Stormwater Runoff Control Concept

The San Diego Regional Water Quality Control Board stormwater runoff requirements have become very stringent and require quantity and quality control for all runoff. Standard engineering methods are no longer acceptable for quality control. The requirements restrict the amount of runoff from a site to match the pre-construction amounts. The proposed parking lots will result in impervious surfaces that will result in additional runoff and will therefore have to meet these more stringent standard.

Figure 51 is a diagram showing a typical plan view of the stormwater concepts being proposed at the NASSCO rebuilt parking lots that touch the edge of Harbor Drive. The concept utilizes a combination of permeable concrete, flow inlet raised curbs, underground Silva Cells, open cobble stream courses and a bioswale for water quality improvements. A subsurface drainage system is proposed, but the majority of non-major storm events will be captured in the bioswales and be taken up by ground / soil reservoirs in and around the parking lot trees, as well as vertical infiltration trenches that run the length of the parking lots. Major story events will be captured by overflow pipe inlets into the storm drain and in sheet flows over the bike path and into the road drainage solutions.

Figure 52 shows a cross section of how the stormwater infiltration and drainage system will work. The path will sheet flow into its own bio-swale. Though not shown on Figure 52, the smaller bio-swale will be interconnected with the larger bio-swale at the parking lot edge.

Landscape Treatments

Figure 53 depicts the proposed planting and groundcover plans for the same typical area shown in Figure 51. This diagram shows a higher level of detail in planting and also indicates the desire to utilize cobble river rock and shredded bark mulch in a significant percentage of the bio-swale areas.

The proposed trees are sample suggestions. All trees will need to have a high growing pattern to allow for a 8' height clearance for bike path users. Most of the proposed plant material are natives or drought tolerant and low maintenance. Though the trees in this typical diagram appear to have equal spacing, a dynamic rhythm has been established with tree gaps and groupings that are more visible when viewing the broader tree layouts seen in Figures 19-24.

Figure 54 shows typical planting patterns proposed for the various roadway medians proposed in the project. The reconstructed median will be of varying widths so different tree options and plant materials are required to meet the City of San Diego's median planting street tree requirements. In many cases, the median will be too small for trees, but will contain continuity in design themes and understory plant material. As was the case for the bio-swales, the median will contain a large amount of river cobble rock, as well as decomposed granite and bark mulch. This will serve to lower the overall maintenance costs and allow for clarity in curvilinear patterns running through the median. Small medians and turn lanes that are less than 5' will not contain plant material, though the curvilinear cobble pattern will carry through.

Figure 55 includes imagery that captures the look and feel proposed for these bio-swales and medians. The figure also shows a variety of non-vegetative ground covers such as cobble, pebble, crushed rock and decomposed granite. The mulches will need to be shredded and course enough to not be carried away by flowing water. The subsurface soil materials around trees, in and around the Silva Cells, and in vertical infiltration trenches will need to include a composted filter media and growing median that helps to provide water quality improvements.

Figure 56 provides images of the proposed street trees that would be placed either in the bio-swales, parking lots or the medians. Parkway trees will need to be smaller than those proposed for the parking lots and the median. This figure also shows samples of some of the native shrubs that can be used in these planted areas.

Figure 57 shows a variety of native grasses and other plants that are ideal for use in the bio-swales. Plant materials in these locations need to be able to survive wet inundation periods, as well as dry periods equally well. Extensive amounts of groundcover color or accent is not envisioned, however the judicious use of color will be provided nearest the intersections and along segments where traffic or cyclists will tend to slow down.

Lighting Treatments

A variety of lighting types are proposed along the corridor. Taller vehicular scaled lights are proposed in the medians (see Figure 59 for images of the style being recommended). This lighting style needs to capture the industrial nature of the working waterfront. The use of guy wires and supporting horizontal beams are suggested to capture this character. These light standards would be breakaway type lights to improve driver safety.

Benches, water fountains and trash receptacles are not recommended along this pathway in order to reduce costs, maintenance costs and graffiti issues. The nature of this segment of the Bayshore Bikeway is that it is a linear experience, without many locations for public viewing of natural areas or other public spaces where individuals are likely to want to stop.

Harbor Drive • Bayshore Bikeway

A second level of lighting is proposed along the pathways. Though it is not intended to light the entire length of the pathways, a significant number of pedestrian level lighting is suggested. The lighting has been concentrated nearest the intersections and the driveway locations to increase safety. All cyclists along the route should be riding with lights if dark conditions exist. Pedestrians will benefit from a low level of light along the pathways that will be projected over the path from the tall center median lights. It is important to transition from dark to bright areas in order to give the eye a chance to adjust to different light levels. Figure 58 includes a sample of the pedestrian level light standard being recommended. The design of this light standard fits the nautical and industrial nature of the area. The light standard has been customized with a Barrio Logan cut-out lettering, as well as a working waterfront letters. The light fixture would also be outfitted with a bracket system to support a variety of art and banner options.

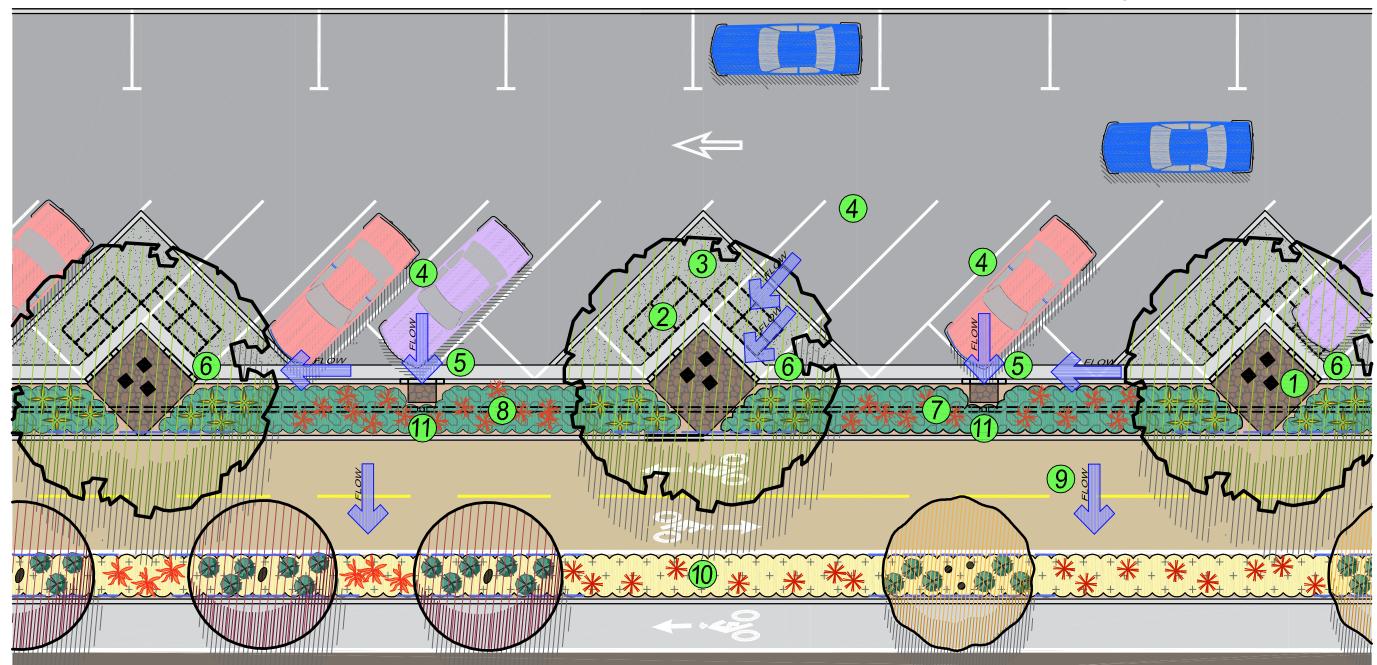
Other Walkway Amenities

Art Opportunities

Figure 58 shows a variety of art concepts that could be created as part of the lighting system. A sample from Seattle, Washington can be seen in this figure to show how dimensional art could be very interesting. By having each light standard handled by a different artist, it would be possible to provide a great deal of visual interest and variety. The name of the art program is called "Art Revolution". This not only denotes the cultural independence of the Barrio, but is also a play on words that can denote revolving art that could move with the wind. What ever art is used, design guidelines should be provided to obtain a level of consistency while allowing for a great deal of creativity.

Figure 59 denotes the "Art Uprising" program contemplated to mark the different districts along the route. This combination of materials typically found in the industrial areas of Barrio Logan has been morphed with the art culture that is dominant in the area as well.

Figure 60 shows a concept for entry monuments indicated as "Industrial Art". This fusion of art and industry in consistent with all of the other art concepts contemplated.



LEGEND

(4)

5

6

- 1 COBBLE FILLED OPEN TREE WELL WITH BIO-FILTER APPROVED BACKFILL AND ROOTBARRIER
- 2 EIGHT "SILVA CELLS" 18" DEEP SUPPORT SYSTEMS WITH BIO-FILTER APPROVED BACKFILL
- 3 PERMEABLE CONCRETE SURFACE
 - PARKING GRADED TO DRAIN TO CURB
 - BREAK IN CURB WITH COBBLE COVERED ENERGY DISSIPATOR
 - NON PERMEABLE GUTTER WITH 1" PIPE INLET THROUGH CURB TO BIO-SWALE

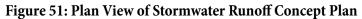
7

8

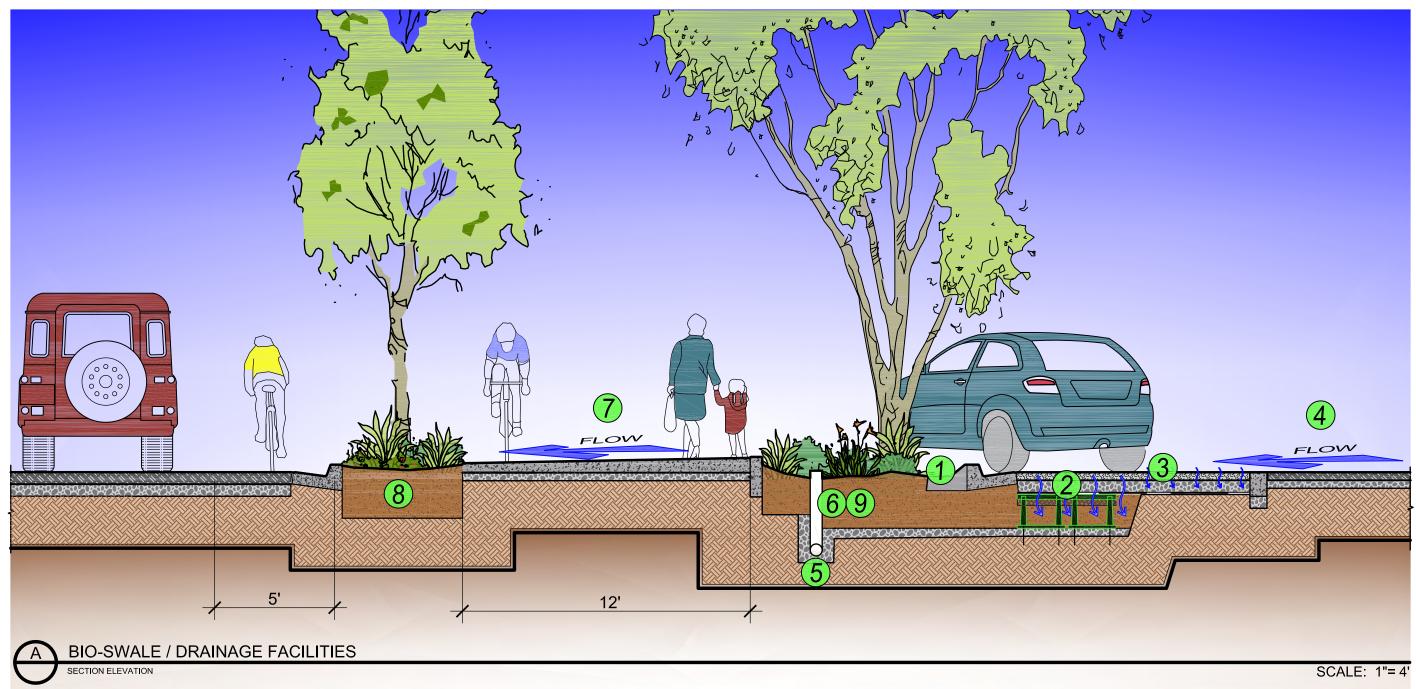
(10)

(11)

- BIO-SWALE OVER VERTICAL INFILTRATION TRENCH WITH GRAVEL BACKFILL
- SUB-SURFACE PERFORATED DRAIN CONNECTED TO STORM DRAIN FOR EXCESS WATER
- 9 TRAIL GRADED TO SHEET FLOW TO ZERO CURB BIO-SWALE
 - BIO-SWALE WITH BIO-FILTER APPROVED BACKFILL
 - OVERFLOW DRAINAGE STAND PIPE



SCALE: 1"= 10'



