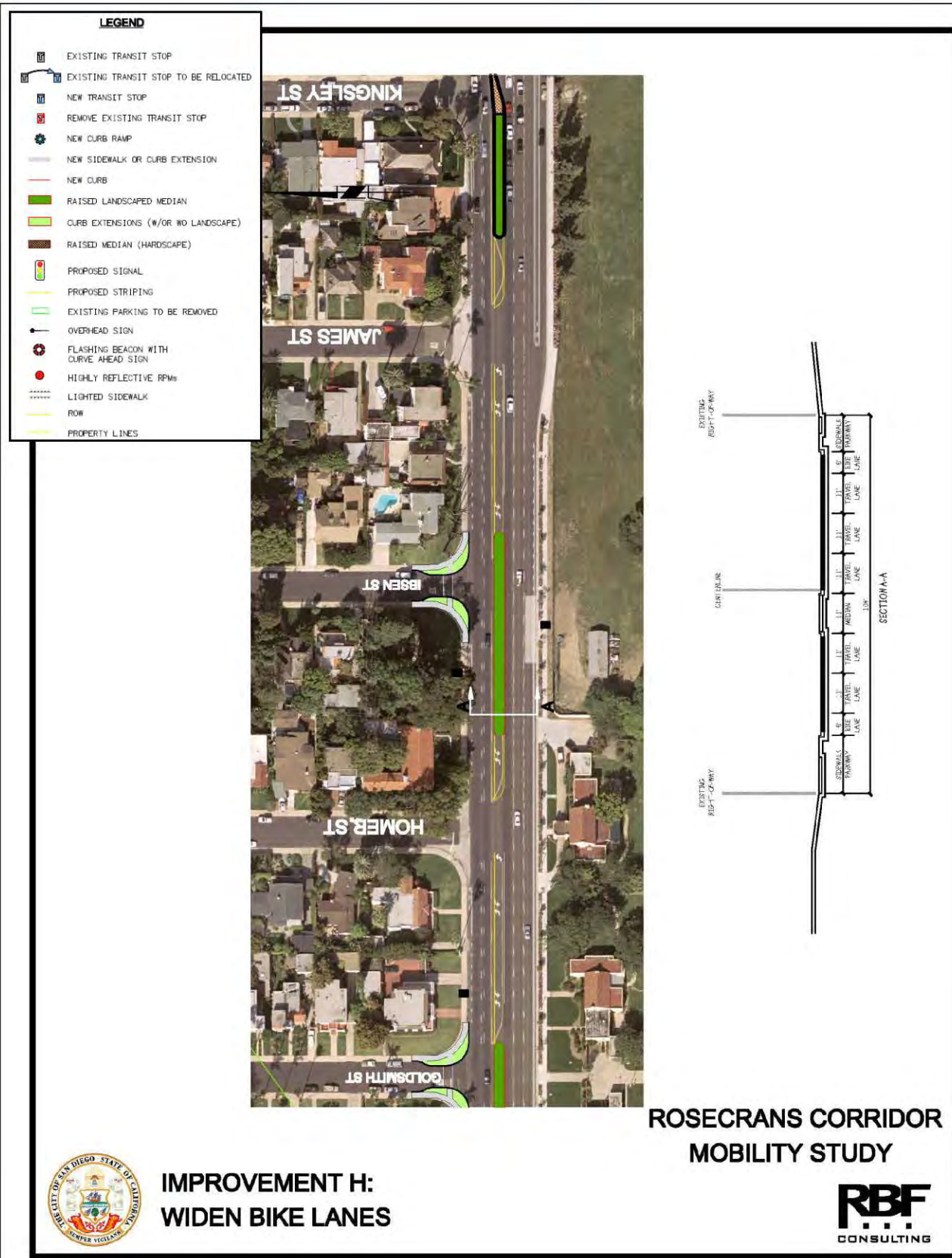


H. WIDEN BICYCLE LANES (LYTTON TO ROOSEVELT)

- Widen the bike lanes within the existing right-of-way by narrowing the width of the median.
- Re-stripe the travel lanes and center median to provide for additional bike lane width.
- When modifying existing medians related to other recommended improvements, consider narrowing or shortening to accommodate wider bicycle lanes.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement H: Widen Bicycle Lanes (Lytton to Roosevelt)				
Proposed Striping	8,870	LF	\$2.00	\$17,740
New Pavement Markings	3	EA	\$100.00	\$300
Demo Existing Striping	7,900	LF	\$3.00	\$23,700
Demo Existing Pavement Markings	12	EA	\$25.00	\$300
Traffic Signal Modificaton (Bike Loops)	1	LS	\$5,000.00	\$5,000
			Subtotal	\$47,040