LEGEND

COBBLE FILLED OPEN TREE WELL WITH BIO-FILTER APPROVED BACKFILL AND ROOTBARRIER

EIGHT "SILVA CELLS" 18" DEEP SUPPORT SYSTEMS WITH BIO-FILTER APPROVED BACKFILL

PERMEABLE CONCRETE SURFACE

PARKING GRADED TO DRAIN TO CURB

BIO-SWALE OVER VERTICAL INFILTRATION TRENCH WITH GRAVEL BACKFILL



7

8

SUB-SURFACE PERFORATED DRAIN CONNECTED TO STORM DRAIN FOR EXCESS WATER

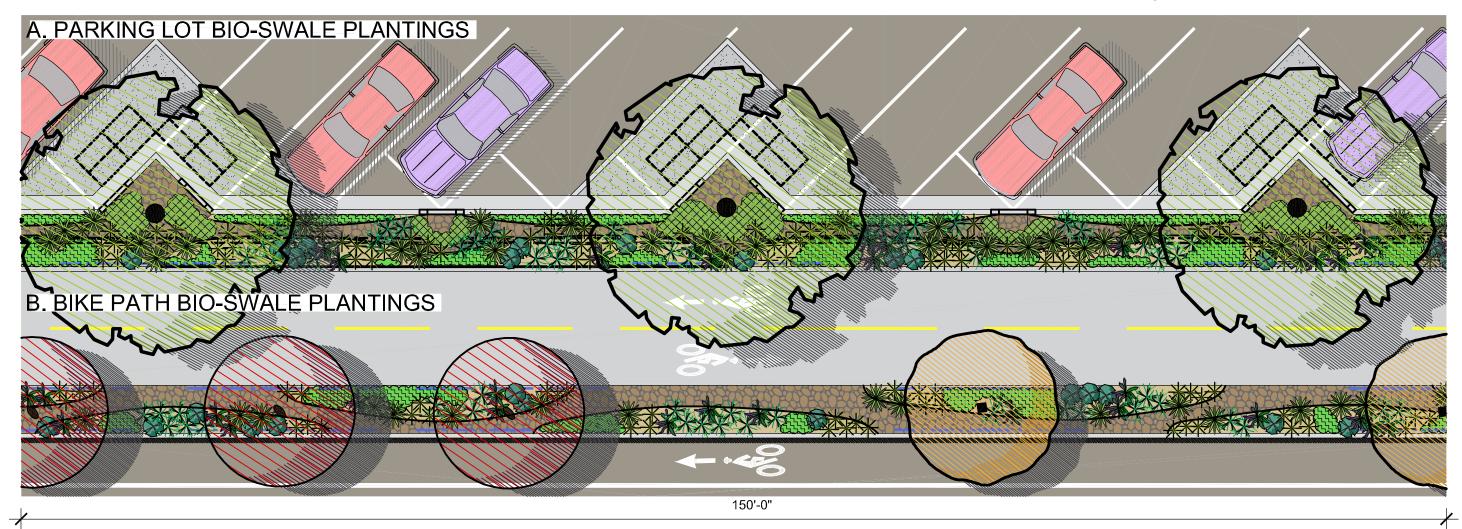
TRAIL GRADED TO SHEET FLOW TO ZERO CURB BIO-SWALE

BIO-SWALE WITH BIO-FILTER APPROVED BACKFILL



OVERFLOW DRAINAGE STAND PIPE

Figure 52: Section View of Stormwater Runoff Concept Plan



100% @ 36" box min.

NATIVE and/or DROUGHT TOLERANT BIO-SWALE PLANTINGS

TREES	SUCH	AS:
-------	------	-----

ARBUTUS 'Marina'	Strawberry Tree
LAGERSTROEMIA indica	Crape Myrtle
METROSIDEROS excelsa	Christmas Tree
PLANTANUS racemosa	California Sycamore
PYRUS calleryana 'Cleveland Select'	Ornamental Pear

NATIVE and/or DROUGHT TOLERANT GRASSES SUCH AS: 259/ E CALLON 759/ 1 CALLON (SPACING 12"-



ACING 12-2	24°0.0.)	25% 5 GALLON, 75% T GALLON
	ARISTIDA purpurea	Purple Three-Awn
	CAREX praegracilis	California Field Sedge
	DISTICHLIS spicata	Salt Grass
	SCIRPUS cernuus	Low Bulrush
₩	JUNCUS patens	Spreading Rush
₩	MUHLENBERGIA rigens	Deergrass

CONT. NATIVE and/or DROUGHT TOLERANT GRASSES SUCH AS: (SPACING 12"- 24"O.C.) 25% 5 GALLON, 75% 1 GALLON

* NASSELLA viridula

ELEOCHARIS montevidensis

ACCENT PLANTS SUCH AS: (SPACING 12" - 24" O.C.)



ACHILLEA millefolium

FESTUCA californica

× IRIS douglasiana

SATUREJA douglasii

NON-VEGETATIVE GROUND COVER SUCH AS:



SHREDDED REDWOOD BARK MULCH OR DECOMPOSED GRANITE

RIVER ROCK COBBLE: 2" TO 8"

Figure 53: Conceptual Bio-swale Landscape Treatments

Green Needlegrass

Spike Sedge

100% 1 GALLON 12" TO 18" O.C.

Yarrow California Fescue Douglas Iris Yerba Buena

SCALE: 1"= 10'-0"

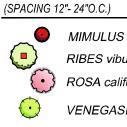
A. WIDE MEDIAN BIO-SWALE PLANTINGS (>12')



NATIVE and/or DROUGHT TOLERANT MEDIAN BIO-SWALE PLANTINGS

TREES SUCH AS





GRASSES SUCH AS:

(SPACING 12"- 24"O.C.)



ACCENT PLANTS SUCH AS: (SPACING 12" - 24" O.C.)



SITE AMENITIES SUCH AS:

RIVER ROCK COBBLE: 2" TO 8"



Figure 54: Median Landscape Treatments

S:	100% @ 36" box min.
'S uhdei	Shamel Ash
reyana	Torrey Pine
IUS racemosa	California Sycamore
tipu	Tipu Tree
IAS:	25% 5 GALLON, 75% 1 GALLON
S cardinalis	Scarlet Monkeyflower
urnifolium	Catalina Perfume
ifornica	California Wild Rose

VENEGASIA carpesioides

NATIVE and/or DROUGHT TOLERANT

25% 5 GALLON, 75% 1 GALLON

Canyon Sunflower

purpurea	Purple Three-Awn
aegracilis	California Field Sedge
IS spicata	Salt Grass
cernuus	Low Bulrush
patens	Spreading Rush
BERGIA rigens	Deergrass
A viridula	Green Needlegrass
RIS montevidensis	Spike Sedge

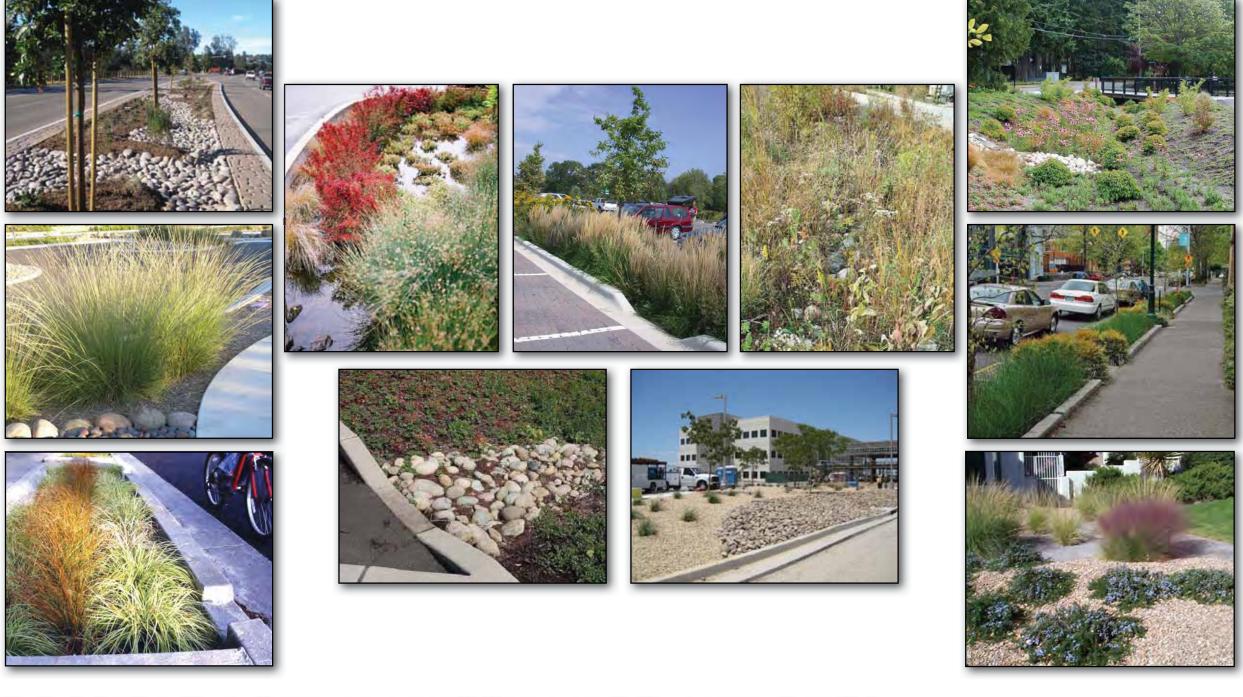
100% 1 GALLON 12" TO 18" O.C.

Yarrow California Fescue Douglas Iris Yerba Buena

SHREDDED REDWOOD BARK MULCH OR DECOMPOSED GRANITE

STAMPED CONCRETE MAINTENANCE STRIP

POSSIBLE PLANT COMPOSITIONS:



POSSIBLE LOW MAINTENANCE MULCHES:



COBBLE STONE

CRUSHED ROCK

DECOMPOSED GRANITE

Figure 55: Landscape Composition Concepts

MULCHES

COMPOST COMPOST FILTER MEDIA GROWING MEDIA

PARKWAY TREES SUCH AS:



ARBUTUS 'Marina' Strawberry Tree



LAGERSTROEMIA indica Crape Myrtle



METROSIDEROS excelsa Christmas Tree

PARKING LOT OR MEDIAN TREES SUCH AS:



FRAXINUS uhdei Shamel Ash SHRUBS SUCH AS:



PINUS torreyana Torrey Pine



PLANTANUS racemosa California Sycamore



MIMULUS cardinalis Scarlet Monkeyflower



RIBES viburnifolium Catalina Perfume



ROSA californica **California Wild Rose**

Figure 56: Sample Parkway and Median Trees



PYRUS calleryana 'Cleveland Select' - Pear



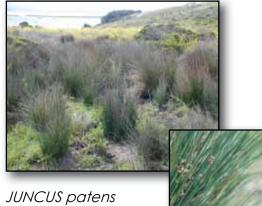
TIPUANA tipu Tipu Tree



NATIVE and/or DROUGHT TOLERANT GRASSES SUCH AS:



Purple Three-Awn



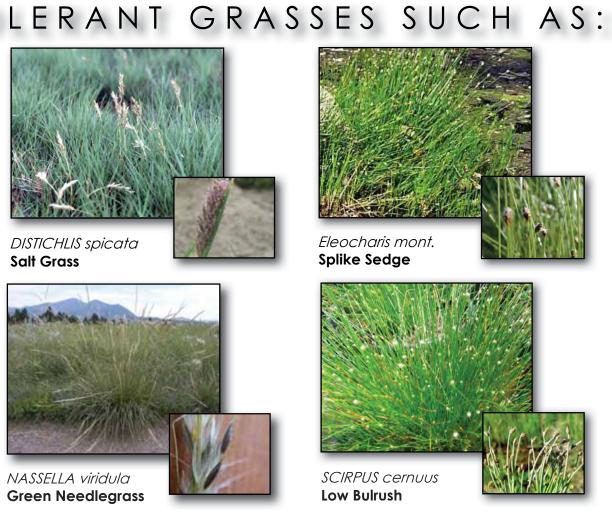
Spreading Rush



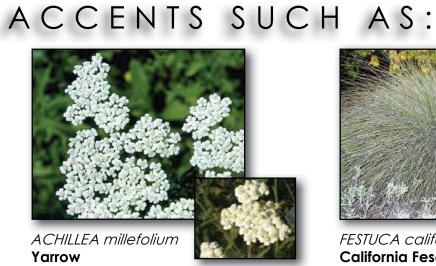
CAREX praegracilis California Field Sedge



MUHLENBERGIA rigens Deergrass







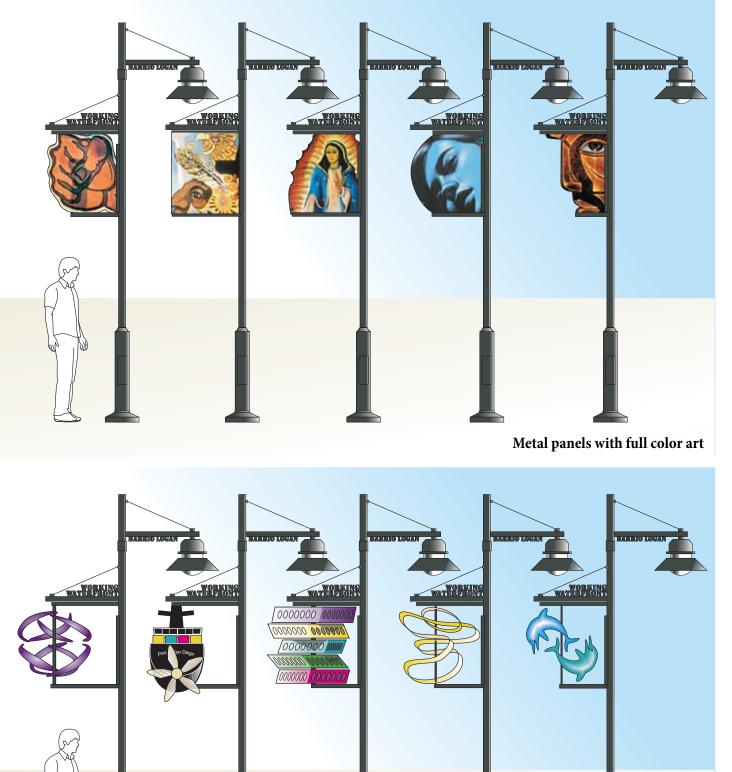


California Fescue





Figure 58: "Art Revolution" Recommended Art Concepts for Light Standards





"Art Revolution" with kinetic art that revolves in the wind



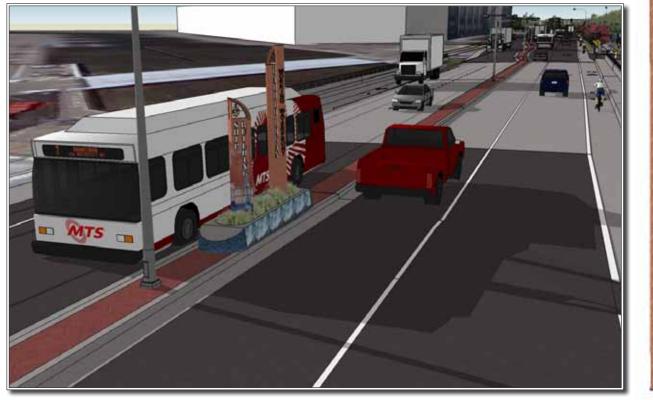


Dimensional art (Laser or Water Jet Cutouts)

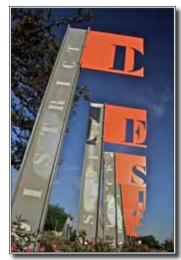
Samples of dimensional art on light poles from Seattle's University Avenue



The vertical markers would be used to denote the general boundaries between the Maritime Operations, Mercado, Ship Repair, Ship Building and the Navy



A support base wold be designed to divert vehicles from collision impacts to the structure and for driver safety



Sample imagery of "I" beam designs using rusted "Corten" steel

The "I" beams would include Laser Jet or Water Jet cutout letters indicating the Working Waterfront as well as the Districts

BARRI

Ō

GAN



Waterfront





The vertical markers would be used close to intersections and can work in narrow, medium or wide medians

Figure 59: "Art Uprising" Recommended Art Concepts for Denote Districts along Harbor Drive

The elements would build on the industrial and art character of Barrio Logan and the Working

Figure 60: "Industrial Art" Recommended Art Concepts for Two Entry Monuments at the South and North End of the Project



Barrio Logan cut-out letters that overhang Harbor Drive with a minimum of 15' clearance



The monument expresses the industrial nature of the area by using rusted Corten "I" beams that symbolically have art partially taking over the structure



Imagery Found in the Immediate Area



The "I" beams will include an held secure on the structure



A barrier or support structure would have to be developed in order to decrease impacts from vehicular collisions and to protect the art project

The "I" beams will include an element that looks like it is hanging, though it would be



Estimate of Construction Costs

Area takeoffs were completed and multiplied by standard industry unit costs. Soft costs such as planning, engineering, permitting, environmental review, inspections, management and other contingency costs were then added to the line item costs. Because of the preliminary nature of the design and engineering and the lack of accurate base mapping, these costs should be considered very preliminary. The unit costs and construction techniques have not yet been assessed, adding an additional level of caution in the use of these very preliminary numbers. A range of costs should be used in discussing and programming for the implementation phase of the work efforts. Costs for all four roadway reconstruction options (see Figure 29 and 30) and all four bridge options (see Figure 31) were developed. Please refer to Tables 4 through 7 for each of the line item summaries per option. Table 8 summarizes the major cost elements of each of the four options.

Probable Maintenance Costs

The overall project will require a few different sources of maintenance funds. The roadway surfaces, along with some of the raised median hardscape surfaces, should be maintained by the City of San Diego as part of ongoing roadway, gas tax based funding. The ongoing maintenance of the hard surface Bayshore Bikeway would include TRANSNET based sales tax money for capital costs of construction, as well as repair and replacement funding. Other maintenance of the Bayshore Bikeway hardscape surfaces, light detection loops, actuators and other markings would fall under the City of San Diego Street Division.

Maintenance of the bio-swale stormwater runoff system, parking lot shade trees and landscape buffers between the bike path and the parking areas, should be funded by NASS-CO or others associated with the use of these parking areas.

Maintenance of the Bayshore Bikeway bio-swale, parkway trees, parkway landscaping, median landscaping, irrigation systems, light fixtures and public art should all be placed under a maintenance assessment district or other assessed form of maintenance where adjacent properties or remote properties that receive a direct benefit from the improvement, are taxed to cover the annual costs of maintenance. The costs of this maintenance will be determined under a separate consultant led study. Table 10 summarizes the quantities of areas to be maintained, as well as the frequency and type of maintenance.

Follow-on Studies Required

2)

3) 4)

5)

This study suggests that the project as originally envisioned is feasible and can be accommodated without extreme expense or disruption to the vehicular carrying capacity of Harbor Drive or major impacts to private parking. However, the conceptual nature of the study did not allow for the identification of a number of issues that will need to be resolved in order to obtain a more accurate construction cost estimate and to determine the types of issues, constraints and options that should be further refined in order to implement the project.

The following is a prioritized list of follow-on research, mapping, design and engineering tasks that are essential for moving this project forward. These tasks include:

1) Cost estimation services to determine more accurate costs. Civil engineering analysis of roadway expansion and reconstruction options. Value engineering of major roadway improvement elements. Additional input from the community, agencies major stakeholders. Accurate property, easement and public right-of-way limits. Accurate base mapping that indicates all major structures or utilities in the way of the Bayshore Bikeway project. 7) Structural engineering analysis of the Harbor Drive Bridge to determine the best solution for adding a 10' to 14' wide bike path facility across this bridge. 8) Civil engineering for stormwater runoff and drainage systems required to implement the plan and resolve water quantity and water quality issues (35% construction documents). 9) Civil engineering for grading solutions to determine proper drainage, ADA requirements and retaining walls (35% construction documents). 10) Structural engineering analysis of the Chollas Creek Bridge to determine the feasibility, options and costs of a 10' to 14' cantilever. 11) Traffic engineering to determine signal sequencing, coordination and MUTCD / ITE / City of San Diego requirements for roadway improvements. 12) Landscape architectural review and layout of planting materials, street tree requirements, bio-swales, median plantings and irrigations systems (35% construction documents). 13) Electrical engineering and lighting engineering to determine lighting levels and points of connection options (35% construction documents)... 14) Refinement of the plan based on additional meetings, workshops, City of San Diego staff input, Port District staff and Commissioner input, County of San Diego input, stakeholder input and SANDAG review and suggestions. 15) Environmental review as required under CEQA. 16) Advisory approval for the conceptual plan and environmental review by the lead agency (which may include the City of San Diego, Port District or SANDAG). 17) Public art coordination and program development. 18) Follow on design, planning and engineering to a 100% design level including electrical, drainage, grading, pavements, landscape architecture, pathway amenities, lighting and irrigation systems.

4a)

Project Phasing

Bike and multi-use facilities with regional significance generally need to be built as one project. However, recognizing difficulties in approvals and funding, a phasing plan will likely be required. Projects such as this one should avoid piecemealing small segments, especially where a near roadway two way path is being contemplated. A cyclist would need to transition from a one-way on-street bike lane or route system to a two way on one side of the road multi-use trail system, which increases safety concerns and decreases connectivity. As such, full segment phasing between major intersections would have to be considered.

A logical progression of phasing would include the following:

1a) Reconstruction of NASSCO parking lots between 28th Street and Sampson Street. This would include new retaining walls and edge treatments to accommodate the northeast expansion of the pathway over the existing tracks that are required to be at or around 90 degrees. 1b) Harbor Drive reconstruction of the median and lane shifting towards the southwest of the northwest bound side of the roadway from 28th to Sampson Street. This would include major drainage and utility extensions for lighting.

1c) Construction of the Bayshore Bikeway from 28th to Sampson, including lighting, signage, street trees and bio-swales.

2a) NASSCO parking lot reconfigurations and stormwater drainage and utility systems from Chollas Creek northward to 28th Street.

Harbor Drive reconstruction of the median and lane shifting towards the southwest of the northwest bound side of the roadway from Chollas Creek to 28th Street. This would include major drainage and utility extensions for lighting.

2c) Construction of the Bayshore Bikeway from 28th to Sampson, including lighting, signage, street trees and bio-swales.

3a) Harbor Drive reconstruction of the median and lane shifting towards the southwest of the northwest bound side of the roadway from Sampson to the southend of the Harbor Drive Bridge. This would include major drainage and utility extensions for lighting.

3b) Construction of the Bayshore Bikeway Sampson to the south end of the Harbor Drive Bridge.

3c) Implementation of the signage and entry monumentation system for the entire corridor, including the public art program.

Construction of a cantilevered bridge on the Chollas Creek bridge and the construction of the path and connectors to the proposed path segments to the south of the study area.

5a) Construction of a cantilevered bridge on the Harbor Drive bridge and the construction of the path and connectors to the proposed path segments to the north of the study area, including connections to the waterfront and the Martin Luther King Promenade.

Table 4: Option 1 (Bridge and Roadway Reconfigurations) Initial Cost Estimates

Bayshore Bikeway: Harbor Drive Segme	yshore Bikeway: Harbor Drive Segment Preliminary Cost Estimate				OPTION 1			
Note: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget		
OPTON 1 SUMMARY								
Non-ROW 1: NASSCO Parking Lots (32nd Street to	o Sampso	n Street)						
I. Parking Lot Construction						\$3,195,51		
Project fees / Contingency						\$1,469,93		
						\$4,665,44		
Option 1: Minimal Roadway & ROW Improvements	s (No Bio-	8wale Bu	iffer)					
2. Roadway Reconstruction						\$369,82		
3. Median Improvements						\$1,173,21		
4. Roadway Infrastructure						\$457,12		
5. Bike / Pedestrian Facilities						\$2,653,77		
3. Identity Signage						\$		
7. Bridge Cantilevers						\$692,87		
3. Landscape and Irrigation						\$1,099,29		
9. Utility Connections & Relocations						\$770,50		
Project fees / Contingency						\$3,175,30		
			Option 1: t	otal:		\$10,391,91		
	Gron	d Total	Ectimated	Construe	ction Costs:	\$15,057,36		

Bayshore Bikeway: Harbor Drive Segm	hore Bikeway: Harbor Drive Segment Preliminary Cost Estimate					OPTION 1
Note: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
Non-ROW 1: NASSCO Parking Lots (32nd Stre	et to Sar	npson St	treet)		15%	
1. Parking Lot Construction						
1.1 Existing parking lot demolition	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,2
1.2 Mass grading, compaction and final grading	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,2
1.3 Drainage improvements including bio-swales	1	LS	\$60,000.00	\$60,000	\$9,000	\$69,0
1.4 Asphaltic concrete with 6" base	159,400	SF	\$8.50	\$1,354,900	\$203,235	\$1,558,1
1.5 Parking lot striping	508	Spaces	\$25.00	\$12,700	\$1,905	\$14,6
1.6 Curb and gutter	10,100	LF	\$20.00	\$202,000	\$30,300	\$232,3
1.7 Belt Street intersection grading, compaction and base	2,135	SF	\$5.00	\$10,675	\$1,601	\$12,
1.8 Parking lot entry/exit signage	11	LS	\$500.00	\$5,500	\$825	\$6,
1.9 Irrigation meter	4	EA	20,000.00	\$80,000	\$12,000	\$92,0
1.10 Irrigation backflow preventer	4	EA	2,500.00	\$10,000	\$1,500	\$11,5
1.11 New planting area irrigation	22,140	SF	\$3.00	\$66,420	\$9,963	\$76,3
1.12 Parking lot/ street trees (36" box)	116	EA	\$800.00	\$92,800	\$13,920	\$106,
1.13 Slope native plantings	5,769	SF	\$3.00	\$17,307	\$2,596	\$19,9
1.14 Parking lot stream course rock and cobble	68	CY	\$50.00	\$3,400	\$510	\$3,9
1.15 Parking lot bark mulch or decomposed granite	84	CY	\$65.00	\$5,460	\$819	\$6,
1.16 Parking lot edge native plantings	16,371	SF	\$3.70	\$60,543	\$9,081	\$69.0
					Subtotal	\$3,195,5 [.]
					inspection fees (2%):	\$63,
		Design, Eng	ineering, Managen		nental Review (15%):	\$479,
					ecord drawings (1%):	\$31,
		90 day			tenance period (2%):	\$63,
			Bor	d - Payment an	d performance (1%):	\$31,
					Contingency (25%):	\$798,
					Total	\$4,665,44