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design

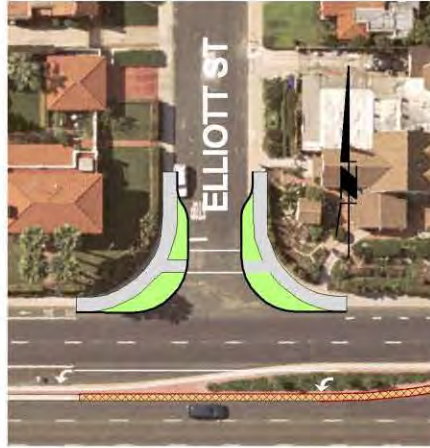


I. SIDE STREET CURB EXTENSIONS TO REDUCE CROSSING DISTANCE

- This improvement identifies three locations for curb extensions:
 - Rosecrans & Elliott
 - Rosecrans & Goldsmith
 - Rosecrans & Ibsen
- It is feasible to assume that the cost estimates prepared would be relevant at other locations if identified by the community. These improvements were co-located with the proposed raised medians and left turn pockets. If the locations were different locations were determined to be preferable, then other improvements identified should be reviewed for consistency and compatibility.
- Construct curb extensions on the side street to reduce pedestrian crossing distance across the side street.
- Stripe crosswalks at intersections with curb extensions
- Storm drain improvements may be necessary at curb extensions to reduce potential for ponding or flooding near intersections

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement I: Side Street Curb Extensions to Reduce Crossing Distance				
New Curb and Gutter	610	LF	\$22.00	\$13,420
New or Reconstructed Sidewalks	3,520	SF	\$8.00	\$28,160
New Curb Ramps	6	EA	\$2,800.00	\$16,800
New Landscaped Curb Extensions	2,650	SF	\$7.00	\$18,550
Proposed Striping	150	LF	\$2.00	\$301
Demo Existing Curb and Gutter	530	LF	\$5.00	\$2,650
Demo Existing Sidewalks	3,080	SF	\$2.00	\$6,160
Storm Drain Improvements (Goldsmith)	1	EA	\$30,000.00	\$30,000
Storm Drain Improvements (Elliot & Ibsen)	2	EA	\$100,000	\$200,000
Sawcut	1,140	LF	\$5.00	\$5,700
Fire Hydrant Relocation	2	EA	\$3,200.00	\$6,400
Subtotal				\$328,141

ROSECRANS CORRIDOR MOBILITY STUDY



LEGEND	
	EXISTING TRANSIT STOP
	EXISTING TRANSIT STOP TO BE RELOCATED
	NEW TRANSIT STOP
	REMOVE EXISTING TRANSIT STOP
	NEW CURB RAMP
	NEW SIDEWALK OR CURB EXTENSION
	NEW CURB
	RAISED LANDSCAPED MEDIAN
	CURB EXTENSIONS (#/OR W/ LANDSCAPE)
	RAISED MEDIAN (HARDSCAPE)
	PROPOSED SIGNAL
	PROPOSED STRIPING
	EXISTING PARKING TO BE REMOVED
	OVERHEAD SIGN
	FLASHING BEACON WITH CURVE AHEAD SIGN
	HIGHLY REFLECTIVE RPMs
	LIGHTED SIDEWALK
	ROW
	PROPERTY LINES



IMPROVEMENT I: SIDE STREET CURB EXT.

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design



J. CONSOLIDATION AND RELOCATION OF TRANSIT STOPS

- Consolidate underutilized transit stops.
- Relocate transit stops from mid-block locations to signalized intersections adjacent to a crosswalk to encourage appropriate street crossing.
- Improvements include relocating the sign, trash receptacle, shelter or other amenities that exist at the existing transit stop. Sidewalk improvements and modifications to landscape may be necessary to provide adequate loading/unloading area at the new transit stop location.
- Improvements include removal of the existing concrete bus pad and construction of a new bus pad at the proposed location.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement J: Consolidation and Relocation of Transit Stops				
New or Relocated Transit Stop	3	EA	\$8,500.00	\$25,500
Demo & Repair Existing Transit Stop	3	EA	\$1,500.00	\$4,500
			Subtotal	\$30,000

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

-  EXISTING TRANSIT STOP
-  EXISTING TRANSIT STOP TO BE RELOCATED
-  NEW TRANSIT STOP
-  REMOVE EXISTING TRANSIT STOP
-  NEW CURB RAMP
-  NEW SIDEWALK OR CURB EXTENSION
-  NEW CURB
-  RAISED LANDSCAPED MEDIAN
-  CURB EXTENSIONS (W/OR W/O LANDSCAPE)
-  RAISED MEDIAN (HARDSCAPE)
-  PROPOSED SIGNAL
-  PROPOSED STRIPING
-  EXISTING PARKING TO BE REMOVED
-  OVERHEAD SIGN
-  FLASHING BEACON WITH CURVE AHEAD SIGN
-  HIGHLY REFLECTIVE RPMs
-  LIGHTED SIDEWALK
-  ROW
-  PROPERTY LINES