		1	1	-		
ote: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
ption 1: Minimal Roadway & ROW Improven	nents (No	Bio-Swa	ale Buffer)			
Roadway Reconstruction	_					
1 Demolition of roadway pavements	0	SF	\$2.50	\$0	\$0	
.2 Roadway grinding .3 Roadway asphalt patching	0		\$5.00 \$6.00	\$0 \$0	\$0 \$0	
4 Roadway concrete patching	0	SF	\$7.00	\$0 \$0	\$0 \$0	
.3 Roadway grading	0	SF	\$5.00	\$0	\$0	
.5 Base compaction	90,838	SF	\$0.71	\$64,495	\$9,674	\$74,
.6 Roadway asphalt paving .7 Roadway concrete paving	90,838	SF SF	\$2.50 \$3.50	\$227,095 \$0	\$34,064 \$0	\$261,
 Roadway concrete dowelling and expansion joints 	ő		\$25,000.00	\$0	\$0 \$0	
.9 Roadway striping & botts dots	1	LS	\$30,000.00	\$30,000	\$4,500	\$34,
Median Improvements						
.1 Median drainage swales & subsurface excess piping	6,579	LF	\$5.00	\$32,895	\$4,934	\$37,
.2 Median concrete curb with stormwater cut throughs .3 Median concrete gutter (where required) with stormwater cut throughs	20,661	LF LF	\$15.00 \$5.00	\$309,915 \$317,980	\$46,487 \$47,697	\$356, \$365,
.4 Median lighting (Large pole fixtures)	70	EA	\$2,425.00	\$169,750	\$25.463	\$195
.5 Enhanced paving	11,853	SF	\$16.00	\$189,648	\$28,447	\$218
Roadway Infrastructure						
.1 New traffic signal at Sicard Street	1	LS	\$175,000.00	\$175,000	\$26,250	\$201,
2 Pedestrian crossing signals	8	EA	\$5,000.00	\$40,000	\$6,000	\$46.
Class 2 bike lane signage and crossing markings Roadway delineators	1	LS LS	\$2,500.00 \$5,000.00	\$2,500 \$5,000	\$375 \$750	\$2. \$5
.5 New traffic signage, stops signs & other regulatory signs	-	LS	\$175,001.00	\$175,001	\$26,250	\$201,
Bike / Pedestrian Facilities						
10' multi-use path grading	118,217	SF	\$5.00	\$591,085	\$88,663	\$679,
.2 10' multi-use path base compaction	118,217	SF	\$0.71	\$83,934	\$12,590	\$96
 .3 10' multi-use path concrete retaining wall (8') .4 10' multi-use path concrete retaining wall (4') with railing 	231	CY CY	\$864.00 \$864.00	\$199,584 \$73,440	\$29,938 \$11,016	\$229 \$84
 4 10' multi-use path concrete retaining wall (4') with railing 5 10' multi-use concrete path 	118,217	SF	\$8.00	\$945,736	\$141,860	\$04, \$1,087,
.6 10' multi-use path striping	1	LS	\$6,000.00	\$6,000	\$900	\$6
.7 10' multi-use path lighting (Small pole fixtures)	0	EA	\$1,800.00	\$0	\$0	
.8 10' multi-use path crossing	1	LS	\$30,000.00	\$30,000	\$4,500 \$1,500	\$34
.9 10' multi-use path signage and crossing markings 10 10' multi-use path: Concrete Protective Barrier (K-rail)	1	LS LS	\$10,000.00 \$20,000.00	\$10,000 \$20,000	\$1,500	\$11. \$23
11 10' multi-use path protective barrier (wood barrier)	6,957	LO	\$50.00	\$347,850	\$52,178	\$400,
Identity Signage						
1 District markers	0	LS	\$15,000.00	\$0	\$0	
2 District Monumentation signage	0	LS	\$30,000.00	\$0	\$0	
Bridge Cantilevers						
1 Chollas Creek bridge cantilever	1	LS	\$350,000.00	\$350,000	\$52,500	\$402,
.2 Harbor Drive Bridge cantilever .3 Lane Restriping	0	LS LS	\$1,000,000.00 \$2,500.00	\$0 \$2,500	\$0 \$375	\$2
4 Northbound sidewalk expansion w / k-rail	1	LS	\$2,500.00	\$2,500	\$37.500	\$287
.5 Move existing center divide k-rail	Ö	LS	\$20,000.00	\$0	\$0	φ207
.6 Northbound sidewalk expansion w/ class 2 added & k-rail	0	LS	\$650,000.00	\$0	\$0	
Landscape and Irrigation	•		•		•	
1 Median Irrigation meter	4	EA	\$20,000.00	\$80,000	\$12,000	\$92,
.2 Median irrigation backflow preventer	4	EA	\$2,500.00	\$10,000	\$1,500	\$11
.3 New median planting area irrigation .4 Median stream course rock and cobble	87,263	SF CY	\$2.50 \$50.00	\$218,158	\$32,724	\$250 \$10
 Median stream course fock and couple Median native planting areas with significant mulch or DG areas 	176		\$65.00	\$8,800 \$28,275	\$1,320 \$4,241	\$32
.6 Median native plantings	47,130		\$1.54	\$72,621	\$10,893	\$83
.7 Median 36" box trees	130	EA	\$800.00	\$104,000	\$15,600	\$119
.8 Parkway Irrigation meter .9 Parkway irrigation backflow preventer	4	EA EA	\$20,000.00	\$80,000	\$12,000	\$92 \$11
.9 Parkway irrigation backflow preventer 10 New parkway planting area irrigation	4 34,785	SF	\$2,500.00 \$2.50	\$10,000 \$86,963	\$1,500 \$13,044	\$11 \$100
11 Parkway 36" box trees	252	EA	\$800.00	\$201,600	\$30,240	\$231
12 Parkway native plantings	18,992	SF	\$1.93	\$36,684	\$5.503	\$42
13 Parkway stream course rock and cobble	146		\$50.00	\$7,300	\$1,095	\$8
14 Parkway native planting areas with significant mulch or DG areas	177	CY	\$65.00	\$11,505	\$1,726	\$13
Utility Connections & Relocations			*			
1 New electrical point of connection		LS	\$20,000.00	\$20,000	\$3,000	\$23
 Relocate below ground utilities in the way Relocate major drainage facilities in the way 	1	LS LS	\$100,000.00 \$200,000.00	\$100,000 \$200,000	\$15,000 \$30,000	\$115 \$230
 A Install subsurface trench, perforated piping & stand pipe 	3,000	LS	\$200,000.00	\$200,000	\$30,000	\$230 \$172
5 Remove existing street lighting and cap off utilities	1	LS	\$100,000.00	\$100,000	\$15,000	\$115
6 New potable water point of connection	4	EA	\$25,000.00	\$100,000	\$15,000	\$115
				Opt	ion 1 Subtotal	\$7,216,0
		Design, Eng	ineering, Managerr	nent & Environn	nental Review (15%):	\$1,082
				Permit and	inspection fees (2%):	\$144
					record drawings(1%):	\$72
		90 day			tenance period (2%):	\$144
			Bor	id - Payment ar	nd performance (1%):	\$72
					Contingency (25%):	\$1,804
				Opti	ion 1 SubTotal	\$10,536,2

Bayshore Bikeway: Harbor Drive Segment

 Table 5: Option 2 (Bridge and Roadway Reconfigurations) Initial Cost Estimates

Bayshore Bikeway: Harbor Drive Segmen	t	Pr	elimina	ry Cost	Estimate	OPTION 2
Note: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
BUMMARY						
Non-ROW 1: NASSCO Parking Lots (32nd Street to S	ampson S	itreet)				
. Parking Lot Construction						\$3,195,51
Project fees / Contingency						\$1,469,93
						\$4,665,4
Option 2: Moderate Roadway Improvements (Add on Land	e with Med	lian Rebui	ld)			
2. Roadway Reconstruction (NORTHEAST LANE ONLY)						\$1,602,4
3. Median Improvements						\$1,173,2 [.]
I. Roadway Infrastructure						\$457,1
5. Bike / Pedestrian Facilities						\$3,189,74
i. Identity Signage						\$396,7
7. Bridge Cantilevers						\$715,8
3. Landscape and Irrigation						\$1,099,29
). Utility Connections & Relocations						\$885,5
Project fees / Contingency						\$2,951,1
			Option 2:	total:		\$12,471,1
	Grand	Total E	ctimated	Constru	ction Costs:	\$17,136,5

Bayshore Bikeway: Harbor Drive Segment

Preliminary Cost Estimate OPTION 2

Note: These costs are preliminary and do not reflect the level of refinement the plan					Contractor	
will be adjusted to once more detailed design, engineering and utility research has	Quantity of	Unit of	Unit Price	Sub-total	Profit and	Full Program
been completed.	Units	Measure	(Installed)	Cost	Markup (15%)	Budget
	00		,	0051	,	Duuget
Non-ROW 1: NASSCO Parking Lots (32nd Street	to Samp	son Stre	iet)		15%	
1. Parking Lot Construction						
1.1 Existing parking lot demolition	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,27
1.2 Mass grading, compaction and final grading	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,27
1.3 Drainage improvements including bio-swales	1	LS	\$60,000.00	\$60,000	\$9,000	\$69,00
1.4 Asphaltic concrete with 6" base	159,400	SF	\$8.50	\$1,354,900	\$203,235	\$1,558,13
1.5 Parking lot striping	508	Spaces	\$25.00	\$12,700	\$1,905	\$14,60
1.6 Curb and gutter	10,100	LF	\$20.00	\$202,000	\$30,300	\$232,30
1.7 Belt Street intersection grading, compaction and base	2,135	SF	\$5.00	\$10,675	\$1,601	\$12,27
1.8 Parking lot entry/exit signage	11	LS	\$500.00	\$5,500	\$825	\$6,32
1.9 Irrigation meter	4	EA	20,000.00	\$80,000	\$12,000	\$92,00
1.10 Irrigation backflow preventer	4	EA	2,500.00	\$10,000	\$1,500	\$11,50
1.11 New planting area irrigation	22,140	SF	\$3.00	\$66,420	\$9,963	\$76,38
1.12 Parking lot/ street trees (36" box)	116	EA	\$800.00	\$92,800	\$13,920	\$106,72
1.13 Slope native plantings	5,769	SF	\$3.00	\$17,307	\$2,596	\$19,90
1.14 Parking lot stream course rock and cobble	68	CY	\$50.00	\$3,400	\$510	\$3,91
1.15 Parking lot bark mulch or decomposed granite	84	CY	\$65.00	\$5,460	\$819	\$6,27
1.16 Parking lot edge native plantings	16,371	SF	\$3.70	\$60,543	\$9,081	\$69,62
					Subtotal	\$3,195,51
				Permit and	inspection fees (2%):	\$63,91 \$479,32
Design, Engineering, Management & Environmental Review (15%):						
					ecord drawings (1%):	\$31,95
		90 day la			tenance period (2%):	\$63,91
			Bon	d - Payment ar	nd performance (1%):	\$31,95
					Contingency (25%):	\$798,87
					Total	\$4,665,44

ii De	adjusted to once more detailed design, engineering and utility research has been completed.
ofi	on 2: Moderate Roadway Improvements (A
	oadway Reconstruction (NORTHEAST LAN
.1	Demolition of roadway pavements
.2	Roadway grinding (10%)
3	Roadway asphalt patching (5%)
4 3	Roadway concrete patching (5%) Roadway grading
5	Base compaction
6	Roadway asphalt paving
7	Roadway concrete paving
8	Roadway concrete dowelling and expansion joints
<u>9</u> M	Roadway striping & botts dots edian improvements
1	Median drainage swales & subsurface excess piping
2	Median concrete curb with stormwater cut throughs
3	Median concrete gutter (where required) with stormwater cut throughs
4 5	Median lighting (Large pole fixtures)
_	Enhanced paving
1	oadway Infrastructure New traffic signal at Sicard Street
2	Pedestrian crossing signals
3	Class 2 bike lane signage and crossing markings
4	Roadway delineators
5	New traffic signage, stops signs & other regulatory signs
	ike / Pedestrian Facilities
1 2	12' multi-use path grading 12' multi-use path base compaction
3	12' multi-use path concrete retaining wall (8')
4	12' multi-use path concrete retaining wall (4') with railing
5	12' multi-use concrete path
6	12' multi-use path striping
7 B	12' multi-use path lighting (Small pole fixtures) 12' multi-use path crossing
9	12' multi-use path signage and crossing markings
	12' multi-use path Signage and clossing manangs 12' multi-use path: Concrete Protective Barrier (K-Rail)
1	Class 2 Bike Lane: 6" concrete curb & gutter
_	lentity Signage
1	District markers
2	Light pole based artwork
3	District Monumentation signage
	ridge Cantilevers
1 2	Chollas Creek bridge cantilever Harbor Drive Bridge cantilever
3	Lane Restriping
4	Northbound sidewalk expansion w / k-rail
5	Move existing center divide k-rail
6	Northbound sidewalk expansion w/ class 2 added & k-rail
	andscape and Irrigation
1	Median Irrigation meter
2 3	Median irrigation backflow preventer New median planting area irrigation
4	Median stream course rock and cobble
5	Median native planting areas with significant mulch or DG areas
6	Median native plantings
7 8	Median 36" box trees Parkway Irrigation meter
9	Parkway irrigation backflow preventer
	New parkway planting area irrigation
1	Parkway 36" box trees
	Parkway native plantings
	Parkway stream course rock and cobble
	Parkway native planting areas with significant mulch or DG areas
	tility Connections & Relocations
.1	New electrical point of connection
.2 .3	Relocate below ground utilities in the way Relocate major drainage facilities in the way
4	Install subsurface trench, perforated piping & stand pipe
5	Remove existing street lighting and cap off utilities
	New potable water point of connection
.6	