ROSECRANS CORRIDOR MOBILITY STUDY

IMPROVEMENT J: CONSOLIDATION OF TRANSIT STOPS



Cost Estimates and Conceptual Design

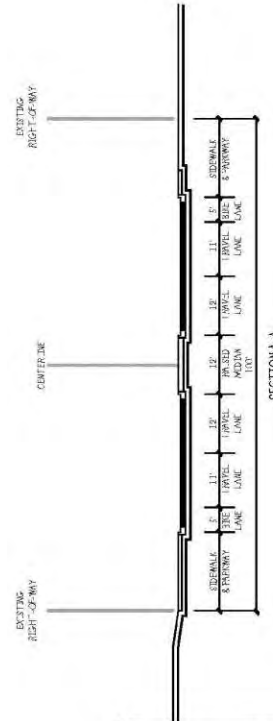


K. RE-STRIPE TO ADD SIX-FOOT BICYCLE LANES

- Re-stripe roadway within existing right-of-way to provide six foot (6') bicycle lanes
- Median nose removed at some locations to accommodate the wider bicycle lanes.
- Modifications at signals to modify loops for new/wider bicycle lanes. New loops for bicycles in lanes shall be installed if bicycle loops are either missing or not functional.
- Minor sidewalk improvements included to remove sidewalk obstructions.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement K: Re-Stripe To Add Six-Foot Bicycle Lanes				
Proposed Striping	12,940	LF	\$2.00	\$25,880
New Pavement Markings	6	EA	\$100.00	\$600
New or Reconstructed Sidewalk	560	SF	\$8.00	\$4,480
Demo Existing Median	85	SF	\$8.00	\$680
Demo Existing Sidewalk	560	SF	\$2.00	\$1,120
Demo Existing Striping	7,170	LF	\$3.00	\$21,510
Demo Existing Pavement Markings	2	EA	\$25.00	\$50
Sawcut	75	LF	\$5.00	\$375
AC Paving	85	SF	\$10.00	\$850
Traffic Signal Modification (5 Intersections)	5	EA	\$10,000.00	\$50,000
Subtotal				\$105,545

ROSECRANS CORRIDOR MOBILITY STUDY



LEGEND	
	EXISTING TRANSIT STOP
	EXISTING TRANSIT STOP TO BE RELOCATED
	NEW TRANSIT STOP
	REMOVE EXISTING TRANSIT STOP
	NEW CURB RAMP
	NEW SIDEWALK OR CURB EXTENSION
	NEW CURB
	RAISED LANDSCAPED MEDIAN
	CURB EXTENSIONS (W/OR W/O LANDSCAPE)
	RAISED MEDIAN (HARDSCAPE)
	PROPOSED SIGNAL
	PROPOSED STRIPING
	EXISTING PARKING TO BE REMOVED
	OVERHEAD SIGN
	FLASHING BEACON WITH CURVE AHEAD SIGN
	HIGHLY REFLECTIVE RMs
	LIGHTED SIDEWALK
	ROW
	PROPERTY LINES



**IMPROVEMENT K:
WIDEN BIKE LANES**

**ROSECRANS CORRIDOR
MOBILITY STUDY**



Cost Estimates and Conceptual Design

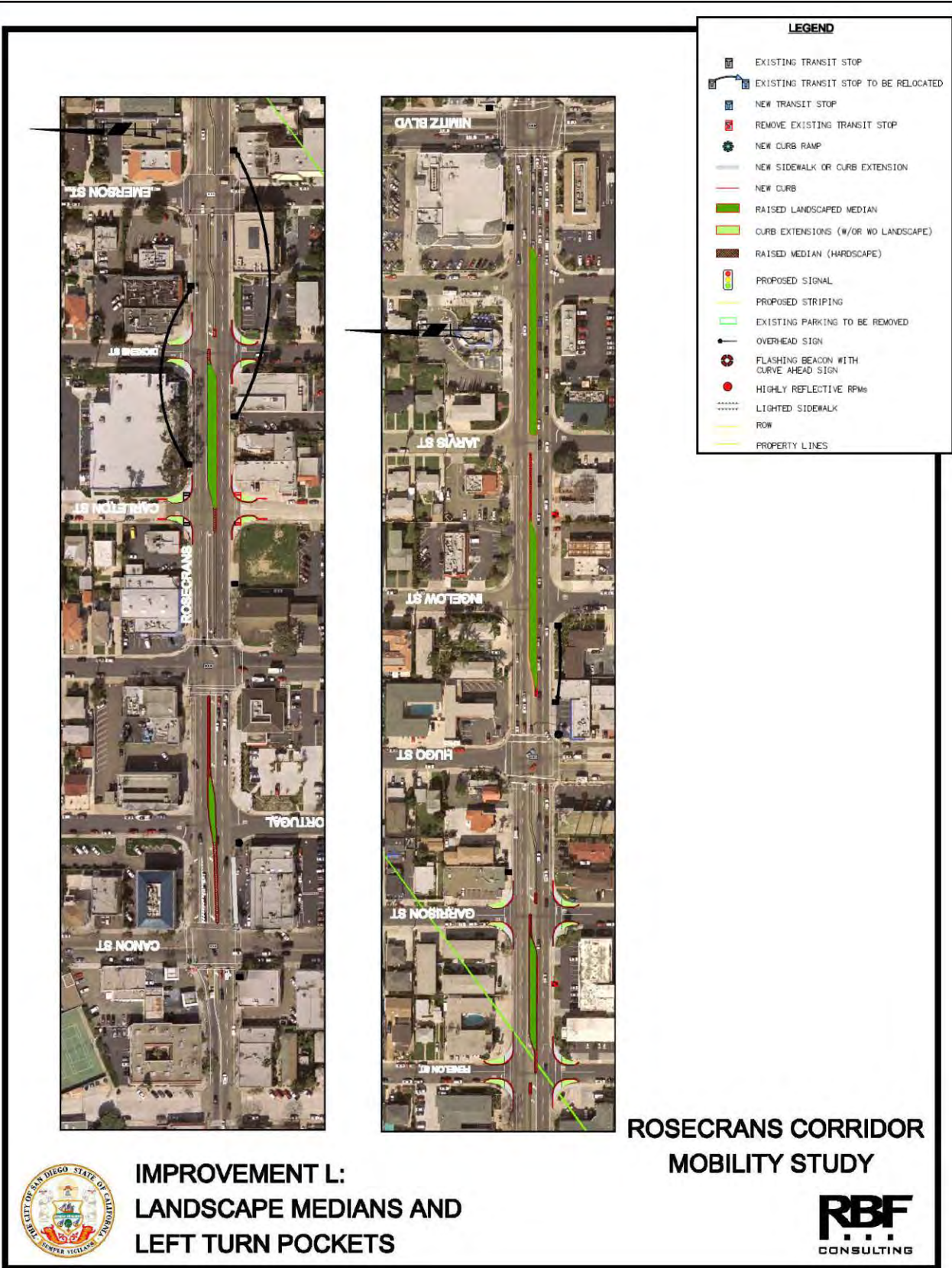


L. LANDSCAPED MEDIANS AND LEFT TURN POCKETS AT INTERSECTIONS

- Construct raised, landscaped medians through intersections.
- Maintain “left turn in” access at selected intersections.
- Restrict all “left turn out” access
- Landscape medians to improve the aesthetic quality of the corridor.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement L: Landscaped Medians and Left-Turn Pockets at Intersections				
New Concrete Raised Median	1,430	SF	\$15.00	\$21,449
New Landscaped Raised Median	11,764	SF	\$7.00	\$82,345
New Curb and Gutter	5,867	LF	\$22.00	\$129,074
Proposed Striping	445	LF	\$2.00	\$889
New Pavement Markings	7	EA	\$100.00	\$700
Demo Existing Median	1,785	SF	\$8.00	\$14,283
Demo Existing Striping	1,324	LF	\$3.00	\$3,971
Demo Existing Pavement Markings	9	EA	\$25.00	\$225
Sawcut	4,766	LF	\$5.00	\$23,831
			Subtotal	\$276,767

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design



M. NEW TRAFFIC SIGNAL AT EMERSON

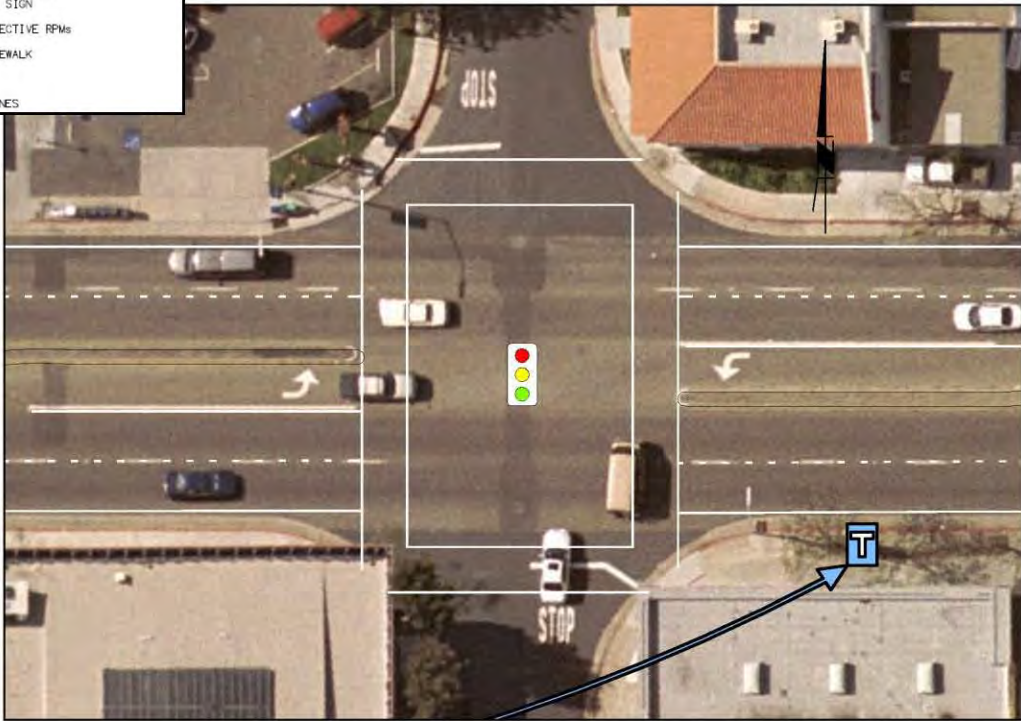
- Install a traffic signal at Rosecrans and Emerson.
- Stripe crosswalks on all legs of intersection
- Install new, ADA compliant pedestrian ramps on all approaches
- Install audible push buttons and count down timers on all approaches

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement M: New Traffic Signal at Emerson				
New Traffic Signal	1	LS	\$200,000.00	\$200,000
Proposed Striping	530	LF	\$2.00	\$1,059
Demo Existing Striping	45	LF	\$3.00	\$136
			Subtotal	\$201,196

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

-  EXISTING TRANSIT STOP
-  EXISTING TRANSIT STOP TO BE RELOCATED
-  NEW TRANSIT STOP
-  REMOVE EXISTING TRANSIT STOP
-  NEW CURB RAMP
-  NEW SIDEWALK OR CURB EXTENSION
-  NEW CURB
-  RAISED LANDSCAPED MEDIAN
-  CURB EXTENSIONS (W/OR NO LANDSCAPE)
-  RAISED MEDIAN (HARDSCAPE)
-  PROPOSED SIGNAL
-  PROPOSED STRIPING
-  EXISTING PARKING TO BE REMOVED
-  OVERHEAD SIGN
-  FLASHING BEACON WITH CURVE AHEAD SIGN
-  HIGHLY REFLECTIVE RPMs
-  LIGHTED SIDEWALK
-  ROW
-  PROPERTY LINES