Preliminary Cost Estimate

OPTION 2

	-		••••••	y cost		
an					Contractor	
is	Quantity of		Unit Price	Sub-total	Profit and	Full Program
	Units	Measure	(Installed)	Cost	Markup (15%)	Budget
١d	d on Lan	e with N	ledian Re	build)		
IE	ONLY)					
	0	SF	\$2.50	\$0	\$0	\$0
	31,271 15,636	SF SF	\$5.00 \$6.00	\$156,356 \$93,814	\$23,453 \$14,072	\$179,809 \$107,886
	15,636	SF	\$0.00	\$109,449	\$14,072	\$107,880
	0	SF	\$5.00	\$0	\$0	\$0
	312,712	SF	\$0.71	\$222,026	\$33,304	\$255,329
	312,712 0	SF SF	\$2.50 \$3.50	\$781,780 \$0	\$117,267 \$0	\$899,047 \$0
	0	LS	\$25,000.00	\$0	\$0	\$0
	1	LS	\$30,000.00	\$30,000	\$4,500	\$34,500
	0.570		AT 00	<u> </u>	A (A)	A07.000
	6,579 20,661	LF LF	\$5.00 \$15.00	\$32,895 \$309,915	\$4,934 \$46,487	\$37,829 \$356,402
	0	LF	\$5.00	\$317,980	\$47,697	\$365,677
	70	EA	\$2,425.00	\$169,750	\$25,463	\$195,213
	11,853	SF	\$16.00	\$189,648	\$28,447	\$218,095
-	4	LS	\$175,000.00	\$175,000	\$26.250	\$201,250
	1	EA	\$175,000.00	\$175,000 \$40,000	\$20,250	\$201,250 \$46,000
	1	LS	\$2,500.00	\$2,500	\$375	\$2,875
	1	LS	\$5,000.00	\$5,000	\$750 \$26.250	\$5,750 \$201,251
	1	LS	\$175,001.00	\$175,001	\$26,250	\$201,251
	141,861	SF	\$5.00	\$709,305	\$106,396	\$815,701
	141,861	SF	\$0.71	\$100,721	\$15,108	\$115,830
	231	CY	\$864.00	\$199,584	\$29,938	\$229,522
	85 141,861	CY SF	\$864.00 \$8.00	\$73,440 \$1,134,888	\$11,016 \$170,233	\$84,456 \$1,305,121
	141,001	LS	\$6,000.00	\$6,000	\$170,233	\$1,505,121 \$6,900
	60	EA	\$1,800.00	\$108,000	\$16,200	\$124,200
	1	LS	\$30,000.00	\$30,000	\$4,500	\$34,500
	1	LS LS	\$10,000.00 \$20,000.00	\$10,000 \$20,000	\$1,500 \$3,000	\$11,500 \$23,000
	7,635	LS	\$50.00	\$381,750	\$57,263	\$439,013
	6	EA	\$15,000.00	\$90,000	\$13,500	\$103,500
	60 1	EA LS	\$3,000.00	\$180,000	\$27,000	\$207,000
	I	Lõ	\$75,000.00	\$75,000	\$11,250	\$86,250
1	1	LS	\$350,000.00	\$350,000	\$52,500	\$402,500
	0	LS	\$800,000.00	\$000,000 \$0	ψ02,500 \$0	\$0
	1	LS	\$2,500.00	\$2,500	\$375	\$2,875
	1	LS LS	\$250,000.00 \$20,000.00	\$250,000 \$20,000	\$37,500	\$287,500 \$22,000
	0	LS	\$650,000.00	\$20,000 \$0	\$3,000 \$0	\$23,000 \$0
	0	LU	ψ000,000.00	ψŪ	ψυ	ψυ
	4	EA	\$20,000.00	\$80,000	\$12,000	\$92,000
	4	EA	\$2,500.00	\$10,000	\$1,500	\$11,500
	87,263 176	SF CY	\$2.50 \$50.00	\$218,158 \$8,800	\$32,724 \$1,320	\$250,881 \$10,120
	435	CY	\$65.00	\$28,275	\$4,241	\$32,516
	47,130	SF	\$1.54	\$72,621	\$10,893	\$83,514
	130	EA EA	\$800.00 \$20,000.00	\$104,000 \$80,000	\$15,600 \$12,000	\$119,600 \$92,000
	4	EA	\$2,500.00	\$10,000	\$1,500	\$92,000 \$11,500
	34,785	SF	\$2.50	\$86,963	\$13,044	\$100,007
	252 18,992	EA SF	\$800.00 \$1.93	\$201,600 \$36,684	\$30,240 \$5,503	\$231,840 \$42,187
	146	CY	\$50.00	\$30,084	\$1,095	\$8,395
	177	CY	\$65.00	\$11,505	\$1,726	\$13,231
	1	LS	\$20,000.00	\$20,000	\$3,000	\$23,000
	1	LS	\$100,000.00	\$100,000	\$15,000	\$115,000
	1 3,000	LS LF	\$200,000.00 \$50.00	\$200,000 \$150,000	\$30,000 \$22,500	\$230,000 \$172,500
	3,000	LF	\$100,000.00	\$100,000	\$22,500	\$172,500 \$115,000
	8	EA	\$25,000.00	\$200,000	\$30,000	\$230,000
				Opt	ion 2 Subtotal	\$9,519,938
		Design, Engine	ering, Managem		nental Review (15%):	\$1,427,991
					inspection fees (2%):	\$190,399
		00.1	nda.aa		record drawings(1%):	\$95,199
		90 day la			tenance period (2%): ad performance (1%):	\$190,399 \$95,199
			501		Contingency (25%):	\$2,379,984
					Option 2 Total	\$13,899,109

Bayshore Bikeway: Harbor Drive Segment

 Table 6: Option 3 (Bridge and Roadway Reconfigurations) Initial Cost Estimates

Bayshore Bikeway: Harbor Drive Segmen	t	P	relimina	ry Cost	Estimate	OPTION 3
Note: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
SUMMARY			-	•		
Non-ROW 1: NASSCO Parking Lots (32nd Street to S	ampson S	Street)				
1. Parking Lot Construction						\$3,195,51
Project fees / Contingency						\$1,469,93
						\$4,665,44
Option 3: Partial Roadway Rebuild (Full Surface Ove	orlay, Add	on Lane	with Media	ın Rebuild	i)	
2. Roadway Reconstruction						\$3,662,31
3. Median Improvements						\$1,173,21
4. Roadway Infrastructure						\$457,12
5. Bike / Pedestrian Facilities						\$3,189,74
6. Identity Signage						\$396,75
7. Bridge Cantilevers						\$1,267,87
8. Landscape and Irrigation						\$1,096,23
9. Utility Connections & Relocations						\$885,50
Project fees / Contingency						\$3,759,91
			Option 3:	total:		\$15,888,67
	Gran	d Total E	stimatod	Constru	ction Costs:	\$20.554.12

Bayshore Bikeway: Harbor Drive Segment

Preliminary Cost Estimate OPTION 3

Note: These costs are preliminary and do not reflect the level of refinement the will be adjusted to once more detailed design, engineering and utility research been completed.		Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
Non-ROW 1: NASSCO Parking Lots (32nd Str	eet to Samp	son Stre	et)		15%	
1. Parking Lot Construction						
1.1 Existing parking lot demolition	159,400	SF	\$2.50	\$398,500	\$59,775	\$458.27
1.2 Mass grading, compaction and final grading	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,27
1.3 Drainage improvements including bio-swales	1	LS	\$60,000.00	\$60,000	\$9,000	\$69,00
1.4 Asphaltic concrete with 6" base	159,400	SF	\$8.50	\$1,354,900	\$203,235	\$1,558,13
1.5 Parking lot striping	508	Spaces	\$25.00	\$12,700	\$1,905	\$14,60
1.6 Curb and gutter	10,100	LF	\$20.00	\$202,000	\$30,300	\$232,30
1.7 Belt Street intersection grading, compaction and base	2,135	SF	\$5.00	\$10,675	\$1,601	\$12,27
1.8 Parking lot entry/exit signage	11	LS	\$500.00	\$5,500	\$825	\$6,32
1.9 Irrigation meter	4	EA	20,000.00	\$80,000	\$12,000	\$92,00
1.10 Irrigation backflow preventer	4	EA	2,500.00	\$10,000		\$11,50
1.11 New planting area irrigation	22,140	SF	\$3.00	\$66,420	\$9,963	\$76,38
1.12 Parking lot/ street trees (36" box)	116	EA	\$800.00	\$92,800	\$13,920	\$106,72
1.13 Parking lot stream course rock and cobble	68	CY	\$50.00	\$3,400		\$3,91
1.14 Parking lot bark mulch or decomposed granite	84	CY	\$65.00	\$5,460	\$819	\$6,27
1.15 Slope native plantings	5,769	SF	\$3.00	\$17,307	\$2,596	\$19,90
1.16 Parking lot edge native plantings	16,371	SF	\$3.70	\$60,543	\$9,081	\$69,62
					Subtotal	\$3,195,51
					inspection fees (2%):	\$63,91
		Design, Engir	eering, Managem		nental Review (15%):	\$479,32
					ecord drawings (1%):	\$31,95
		90 day l	andscape, graffiti	and trash main	tenance period (2%):	\$63,91
			Bon	d - Payment ar	nd performance (1%):	\$31,95
					Contingency (25%):	\$798,87
					Total	\$4,665,446

	adjusted to once more detailed design, engineering and utility research has been completed.
	on 3: Partial Roadway Rebuild (Full Surface Ov
	oadway Reconstruction
2.1 2.2	Demolition of roadway pavements Roadway grinding (10%)
2.3	Roadway asphalt patching (5%)
2.4 2.3	Roadway concrete patching (5%)
	Roadway grading Base compaction
6	Roadway asphalt paving
2.7	Roadway concrete paving (30%)
8 9	Roadway concrete dowelling and expansion joints Roadway striping & botts dots
	edian Improvements
5.1	Median drainage swales & subsurface excess piping
.2	Median concrete curb with stormwater cut throughs
.3 .4	Median concrete gutter (where required) with stormwater cut throughs Median lighting (Large pole fixtures)
	Enhanced paving
	oadway Infrastructure
.1	New traffic signal at Sicard Street
.2	Pedestrian crossing signals
.3 .4	Class 2 bike lane signage and crossing markings Roadway delineators
.5	New traffic signage, stops signs & other regulatory signs
В	ike / Pedestrian Facilities
.1	12' multi-use path grading
.2	12' multi-use path base compaction
.3	12' multi-use path concrete retaining wall (8') 12' multi-use path concrete retaining wall (4') with railing
.5	12' multi-use concrete path
.6	12' multi-use path striping
.7	12' multi-use path lighting (Small pole fixtures) 12' multi-use path crossing
.9	12' multi-use path signage and crossing markings
10	12' multi-use path: Concrete Protective Barrier (K-Rail)
	Class 2 Bike Lane: 6" concrete curb & gutter
	lentity Signage
.1 .2	District markers Light pole based artwork
.3	District Monumentation signage
B	ridge Cantilevers
.1	Chollas Creek bridge cantilever
.2 .3	Harbor Drive Bridge cantilever Lane Restriping
.4	Northbound sidewalk expansion w / k-rail
.5	Move existing center divide k-rail
	Northbound sidewalk expansion w/ class 2 added & k-rail
<u> </u>	andscape and Irrigation
.1 .2	Median Irrigation meter Median irrigation backflow preventer
.3	New median planting area irrigation
.4	Median stream course rock and cobble
.5 .6	Median native planting areas with significant mulch or DG areas Median native plantings
.7	Median 36" box trees
.8	Parkway Irrigation meter
10	Parkway irrigation backflow preventer
10 11	New parkway planting area irrigation Parkway 36" box trees
12	Parkway native plantings
13	Parkway stream course rock and cobble
<u>14</u>	Parkway native planting areas with significant mulch or DG areas
. U .1	tility Connections & Relocations New electrical point of connection
.1	Relocate below ground utilities in the way
.3	Relocate major drainage facilities in the way
.4	Install subsurface trench, perforated piping & stand pipe
.5	Remove existing street lighting and cap off utilities New potable water point of connection