Cost Estimates and Conceptual Design



**IMPROVEMENT M:
NEW SIGNAL @ EMERSON**

**ROSECRANS CORRIDOR
MOBILITY STUDY**





N. SIDE STREET CURB EXTENSIONS TO REDUCE CROSSING DISTANCE

- This improvement includes the construction of curb extensions at the following two locations:
 - Rosecrans & Dickens
 - Rosecrans & Fenelon
- It is feasible to consider other locations for curb extensions. Costs associated with these improvements would be applicable to other locations
- The locations selected for this improvement relate to the location of the proposed raised median and left turn access points. When considering other locations for curb extensions through Area 3, these other improvements should also be taken into consideration for overall compatibility.
- Construct curb extensions on side streets
- Modify drainage to minimize ponding adjacent to curb extensions.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement N: Side Street Curb Extensions to Reduce Crossing Distance				
New Curb and Gutter	1,280	LF	\$22.00	\$28,153
New or Reconstructed Sidewalks	4,857	SF	\$8.00	\$38,853
New Landscaped Curb Extensions	2,959	SF	\$7.00	\$20,715
New Curb Ramps	8	EA	\$2,800.00	\$22,400
Proposed Striping	930	LF	\$2.00	\$1,860
Demo Existing Curb and Gutter	1,120	LF	\$5.00	\$5,600
Demo Existing Sidewalks	5,600	SF	\$2.00	\$11,200
Drainage Improvements	4	EA	\$30,000	\$60,000
Fire Hydrant Relocation	2	EA	\$3,200.00	\$6,400
Sawcut	2,400	LF	\$5.00	\$12,000
			Subtotal	\$207,181

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

-  EXISTING TRANSIT STOP
-  EXISTING TRANSIT STOP TO BE RELOCATED
-  NEW TRANSIT STOP
-  REMOVE EXISTING TRANSIT STOP
-  NEW CURB RAMP
-  NEW SIDEWALK OR CURB EXTENSION
-  NEW CURB
-  RAISED LANDSCAPED MEDIAN
-  CURB EXTENSIONS (#/OR W/ LANDSCAPE)
-  RAISED MEDIAN (HARDSCAPE)
-  PROPOSED SIGNAL
-  PROPOSED STRIPING
-  EXISTING PARKING TO BE REMOVED
-  OVERHEAD SIGN
-  FLASHING BEACON WITH CURVE AHEAD SIGN
-  HIGHLY REFLECTIVE RPMs
-  LIGHTED SIDEWALK
-  ROW
-  PROPERTY LINES



**IMPROVEMENT N:
SIDE STREET CURB EXT.**

**ROSECRANS CORRIDOR
MOBILITY STUDY**



Cost Estimates and Conceptual Design



O. RELOCATION OF TRANSIT STOPS TO SIGNALIZED INTERSECTIONS

- Consolidate underutilized transit stops.
- Relocate transit stops from mid-block locations to signalized intersections adjacent to a crosswalk to encourage appropriate street crossing.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement O: Relocation of Transit Stops to Signalized Intersections				
New or Relocated Transit Stop	3	EA	\$8,500.00	\$25,500
Demo Existing Transit Stop	5	EA	\$1,500.00	\$7,500
			Subtotal	\$33,000

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design





P. RE-STRIPE INTERSECTION OF ROSECRANS AND TALBOT

- Restripe the northbound approach to include a dedicated left-turn lane and shared through-right turn lane on Rosecrans.
- Restripe the southbound approach to include a southbound left-turn lane and shared through-right turn on Rosecrans.
- Re-stripe the existing crosswalks to match the proposed lane configurations.
- Modify traffic signal for new loop locations for bicycles and vehicles.
- Install audible pedestrian push buttons and count down timers on all approaches.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement P: Re-Stripe Intersection of Rosecrans and Talbot				
Proposed Striping	2,300	LF	\$2.00	\$4,600
New Pavement Markings	2	EA	\$100.00	\$200
Demo Existing Striping	1,375	LF	\$3.00	\$4,124
Traffic Signal Modification (Loops/Bike Loops/Audible Push Buttons & Countdown Timers)	1	LS	\$60,000	\$60,000
Subtotal				\$68,924

- LEGEND**
-  EXISTING TRANSIT STOP
 -  EXISTING TRANSIT STOP TO BE RELOCATED
 -  NEW TRANSIT STOP
 -  REMOVE EXISTING TRANSIT STOP
 -  NEW CURB RAMP
 -  NEW SIDEWALK OR CURB EXTENSION
 -  NEW CURB
 -  RAISED LANDSCAPED MEDIAN
 -  CURB EXTENSIONS (#/OR W/ LANDSCAPE)
 -  RAISED MEDIAN (HARDSCAPE)
 -  PROPOSED SIGNAL
 -  PROPOSED STRIPING
 -  EXISTING PARKING TO BE REMOVED
 -  OVERHEAD SIGN
 -  FLASHING BEACON WITH CURVE AHEAD SIGN
 -  HIGHLY REFLECTIVE RPMs
 -  LIGHTED SIDEWALK
 -  ROW
 -  PROPERTY LINES