s Quantity of Unit of Unit Price Sub-total Profit and Key (15%) Full Program Budget vertax, Add on Lane witch Median Rebuild b (0) SF 22976 SF 3500 3232747 \$440.462 3379.200 23.2975 SF 3500 3232747 \$440.462 3379.200 32.2975 SF 3500 3220.823 \$34.623 3255.464 0 SF 350.01 \$20.821 \$34.623 3255.464 0 SF 350.01 \$20.821 \$34.623 3255.464 11 LS \$2.500.00 \$2.500 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	n	t	P	reliminaı	ry Cost	Estimate	OPTION 3
Image: start in the start in thestare intere in the start in the start in the start in	an as	Units	Measure	(Installed)	Cost	Profit and Markup (15%)	•
66 5448 SF 55 00 323 747 54 442 537 300 22 975 SF \$5 00 \$20 877 \$22 677 \$27 55 32 975 SF \$5 00 \$20 873 \$34 623 \$226 463 0 SF \$50.00 \$50 \$50 \$50 \$50 0 SF \$50.071 \$50 \$50 \$50 \$50 1 LS \$52.000 \$52.5000 \$37.50 \$28.767 1 LS \$50.000 \$50.000 \$37.50 \$28.763 2.0.661 LF \$51.00 \$31.980 \$44.67 \$33.66.42 2.0.661 LF \$51.00 \$31.980 \$47.637 \$33.66.42 2.0.611 LF \$51.00 \$31.980 \$47.637 \$33.66.42 2.0.611 LF \$51.00 \$32.847 \$33.762 \$33.762 2.0.611 LF \$51.00 \$35.700 \$35.757 \$33.750 \$33.750 \$33.762 \$33.757 \$33.750	ve	rlay, Add	on Lane	with Media	n Rebuild	1)	
66 5448 SF 55 00 323 747 54 442 537 300 22 975 SF \$5 00 \$20 877 \$22 677 \$27 55 32 975 SF \$5 00 \$20 873 \$34 623 \$226 463 0 SF \$50.00 \$50 \$50 \$50 \$50 0 SF \$50.071 \$50 \$50 \$50 \$50 1 LS \$52.000 \$52.5000 \$37.50 \$28.767 1 LS \$50.000 \$50.000 \$37.50 \$28.763 2.0.661 LF \$51.00 \$31.980 \$44.67 \$33.66.42 2.0.661 LF \$51.00 \$31.980 \$47.637 \$33.66.42 2.0.611 LF \$51.00 \$31.980 \$47.637 \$33.66.42 2.0.611 LF \$51.00 \$32.847 \$33.762 \$33.762 2.0.611 LF \$51.00 \$35.700 \$35.757 \$33.750 \$33.750 \$33.762 \$33.757 \$33.750		0	SE	\$2.50	\$0	\$0	\$0
32.975 SF 37.00 3220.823 33.4623 \$226.446 0 SF 35.71 \$60 \$60 \$60 0 SF 35.71 \$60 \$60 \$60 197.848 SF \$25.05 \$16.873 \$24.7310 \$776.333 1 LS \$26.000 \$37.50 \$28.763 20.661 LF \$51.00 \$33.915 \$44.447 \$336.402 20.661 LF \$51.00 \$39.915 \$44.447 \$336.402 20.661 LF \$51.00 \$39.915 \$44.447 \$336.402 1 LS \$24.250 \$169.750 \$22.643 \$118.52.13 11.85 SF \$50.00 \$175.000 \$37.53 \$37.63 1 LS \$175.000 \$175.000 \$37.53 \$37.63 11.85 \$50.000 \$175.001 \$12.22.250 \$201.251 141.861 SF \$50.01 \$100.336 \$31.5701 141.861		65,949	SF	\$5.00	\$329,747	\$49,462	\$379,209
0 SF 55.00 50							
659.484 SF 52.50 \$1.647.35 \$247.310 \$1.816.645 197.848 SF 53.50 \$692.466 \$103.870 \$37.51 \$37.50 \$37.51 \$37.570 \$32.467 \$32.463 \$32.447 \$221.80.95 1 LS \$175.000 \$37.50 \$37.50 \$37.570 \$32.751 \$37.570 \$32.757 \$32.757 \$32.757 \$32.757 \$32.751 \$35.750 \$37.450 \$37.450 \$37.450 \$37.450 \$37.450 \$37.450 \$37.450		0	SF	\$5.00	\$0	\$0	\$0
197,648 SF 53.50 5662.469 \$10.370 \$276.000 1 LS \$\$26.000 \$32.600 \$32.895 \$4.934 \$37.629 1 LS \$\$60.000 \$32.895 \$4.934 \$37.629 20.661 LF \$15.00 \$339.915 \$46.487 \$336.577 70 EA \$22.425.00 \$19.750 \$22.463 \$195.213 11.653 SFF \$16.00 \$19.648 \$22.447 \$218.957 1 LS \$5.000.00 \$40.000 \$6.000 \$46.000 1 LS \$5.000.00 \$5.000 \$5.2670 \$5.757 1 LS \$5.000.00 \$5.000 \$5.000 \$5.001 \$5.001 \$5.2757 1 LS \$5.000.00 \$5.000 \$5.000 \$5.000 \$5.2757 \$5.757 1 LS \$5.000.00 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000 \$5.000					1.1		\$0 \$1 806 045
1 LS \$60,000 \$90,000 \$90,000 \$90,000 6,579 LF \$500 \$32,895 \$44,934 \$37,829 20,661 LF \$15.00 \$309,915 \$46,497 \$366,677 70 EA \$24,250.00 \$189,648 \$225,463 \$195,213 11.853 SF \$216,000 \$175,000 \$26,250 \$201,250 8 EA \$5,000.00 \$40,000 \$6,000 \$46,000 1 LS \$5175,001.00 \$56,000 \$26,250 \$201,250 1 LS \$575,000.00 \$26,000 \$375,085,750 \$57,750 1 LS \$570,000 \$50,000 \$376,025,700 \$51,500 1 LS \$570,000,000 \$100,021,510 \$52,5138 \$229,522 65 CV \$864,00 \$199,584 \$29,393 \$229,522 65 CV \$864,00 \$13,488 \$170,233 \$13,305,121 1 LS \$50,000,000							
1 1							\$28,750
20.661 LF \$15.00 \$309.915 \$46,447 \$356,677 70 EA \$2,425.00 \$189,750 \$25,463 \$195,713 11 LS \$175,000.00 \$175,000 \$26,260 \$201,250 8 EA \$5,000.00 \$40,000 \$6,000 \$46,000 1 LS \$2,000.01 \$22,00 \$375,502 \$201,250 1 LS \$5,000.00 \$5,000 \$6,000 \$46,000 1 LS \$5,000.00 \$175,001 \$26,250 \$201,251 141,861 SF \$5,00 \$709,305 \$106,396 \$815,701 141,861 SF \$5,00 \$719,305 \$106,396 \$815,701 141,861 SF \$5,00 \$719,305 \$106,396 \$815,701 141,861 SF \$5,00 \$73,440 \$117,103 \$13,502,292,922 265 CY \$864,00 \$73,440 \$171,016 \$84,459 141,861 SF \$50,000			Lð	\$00,000.00	\$00,000	\$9,000	\$09,000
0 LF \$5:00 \$3:17:800 \$47:697 \$3:86,877 1 LS \$2:42:500 \$1:69,760 \$2:5,463 \$1:69,760 1 LS \$1:75,000 \$1:69,760 \$2:26,200 \$2:201,250 8 EA \$5:000,000 \$4:0,000 \$6:000 \$4:60,000 1 LS \$2:200 \$2:375 \$2:277 1 LS \$5:500 \$5:750 \$2:201 \$2:500 \$2:201,250 1 LS \$5:700 \$1:00,271 \$5:16 \$6:570 \$2:201,251 141,861 SF \$5:00 \$7:03,005 \$1:06,396 \$8:15,703 141,861 SF \$5:00 \$7:3,440 \$1:01,016 \$8:45,900 141,861 SF \$5:000 \$1:14,488 \$1:70,233 \$1:13,05,121 1 LS \$5:0000 \$5:000 \$6:000 \$6:000 \$1:24,200 1 LS \$5:0000 \$3:000 \$1:24,200 \$1:14,861 \$1:00,000 \$1:00,000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$37,829</td>							\$37,829
70 EA \$2,425.00 \$189,648 \$26,463 \$192,613 11.853 SF \$16.00 \$189,648 \$28,447 \$218,095 1 LS \$175,000.00 \$26,250 \$201,250 8 EA \$5,000.00 \$5,000 \$26,250 \$201,250 1 LS \$5,000.00 \$5,000 \$755 \$2,875 1 LS \$5,000.00 \$5,000 \$755 \$5,575 1 LS \$5,000.00 \$175,001 \$22,620 \$221,252 23 CY \$864.00 \$199,584 \$29,382 \$229,522 85 CY \$864.00 \$134,488 \$170,233 \$1,305,171 141,861 SF \$8,000 \$1,34,488 \$170,233 \$1,335,173 141,861 SF \$8,000 \$16,000 \$16,000 \$12,300 1 LS \$30,000 \$31,000 \$16,000 \$12,300 1 LS \$20,000.00 \$10,000 \$13,500							
1 LS \$175,000 \$26,250 \$201,250 8 EA \$5,000,00 \$40,000 \$6,000 \$40,000 1 LS \$2,500,00 \$25,000 \$3750 \$2,875 1 LS \$5,000,00 \$5,500 \$3750 \$5,575 1 LS \$175,001,00 \$175,001 \$26,250 \$201,251 141,861 SF \$5,00 \$709,305 \$106,396 \$815,701 141,861 SF \$5,00 \$709,305 \$106,396 \$211,305,121 141,861 SF \$5,00 \$709,305 \$106,398 \$229,822 85 CY \$884,00 \$173,440 \$11,016 \$84,456 141,061 SF \$8,00 \$173,440 \$170,233 \$1,306,121 1 LS \$50,000 \$30,000 \$4,500 \$34,500 \$12,500 1 LS \$50,000 \$30,000 \$15,000 \$10,000 \$12,000 1 LS \$15,000,000		70	EA		\$169,750	\$25,463	\$195,213
8 EA \$5,000.00 \$6,000 \$5,000 \$5,000 \$5,000 \$5,750 \$2,267 1 LS \$5,000.00 \$5,000 \$5,750 \$5,750 1 LS \$175,001.00 \$175,001 \$20,250 \$201,251 141,861 SF \$5,001 \$709,305 \$106,396 \$815,701 141,861 SF \$5,001 \$179,9305 \$106,396 \$815,701 141,861 SF \$5,001 \$179,9305 \$106,396 \$815,000 2231 CY \$884,00 \$173,448 \$17,016 \$84,450 141,861 SF \$8,000.00 \$108,000 \$12,000 \$12,000 60 EA \$18,00,000 \$30,000 \$14,200 \$12,4200 1 LS \$20,000.00 \$30,000 \$14,200 \$23,000 1 LS \$10,000.00 \$30,000 \$13,500 \$11,490 1 LS \$20,000.00 \$20,000 \$31,250 \$842,200 <		11,853	SF	\$16.00	\$189,648	\$28,447	\$218,095
8 EA \$5,000.00 \$6,000 \$5,000 \$5,000 \$5,000 \$5,750 \$2,267 1 LS \$5,000.00 \$5,000 \$5,750 \$5,750 1 LS \$175,001.00 \$175,001 \$20,250 \$201,251 141,861 SF \$5,001 \$709,305 \$106,396 \$815,701 141,861 SF \$5,001 \$179,9305 \$106,396 \$815,701 141,861 SF \$5,001 \$179,9305 \$106,396 \$815,000 2231 CY \$884,00 \$173,448 \$17,016 \$84,450 141,861 SF \$8,000.00 \$108,000 \$12,000 \$12,000 60 EA \$18,00,000 \$30,000 \$14,200 \$12,4200 1 LS \$20,000.00 \$30,000 \$14,200 \$23,000 1 LS \$10,000.00 \$30,000 \$13,500 \$11,490 1 LS \$20,000.00 \$20,000 \$31,250 \$842,200 <		1	15	\$175,000,00	\$175.000	\$26.250	\$201 250
1 LS \$5,000,00 \$75,001 \$27,50 \$5,750 1 LS \$175,001,00 \$175,001 \$26,250 \$201,251 141,861 SF \$5,071 \$100,721 \$15,108 \$115,803 231 CY \$364,00 \$199,964 \$29,938 \$229,522 85 CY \$364,00 \$13,488 \$110,16 \$544,465 141,861 SF \$8,000 \$1,34,888 \$110,233 \$1,305,121 1 LS \$6,000 \$50,000 \$50,000 \$54,500 \$14,861 141,861 SF \$8,000,00 \$10,000 \$14,000 \$14,200 6 EA \$16,000,00 \$10,000 \$4,500 \$34,900 1 LS \$20,000,00 \$31,306,121 \$100,000 \$10,300 7,635 LF \$50,000,00 \$31,500 \$10,3500 \$10,3500 2 EA \$50,000,00 \$350,000 \$11,250 \$366,250 1 LS \$3		8	EA	\$5,000.00	\$40,000	\$6,000	\$46,000
1 LS \$175.001 \$26.250 \$201.251 141.861 SF \$5.00 \$709.305 \$106.396 \$815.701 141.861 SF \$0.71 \$100.721 \$15.108 \$115.830 231 CY \$864 00 \$199.864 \$29.938 \$225.22 85 CY \$864 00 \$51.400 \$51.000 \$6.000 60 EA \$1.300.00 \$11.4.888 \$170.233 \$1.305.121 1 LS \$50.000 \$51.000 \$51.000 \$12.4500 1 LS \$50.000 \$51.000 \$51.000 \$51.000 1 LS \$50.000 \$30.000 \$51.500 \$51.500 1 LS \$50.000 \$30.000 \$51.500 \$52.000 \$52.000 2 EA \$50.000.00 \$52.500 \$402.500 \$402.500 1 LS \$350.000 \$52.500 \$402.500 \$50 1 LS \$350.000.00 \$52.500 \$40							
141.861 SF \$0.71 \$100.721 \$15.108 \$111.833 231 CY \$864.00 \$199.584 \$29.938 \$229.522 85 CY \$864.00 \$77.440 \$11.016 \$84.456 141.861 SF \$8.00 \$11.34.888 \$170.233 \$1.305.121 1 LS \$60.00 \$50.000 \$6.900 \$6.900 6 EA \$1.800.00 \$10.800 \$4.500 \$323.000 7.635 LF \$50.000 \$31.500 \$31.500 \$30.900 7.635 LF \$50.000 \$31.750 \$57.263 \$439.013 6 EA \$15.000.00 \$90.000 \$13.500 \$20.7000 22 EA \$50.000.00 \$30.000 \$402.500 \$20.7000 1 LS \$350.000.00 \$30.500 \$402.500 \$20.7000 2 EA \$50.000.00 \$30.500 \$30.500 \$30.500 \$30.500 1 LS \$350.000.00 <td></td> <td></td> <td></td> <td></td> <td>\$175,001</td> <td></td> <td>\$201,251</td>					\$175,001		\$201,251
141.861 SF \$0.71 \$100.721 \$15.108 \$111.833 231 CY \$864.00 \$199.584 \$29.938 \$229.522 85 CY \$864.00 \$77.440 \$11.016 \$84.456 141.861 SF \$8.00 \$11.34.888 \$170.233 \$1.305.121 1 LS \$60.00 \$50.000 \$6.900 \$6.900 6 EA \$1.800.00 \$10.800 \$4.500 \$323.000 7.635 LF \$50.000 \$31.500 \$31.500 \$30.900 7.635 LF \$50.000 \$31.750 \$57.263 \$439.013 6 EA \$15.000.00 \$90.000 \$13.500 \$20.7000 22 EA \$50.000.00 \$30.000 \$402.500 \$20.7000 1 LS \$350.000.00 \$30.500 \$402.500 \$20.7000 2 EA \$50.000.00 \$30.500 \$30.500 \$30.500 \$30.500 1 LS \$350.000.00 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
231 CY \$864.00 \$199.584 \$29.938 \$229.522 85 CY \$864.00 \$73.440 \$11.016 \$82.00 \$11.34.888 \$170.233 \$1.305.121 1 LS \$6,000.00 \$6,000 \$59.00 \$89.00 \$16.200 \$124.200 1 LS \$30.000.00 \$20.000 \$31.600 \$14.500 \$10.000 \$10.500							
141,861 SF \$8,00 \$1,134,888 \$170,233 \$1,306,121 1 LS \$6,000,00 \$6,000 \$16,200 \$12,200 1 LS \$30,000,00 \$30,000 \$4,500 \$34,500 1 LS \$10,000,00 \$10,000 \$15,00 \$11,500 1 LS \$20,000,01 \$20,000 \$20,000 \$20,000 7,635 LF \$50,000 \$13,500 \$103,500 \$103,500 6 EA \$35,000,00 \$100,000 \$11,250 \$86,250 1 LS \$350,000,00 \$300 \$52,500 \$402,500 0 LS \$10,000,00 \$0 \$0 \$50 1 LS \$250,000,00 \$0 \$0 \$50 1 LS \$250,000,00 \$0 \$0 \$50 1 LS \$250,000,00 \$0 \$0 \$0 \$0 1 LS \$250,000,00 \$10,000 \$112,500 <td< td=""><td></td><td></td><td>CY</td><td></td><td></td><td></td><td>\$229,522</td></td<>			CY				\$229,522
1 LS \$6,000 \$6,000 \$6,000 \$6,000 \$6,000 \$6,000 \$16,200 \$124,200 1 LS \$31,000,00 \$30,000 \$4,500 \$34,200 1 LS \$10,000,00 \$15,000 \$33,000 \$54,500 7,635 LF \$50,000 \$36,000 \$52,000 \$36,000 6 EA \$15,000,000 \$20,000 \$20,000 \$20,000 2 EA \$50,000 \$100,000 \$27,000 \$20,000 2 EA \$50,000,00 \$350,000 \$22,500 \$20,000 1 LS \$350,000,00 \$350,000 \$22,500 \$20,800 0 LS \$1,000,000,00 \$0 \$0 \$30 \$30 0 LS \$20,000,00 \$0 \$0 \$30 \$30 1 LS \$25,000,00 \$312,000 \$30 \$30 0 LS \$20,000,00 \$312,000 \$30 \$30							\$84,456 \$1 205 121
60 EA \$180.000 \$108.000 \$14,200 \$124,200 1 LS \$30,000.00 \$30,000 \$4,500 \$34,500 1 LS \$20,000.00 \$100.000 \$51,000 \$23,000 7,635 LF \$50,000 \$381,750 \$57,263 \$439,013 6 EA \$15,000.00 \$13,500 \$103,500 \$207,000 \$207,000 2 EA \$30,000.00 \$100,000 \$11,250 \$86,250 1 LS \$350,000.00 \$350,000 \$22,500 \$402,500 0 LS \$1,000,000.00 \$0 \$0 \$0 \$0 1 LS \$250,000.00 \$0 \$0 \$0 \$0 1 LS \$250,000.00 \$0 \$0 \$0 \$0 \$0 1 LS \$20,000.01 \$0 \$0 \$0 \$0 \$0 1 LS \$20,000.01 \$10,000 \$11,2500 \$886,250						\$170,233	\$6,900
1 LS \$10,000 \$10,000 \$1,500 \$11,500 1 LS \$20,000 \$22,000 \$33,000 \$23,000 7,635 LF \$50,000 \$381,750 \$57,263 \$439,013 6 EA \$15,000,000 \$13,500 \$20,7000 \$207,000 2 EA \$350,000,00 \$100,000 \$27,000 \$207,000 0 LS \$100,000,00 \$100,000 \$52,500 \$402,500 0 LS \$2,500,000 \$20,000 \$0 \$0 \$0 1 LS \$2,500,000 \$0 \$0 \$0 \$0 \$0 0 LS \$2,500,000 \$0 \$0 \$0 \$0 \$0 1 LS \$2,500,000 \$10,000 \$12,000 \$0 \$0 \$0 1 LS \$2,500,000 \$10,000 \$112,500 \$862,500 2 4 EA \$2,000,000 \$80,000 \$112,000 \$92,000						\$16,200	\$124,200
7,635 LF \$50,00 \$381,750 \$57,263 \$439,013 6 EA \$15,000,00 \$90,000 \$13,500 \$103,500 60 EA \$30,000,00 \$100,000 \$27,000 \$207,000 2 EA \$50,000,00 \$100,000 \$11,250 \$86,250 1 LS \$350,000,00 \$25,500 \$402,500 0 LS \$1,000,000,00 \$0 \$0 \$30 1 LS \$250,000,00 \$2,000 \$30 \$30 0 LS \$22,000,00 \$0 \$0 \$30 1 LS \$250,000,00 \$10,000 \$112,500 \$862,500 1 LS \$250,000,00 \$10,000 \$112,500 \$862,500 2 4 EA \$20,000,00 \$80,000 \$12,000 \$92,000 4 EA \$20,000,00 \$80,000 \$12,000 \$92,000 4 EA \$20,000,00 \$80,000 \$12,000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>\$34,500 \$11,500</td></t<>							\$34,500 \$11,500
6 EA \$15,000.00 \$90,000 \$13,500 \$100,000 60 EA \$30,000.00 \$180,000 \$27,000 \$207,000 2 EA \$50,000.00 \$100,000 \$11,250 \$86,250 0 LS \$1,000,000 \$0 \$0 \$0 \$0 0 LS \$2,500,000,00 \$22,500 \$375 \$22,875 0 LS \$25,000,00 \$0 \$0 \$0 \$0 1 LS \$22,500,000,00 \$0 \$0 \$0 \$0 1 LS \$25,000,00 \$0 \$0 \$0 \$0 \$0 1 LS \$2,500,00 \$12,000 \$12,000 \$862,500 1 LS \$2,500,00 \$10,000 \$12,500 \$862,500 4 EA \$2,0000,00 \$80,000 \$12,000 \$92,000 4 EA \$2,500,00 \$10,000 \$12,500 \$11,500 87,263 SF <td< td=""><td></td><td>1</td><td></td><td>\$20,000.00</td><td>\$20,000</td><td>\$3,000</td><td>\$23,000</td></td<>		1		\$20,000.00	\$20,000	\$3,000	\$23,000
60 EA \$3,000.00 \$180,000 \$27,000 \$207,000 2 EA \$50,000.00 \$100,000 \$11,250 \$86,250 1 LS \$350,000.00 \$350,000 \$52,500 \$402,500 0 LS \$1,000,000.00 \$0 \$0 \$375 \$2,875 0 LS \$250,000.00 \$0 \$0 \$0 \$0 0 LS \$20,000.00 \$0 \$0 \$0 \$0 0 LS \$20,000.00 \$10.000 \$112,500 \$862,500 4 EA \$2,000.00 \$12,000 \$12,000 \$11,500 87,263 SF \$2,250 \$218,158 \$32,724 \$2250,881 176 CY \$56,00 \$28,275 \$4,241 \$32,514 \$32,514 130 EA \$800,00 \$114,000 \$15,600 \$119,600 4 EA \$2,000.00 \$80,000 \$12,000 \$23,3144 130 EA		7,035	LF	\$50.00	\$381,750	\$57,263	\$439,013
2 EA \$50,000.00 \$100,000 \$11,250 \$86,250 1 LS \$350,000.00 \$350,000 \$52,500 \$402,500 0 LS \$1,000,000.00 \$0 \$0 \$30 1 LS \$2,500.00 \$2,500 \$375 \$2,875 0 LS \$25,000.00 \$0 \$0 \$30 0 LS \$22,000.00 \$0 \$0 \$30 0 LS \$22,000.00 \$12,000 \$12,000 \$12,000 \$12,000 4 EA \$22,000.00 \$12,000 \$11,500 \$862,500 4 EA \$22,000.00 \$12,000 \$12,000 \$12,000 \$12,000 87,263 SF \$2,50 \$218,158 \$32,774 \$250,881 \$176 CY \$50.00 \$28,800 \$1,320 \$101,200 \$112,500 \$11,250 435 CY \$65.00 \$28,275 \$4,241 \$32,2516 \$24,241 \$32,2516 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>\$103,500</td></td<>							\$103,500
1 LS \$350,000,00 \$52,500 \$402,500 0 LS \$1,000,000,00 \$50 \$50 \$50 1 LS \$22,500,00 \$2,500 \$375 \$2,875 0 LS \$2250,000,00 \$50 \$50 \$50 0 LS \$220,000,00 \$50 \$50 \$50 1 LS \$750,000,00 \$12,000 \$862,500 4 EA \$22,000,00 \$112,500 \$8822,500 4 EA \$22,000,00 \$10,000 \$11,500 \$11,500 87,263 SF \$22,50 \$218,158 \$32,724 \$2250,881 176 CY \$50,00 \$88,000 \$13,200 \$10,102 435 CY \$50,00 \$82,275 \$44,241 \$32,514 430 EA \$20,000 \$14,000 \$15,600 \$119,600 4 EA \$20,000 \$10,000 \$1,500 \$119,600 4 EA <							
0 LS \$1,000,000.00 \$0 \$0 \$0 \$0 1 LS \$2,500 \$375 \$2,875 0 LS \$20,000.00 \$0 \$0 \$0 1 LS \$220,000.00 \$0 \$0 \$0 1 LS \$750,000 \$112,500 \$8862,500 4 EA \$22,000.00 \$80,000 \$112,000 \$92,000 4 EA \$22,000.00 \$80,000 \$11,500 \$11,500 87,263 SF \$255 \$218,158 \$32,724 \$2250,881 176 CY \$50.00 \$8,800 \$1,320 \$10,120 435 CY \$65.00 \$28,275 \$4,241 \$32,516 47,130 SF \$1,54 \$72,621 \$10,893 \$83,514 130 EA \$20,000.00 \$16,000 \$115,600 \$119,600 34,785 SF \$2,250 \$86,963 \$13,044 \$100,007 252 </td <td></td> <td><u> </u></td> <td>En</td> <td>\$00,000.00</td> <td>ψ100,000</td> <td>ψ11,200</td> <td>\$60,200</td>		<u> </u>	En	\$00,000.00	ψ100,000	ψ11,200	\$60,200
1 LS \$2,500 \$375 \$2,875 0 LS \$250,000.00 \$0 \$0 \$0 0 LS \$20,000.00 \$0 \$0 \$0 1 LS \$750,000.00 \$750,000 \$112,500 \$862,500 4 EA \$20,000.00 \$80,000 \$112,000 \$92,000 4 EA \$2,000.00 \$10,000 \$112,000 \$92,000 4 EA \$2,000.00 \$10,000 \$11,500 \$11,500 87,263 SF \$2,50 \$218,158 \$32,724 \$2250,811 176 CY \$50.00 \$88,800 \$1,320 \$10,120 435 CY \$65.00 \$28,275 \$4,241 \$322,516 47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$20,000.00 \$10,000 \$11,500 \$114,600 252 EA \$800.00 \$20,000 \$30,240 \$231,840							\$402,500