ROSECRANS CORRIDOR MOBILITY STUDY



IMPROVEMENT P: RESTRIPE ROSECRANS AND TALBOT



Cost Estimates and Conceptual Design



Q. COMPLETE SIDEWALKS ON WEST SIDE OF STREET

- Construct sidewalks on the west side of the street in sections where sidewalks are currently missing or in a state of disrepair.
- Install new curb ramps at intersections where existing ramps do not meet current ADA standards. Anticipated locations include:
 - Rosecrans / Kellogg (4 corners)
 - Rosecrans/Nichols (2 corners)
 - Rosecrans/Owens (may be modified with curb extensions) (2 corners)
 - Rosecrans/Upshur (4 corners)
- Construct gravity or retaining wall (3 feet or less) along fronting properties due to change in elevation
- It may be necessary to acquire limited amounts of right-of-way to construct sidewalk. Right-of-way costs are not included in this assessment as actual quantities are unknown at this time
- Existing driveways may need to be modified with the construction of the sidewalk
- Existing utilities may need to be relocated or modified

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement Q: Complete Sidewalks on West Side of Street				
Demo Existing Curb	1,100	LF	\$5.00	\$5,500
New or Reconstructed Sidewalks	6,050	SF	\$8.00	\$48,402
New Retaining Wall (3 feet)	1,050	SF	\$15.00	\$15,750
New Gravity Wall (1 foot)	215	LF	\$8.00	\$1,720
New Curb & Gutter	1,100	LF	\$22.00	\$24,200
Modify Existing Driveways	2	EA	\$2,500.00	\$5,000
New Curb Ramps	12	EA	\$2,800.00	\$33,600
Sawcut	1,100	LF	\$5.00	\$5,500
Utility Relocation	1	EA	\$1,500.00	\$1,500
Dry Utility Relocation	4	EA	\$2,500.00	\$10,000
			Subtotal	\$120,372

ROSECRANS CORRIDOR MOBILITY STUDY



LEGEND

- EXISTING TRANSIT STOP
- EXISTING TRANSIT STOP TO BE RELOCATED
- NEW TRANSIT STOP
- REMOVE EXISTING TRANSIT STOP
- NEW CURB RAMP
- NEW SIDEWALK OR CURB EXTENSION
- NEW CURB
- RAISED LANDSCAPED MEDIAN
- CURB EXTENSIONS (W/OR W/O LANDSCAPE)
- RAISED MEDIAN (HARDSCAPE)
- PROPOSED SIGNAL
- PROPOSED STRIPING
- EXISTING PARKING TO BE REMOVED
- OVERHEAD SIGN
- FLASHING BEACON WITH CURVE AHEAD SIGN
- HIGHLY REFLECTIVE RPMs
- LIGHTED SIDEWALK
- ROW
- PROPERTY LINES



**IMPROVEMENT Q:
COMPLETE SIDEWALK**

**ROSECRANS CORRIDOR
MOBILITY STUDY**



Cost Estimates and Conceptual Design



R. CURB EXTENSIONS AT OWEN AND BESSEMER

- Construct curb extensions at Owen and Bessemer
- Includes construction of new curb ramps at both intersections (also included in Improvement Q)
- Stripe crosswalks on the south leg and along the stop controlled side streets.
- Use highly reflective paint and/or pavement markings to improve the visibility of the pedestrian crossing to the motorist.
- May require drainage improvements to minimize potential for ponding at intersections

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement R: Curb Extensions at Bessemer and Owen				
Rosecrans/Bessemer				
New Curb and Gutter	470	LF	\$22.00	\$10,340
New or Reconstructed Sidewalks	1,180	SF	\$8.00	\$9,440
New Landscaped Curb Extensions	2,210	SF	\$7.00	\$15,470
New Curb Ramps	6	EA	\$2,800.00	\$16,800
Proposed Striping - Highly Reflective Paint	160	LF	\$3.00	\$480
Demo Existing Curb and Gutter	380	LF	\$5.00	\$1,900
Demo Existing Sidewalks	1,040	SF	\$2.00	\$2,080
Demo Existing Striping	60	LF	\$3.00	\$180
Drainage Improvements (per corner)	4	EA	\$7,500.00	\$30,000
Sawcut	850	LF	\$5.00	\$4,250
Subtotal Rosecrans/Bessemer				\$90,940
Rosecrans/Owen				
New Curb and Gutter	320	LF	\$22.00	\$7,040
New or Reconstructed Sidewalks	1,040	SF	\$8.00	\$8,320
New Landscaped Curb Extensions	650	SF	\$7.00	\$4,550
New Curb Ramps	4	EA	\$2,800.00	\$11,200
Proposed Striping - Highly Reflective Paint	160	LF	\$3.00	\$480
Lighted Crosswalk	1	LS	\$15,000.00	\$15,000
Demo Existing Curb and Gutter	295	LF	\$5.00	\$1,476
Demo Existing Sidewalks	40	SF	\$2.00	\$80
Demo Existing Striping	115	LF	\$3.00	\$345
Drainage Improvements	1	LS	\$25,000	\$25,000
Sawcut	615	LF	\$5.00	\$3,076
Subtotal Rosecrans/Owen				\$76,576
Subtotal of Both Intersections				\$167,507

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND	
	EXISTING TRANSIT STOP
	EXISTING TRANSIT STOP TO BE RELOCATED
	NEW TRANSIT STOP
	REMOVE EXISTING TRANSIT STOP
	NEW CURB RAMP
	NEW SIDEWALK OR CURB EXTENSION
	NEW CURB
	RAISED LANDSCAPED MEDIAN
	CURB EXTENSIONS (W/OR W/O LANDSCAPE)
	RAISED MEDIAN (HARDSCAPE)
	PROPOSED SIGNAL
	PROPOSED STRIPING
	EXISTING PARKING TO BE REMOVED
	OVERHEAD SIGN
	FLASHING BEACON WITH CURVE AHEAD SIGN
	HIGHLY REFLECTIVE RPMs
	LIGHTED SIDEWALK
	ROW
	PROPERTY LINES



Cost Estimates and Conceptual Design



**IMPROVEMENT R:
CURB EXTENSION @ OWENS &
BESSEMER**

**ROSECRANS CORRIDOR
MOBILITY STUDY**





S. MEDIAN ISLANDS AT ARMADA

- Construct medians in the center of the road at Armada Place.
- Install curb extensions on the north leg of Kona Way to buffer existing parking along Rosecrans south of the curve.
- Restripe through curve with highly reflective paint and appropriate raised pavement markers
- Install appropriate signage in advance of curve including a flashing beacon and/or V-Calming sign.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement S: Median Islands at Armada				
New Curb and Gutter	370	LF	\$22.00	\$8,140
New Landscaped Median Islands	505	SF	\$7.00	\$3,536
New Landscaped Curb Extensions	600	SF	\$7.00	\$4,200
New or Reconstructed Sidewalks	420	SF	\$8.00	\$3,363
Proposed Striping - Highly Reflective Paint	1,550	LF	\$3.00	\$4,650
Highly Reflective RPMs	14	EA	\$7.00	\$98
Flashing Beacon with Curb Ahead Sign	1	EA	\$5,000.00	\$5,000
Demo Existing Curb and Gutter	175	LF	\$5.00	\$876
Demo Existing AC Paving	200	SF	\$4.00	\$800
Demo Existing Striping	1,060	LF	\$3.00	\$3,180
Sawcut	545	LF	\$5.00	\$2,726
			Subtotal	\$36,570

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

-  EXISTING TRANSIT STOP
-  EXISTING TRANSIT STOP TO BE RELOCATED
-  NEW TRANSIT STOP
-  REMOVE EXISTING TRANSIT STOP
-  NEW CURB RAMP
-  NEW SIDEWALK OR CURB EXTENSION
-  NEW CURB
-  RAISED LANDSCAPED MEDIAN
-  CURB EXTENSIONS (W/OR W/O LANDSCAPE)
-  RAISED MEDIAN (HARDSCAPE)
-  PROPOSED SIGNAL
-  PROPOSED STRIPING
-  EXISTING PARKING TO BE REMOVED
-  OVERHEAD SIGN
-  FLASHING BEACON WITH CURVE AHEAD SIGN
-  HIGHLY REFLECTIVE RPMs
-  LIGHTED SIDEWALK
-  ROW
-  PROPERTY LINES



Cost Estimates and Conceptual Design



**IMPROVEMENT S:
MEDIANS ISLANDS @ ARMADA**

**ROSECRANS CORRIDOR
MOBILITY STUDY**





T. CHOKERS NEAR QUALTROUGH AND NEAR KONA

- Construct outside islands (6' wide) adjacent to the outside lane near both Qualtrough and Kona (2 locations)
- Re-route bicycles to the outside of the curb extensions. Provide minimum 5 foot bicycle lanes.
- Construct center island (6' wide) between curb extensions.
- Restripe through the choker with highlight reflective paint and associated raised pavement marking. Maintain a minimum 14' lane through the choker.
- Drainage improvements may be necessary to avoid ponding in bicycle lane or through lane.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement T: Chokers Near Qualtrough and Kona				
New Curb and Gutter	430	LF	\$22.00	\$9,460
New Sidewalk	2,150	SF	\$8.00	\$17,200
New Landscaped Chokers	910	SF	\$7.00	\$6,370
Proposed Striping	870	LF	\$2.00	\$1,740
New Pavement Markings	4	EA	\$50.00	\$200
Demo Existing Striping	980	LF	\$3.00	\$2,940
Drainage Improvements (per location)	2	EA	\$7,500	\$15,000
Sawcut	430	LF	\$5.00	\$2,150
Utility Modification	1	EA	\$1,500.00	\$1,500
Subtotal				\$56,560

ROSECRANS CORRIDOR MOBILITY STUDY



LEGEND	
	EXISTING TRANSIT STOP
	EXISTING TRANSIT STOP TO BE RELOCATED
	REMOVE EXISTING TRANSIT STOP
	NEW CURB RAMP
	NEW SIDEWALK OR CURB EXTENSION
	NEW CURB
	RAISED LANDSCAPED MEDIAN
	CURB EXTENSIONS (W/OR W/O LANDSCAPE)
	RAISED MEDIAN (HARDSCAPE)
	PROPOSED SIGNAL
	PROPOSED STRIPING
	EXISTING PARKING TO BE REMOVED
	OVERHEAD SIGN
	FLASHING BEACON WITH CURVE AHEAD SIGN
	HIGHLY REFLECTIVE RPMs
	LIGHTED SIDEWALK
	ROW
	PROPERTY LINES



IMPROVEMENT T: CHOKERS NEAR QUALTHROUGH & KONA

ROSECRANS CORRIDOR MOBILITY STUDY



Cost Estimates and Conceptual Design



U. MINI ROUNDABOUT AT MCCALL

- Construct a mini roundabout at McCall and Rosecrans
- Restripe in advance of the mini-roundabout with highly reflective paint and provide the appropriate signage
- Stripe crosswalks on all legs of the intersection with highlight reflective paint.
- Install ADA compliant directional curb ramps on all legs of the intersection.
- Modify drainage on all corners to minimize ponding.
- Provide highly reflective signage and advance pavement markings to alert driver of roundabout.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement U: Mini Roundabout at McCall				
Roundabout	1	LS	\$250,000	\$250,000
			Subtotal	\$250,000

ROSECRANS CORRIDOR MOBILITY STUDY

LEGEND

- EXISTING TRANSIT STOP
- EXISTING TRANSIT STOP TO BE RELOCATED
- NEW TRANSIT STOP
- REMOVE EXISTING TRANSIT STOP
- NEW CURB RAMP
- NEW SIDEWALK OR CURB EXTENSION
- NEW CURB
- RAISED LANDSCAPED MEDIAN
- CURB EXTENSIONS (W/OR W/O LANDSCAPE)
- RAISED MEDIAN (HARDSCAPE)
- PROPOSED SIGNAL
- PROPOSED STRIPING
- EXISTING PARKING TO BE REMOVED
- OVERHEAD SIGN
- FLASHING BEACON WITH CURVE AHEAD SIGN
- HIGHLY REFLECTIVE RPMs
- LIGHTED SIDEWALK
- ROW
- PROPERTY LINES



Cost Estimates and Conceptual Design



**IMPROVEMENT U:
ROUNDBOUT @ MCCALL**

**ROSECRANS CORRIDOR
MOBILITY STUDY**





V. CONSOLIDATION OF TRANSIT STOPS

- Consolidate underutilized transit stops.
- Remove existing concrete bus pads at existing transit stops.
- Construct new concrete bus pads at new transit stops.
- Relocate all existing transit stop amenities to new location.
- As necessary, modify the sidewalk and existing landscape to accommodate passenger loading and unloading.

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Improvement V: Consolidation of Transit Stops				
New or Relocated Transit Stop	2	EA	\$8,500.00	\$17,000
Demo Existing Transit Stop	7	EA	\$1,500.00	\$10,500
			Subtotal	\$27,500

ROSECRANS CORRIDOR MOBILITY STUDY



LEGEND	
	EXISTING TRANSIT STOP
	EXISTING TRANSIT STOP TO BE RELOCATED
	NEW TRANSIT STOP
	REMOVE EXISTING TRANSIT STOP
	NEW CURB RAMP
	NEW SIDEWALK OR CURB EXTENSION
	NEW CURB
	RAISED LANDSCAPED MEDIAN
	CURB EXTENSIONS (W/O OR W/ LANDSCAPE)
	RAISED MEDIAN (HARDSCAPE)
	PROPOSED SIGNAL
	PROPOSED STRIPING
	EXISTING PARKING TO BE REMOVED
	OVERHEAD SIGN
	FLASHING BEACON WITH CURVE AHEAD SIGN
	HIGHLY REFLECTIVE RPMs
	LIGHTED SIDEWALK
	ROW
	PROPERTY LINES

Cost Estimates and Conceptual Design



IMPROVEMENT V: CONSOLIDATION OF TRANSIT STOPS

ROSECRANS CORRIDOR MOBILITY STUDY





9.7 Summary

A total of 22 improvements were identified for the Rosecrans Corridor Mobility Study. The improvements ranged from minor restriping and signal modifications to reconstruction of major intersections. Overall, the cost of the improvements exceeds over \$6.3 million. Of the projects identified, nearly \$1.4 million in construction costs relate to pedestrian improvements and \$over \$300,000 relate to bicycle improvements. Transit improvements focused primarily on transit stop location and accessibility. But improvements to the existing transit only lane (Rosecrans/Taylor) and the proposed queue jump/right turn lane at Rosecrans/Midway are also included in the Recommended Concept Plan. Overall, transit improvements account for approximately \$160,000 of the total construction costs calculated for the study corridor.

Vehicular flow improvements, which include both capacity enhancements in Area 1 and traffic calming features in Area 4, consume the greatest portion of the calculated construction costs with over \$3.4 million in construction costs identified for the corridor. Vehicle improvements account for all improvements within the curb-to-curb distance of the road (ie, medians, traffic signal, drainage, striping, etc). Many of the improvements identified as vehicle or traffic improvements also include improvements that will improve pedestrian and bicycle access, such as new traffic signals, median islands that provide pedestrian refuge islands, and traffic calming to reduce traffic speed in the residential portion of the corridor.

Although the construction costs estimated exceed \$10 million, the overall to complete the design, environmental and administrative costs will result in nearly doubling the cost of the improvements for the corridor. City of San Diego has standard cost estimating percentages that were applied that result in an increase over the construction cost of nearly 98%. As a result, the total estimated construction, design and administrative cost for the improvements for the corridor exceed \$12 million.

Many of the improvements identified will require some level of environmental review or documentation, which affects both the cost of the project as well as the time needed to complete the improvement. The implementation plan in the following chapter ranks the projects by short, medium and long term projects and identifies potential funding sources for the projects.