0 LS \$250,000.00 \$0 \$0 \$0 0 LS \$20,000.00 \$0 \$0 \$0 \$0 1 LS \$750,000.00 \$750,000 \$112,500 \$862,500 4 EA \$20,000.00 \$112,500 \$822,000 4 EA \$2,000.00 \$112,500 \$112,500 87,263 SF \$2,50 \$218,158 \$32,724 \$250,881 176 CY \$56,00 \$8,800 \$1,320 \$10,120 435 CY \$65,00 \$28,275 \$4,241 \$32,516 47,130 SF \$1,54 \$72,621 \$10,893 \$83,514 130 EA \$800.00 \$10,000 \$15,600 \$119,600 4 EA \$2,500.00 \$80,000 \$12,000 \$223,840 130 EA \$20,000.00 \$30,000 \$119,600 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992<							
1 LS \$750,000 \$112,500 \$862,500 4 EA \$20,000,00 \$80,000 \$12,000 \$92,000 4 EA \$2,500,00 \$10,000 \$12,000 \$92,000 87,263 SF \$250 \$218,158 \$32,724 \$250,881 176 CY \$50,00 \$8,800 \$1,320 \$10,102 435 CY \$66,00 \$28,275 \$4,241 \$32,516 47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$800,000 \$112,000 \$92,000 \$42,000 \$15,600 \$119,600 4 EA \$22,000,00 \$80,000 \$12,000 \$92,000 \$42,000 \$46,000 \$15,000 \$11,500 \$11,500 \$11,500 \$11,500 \$11,500 \$11,600 \$42,187 \$44 \$100,000 \$12,000 \$30,240 \$231,840 \$18,992 \$F \$133 \$36,684 \$5,503 \$42,187 \$42,187 \$146 CY		0	LS	\$250,000.00	\$0	\$0	\$0
4 EA \$20,000.00 \$80,000 \$12,000 \$92,000 4 EA \$2,500.00 \$10,000 \$15,000 \$11,500 87,263 SF \$2,500 \$218,158 \$32,724 \$2250,881 1766 CY \$500.00 \$8,800 \$1,320 \$10,120 4355 CY \$65.00 \$28,275 \$4,241 \$322,516 47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$800.00 \$14,000 \$15,600 \$119,600 4 EA \$20,000.00 \$80,000 \$12,000 \$22,000 4 EA \$20,000.00 \$10,000 \$15,600 \$11,500 34,785 SF \$2.50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$33,0240 \$231,840 18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$1,300							
4 EA \$2,500.00 \$10,000 \$15,000 \$11,500 87,263 SF \$2.50 \$218,158 \$32,724 \$2260,881 1766 CY \$565.00 \$8,800 \$1,320 \$10,120 4335 CY \$65.00 \$28,275 \$4,241 \$32,516 47,130 SF \$1.54 \$77,621 \$10,893 \$\$83,514 130 EA \$800.00 \$104,000 \$15,600 \$119,600 4 EA \$20,000.00 \$80,000 \$12,000 \$220,000 4 EA \$2,50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,995 \$8,395 177 CY \$50.00 \$20,000 \$3,000 \$23,000 1 LS \$20,000.0 \$20,000 \$3,000		· · ·	20	¢100,000100	<i></i>	÷::2,000	\$00 <u>2</u> ,000
87,263 SF \$2.50 \$218,158 \$32,724 \$220,814 176 CY \$50.00 \$8,800 \$1,320 \$10,120 435 CY \$65.00 \$28,275 \$4,241 \$32,516 47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$800.00 \$114,000 \$15,600 \$119,600 4 EA \$20,000.00 \$80,000 \$12,000 \$92,000 4 EA \$20,000.00 \$10,000 \$11,500 \$111,500 34,785 SF \$2.50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,095 \$8,395 1777 CY \$50.00 \$20,000 \$30,000 \$230,000 1 LS \$200,000.00 \$200,000 \$30,							\$92,000
176 CY \$50.00 \$8,800 \$1,320 \$10,120 435 CY \$65.00 \$28,275 \$4,241 \$325,514 47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$80,000 \$112,000 \$92,000 4 EA \$20,000.00 \$80,000 \$11,500 \$111,500 34,785 SF \$2.50 \$86,963 \$13,044 \$100,000 \$231,840 18,992 SF \$1.33 \$6,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$10,905 \$83,995 1777 CY \$50.00 \$7,300 \$1,995 \$83,900 1 LS \$20,000.00 \$20,000 \$30,000 \$23,000 1 LS \$20,000.00 \$30,000 \$23,000 1 LS \$20,000.00 \$30,000 \$23,000 1 LS \$100,000.00 \$150,000 \$15,000 \$115,000		L					
47,130 SF \$1.54 \$72,621 \$10,893 \$83,514 130 EA \$800.00 \$114,000 \$15,600 \$119,600 4 EA \$20,000.00 \$80,000 \$12,000 \$92,000 4 EA \$22,000.00 \$80,000 \$11,500 \$11,500 34,785 SF \$2.50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992 SF \$1.33 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,095 \$83,395 177 CY \$50.00 \$30,000 \$230,000 1 LS \$100,000.00 \$100,000 \$15,000 \$230,000 3,000 LF \$50.00 \$100,000 \$150,0		176	CY	\$50.00	\$8,800	\$1,320	\$10,120
130 EA \$800.00 \$104,000 \$15,600 \$119,600 4 EA \$20,000.00 \$80,000 \$12,000 \$82,000 4 EA \$2,500.00 \$10,000 \$1,500 \$11,500 34,785 SF \$2,50 \$86,963 \$13,044 \$100.007 252 EA \$80.00 \$201,600 \$30,240 \$231,840 18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,995 \$8,395 177 CY \$50.00 \$13,000 \$230,000 1 LS \$20,000.00 \$3,000 \$230,000 1 LS \$100,000.00 \$15,000 \$115,000 1 LS \$200,000 \$30,000 \$230,000 1 LS \$100,000.00 \$100,000 \$115,000 1 LS \$100,000.00 \$100,000 \$230,000 1 LS \$100,000.00 \$100,000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
4 EA \$2,500.00 \$10,000 \$1,500 \$11,500 34,785 SF \$2.50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992 SF \$13,33 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,095 \$83,955 1777 CY \$50.00 \$7,300 \$1,328 \$10,178 1 LS \$20,000.00 \$20,000 \$33,000 \$23,000 1 LS \$200,000.00 \$20,000 \$30,000 \$230,000 1 LS \$100,000.00 \$100,000 \$150,000 \$223,000 3,000 LF \$50.00 \$100,000 \$150,000 \$223,000 3,000 LF \$50.00 \$100,000 \$150,000 \$223,000 3,000 LF \$50.00 \$100,000 \$150,000 \$223,000 3,000 LF \$500,000 \$200,000		130	EA	\$800.00	\$104,000	\$15,600	\$119,600
34,785 SF \$2.50 \$86,963 \$13,044 \$100,007 252 EA \$800.00 \$201,600 \$30,240 \$231,840 18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1,095 \$8,395 177 CY \$50.00 \$3,000 \$23,000 1 LS \$20,000.00 \$20,000 \$30,000 \$230,000 1 LS \$100,000.00 \$100,000 \$15,000 \$230,000 1 LS \$200,000.00 \$200,000 \$30,000 \$230,000 1 LS \$100,000.00 \$150,000 \$15,000 \$115,000 1 LS \$100,000.00 \$100,000 \$150,000 \$220,000 \$230,000 3,000 LF \$50.00 \$150,000 \$30,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$243,000 \$242,575 \$242,575 \$			EA FA				
18,992 SF \$1.93 \$36,684 \$5,503 \$42,187 146 CY \$50.00 \$7,300 \$1.995 \$8,395 177 CY \$50.00 \$7,300 \$1,995 \$8,395 177 CY \$50.00 \$8,850 \$1,328 \$10,178 1 LS \$20,000,00 \$20,000 \$3,000 \$230,000 1 LS \$100,000,00 \$100,000 \$15,000 \$115,000 1 LS \$200,000,00 \$30,000 \$230,000 \$230,000 3,000 LF \$50.00 \$150,000 \$22,500 \$117,500 1 LS \$100,000.00 \$100,000 \$30,000 \$230,000 3,000 LF \$50.00 \$200,000 \$30,000 \$230,000 8 EA \$25,000.00 \$100,000 \$15,000 \$115,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 200,000 \$200,000 \$30,000 \$242,575		34,785	SF	\$2.50	\$86,963	\$13,044	\$100,007
146 CY \$50.00 \$7,300 \$1.095 \$8,395 177 CY \$50.00 \$8,850 \$1.328 \$10,178 1 LS \$20,000.00 \$20,000 \$3,000 \$23,000 1 LS \$100,000.00 \$100,000 \$15,000 \$115,000 1 LS \$200,000.00 \$220,000 \$30,000 \$2230,000 3,000 LF \$50.00 \$150,000 \$22,500 \$172,500 1 LS \$100,000.00 \$100,000 \$30,000 \$230,000 3,000 LF \$50.00 \$100,000 \$30,000 \$230,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 9 Permit and inspection fees (2%): \$242,575 \$242,575 \$242,575 Design, Engineering, Management & Environmental Review (15%): \$11,21,288 \$90 day landscape, graffit and trash maintenance period (2%): \$242,575 Bond - P							\$231,840 \$42,187
1 LS \$20,000.00 \$20,000 \$3,000 \$23,000 1 LS \$100,000.00 \$100,000 \$15,000 \$115,000 1 LS \$200,000.00 \$220,000 \$30,000 \$2230,000 3,000 LF \$50.00 \$150,000 \$22,500 \$172,500 1 LS \$100,000.00 \$150,000 \$22,500 \$172,500 1 LS \$100,000.00 \$150,000 \$22,500 \$172,500 1 LS \$100,000.00 \$150,000 \$22,500 \$172,500 8 EA \$25,000.00 \$20,000 \$330,000 \$230,000 200,000 \$200,000 \$200,000 \$30,000 \$242,575 Permit and inspection fees (2%): \$242,575 Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 <		146	CY	\$50.00	\$7,300	\$1,095	\$8,395
1 LS \$100,000.00 \$15,000 \$115,000 1 LS \$200,000.00 \$200,000 \$30,000 \$2230,000 3,000 LF \$50.00 \$150,000 \$2250,000 \$30,000 \$2230,000 1 LS \$100,000.00 \$150,000 \$225,000 \$172,500 1 LS \$100,000.00 \$150,000 \$2230,000 \$30,000 \$230,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$2430,000 \$2430,000 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$1,819,314 \$1,819,314 \$1,21,288 \$121,288 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$121,288 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575		177	CY	\$50.00	\$8,850	\$1,328	\$10,178
1 LS \$100,000.00 \$15,000 \$115,000 1 LS \$200,000.00 \$200,000 \$30,000 \$2230,000 3,000 LF \$50.00 \$150,000 \$2250,000 \$30,000 \$2230,000 1 LS \$100,000.00 \$150,000 \$225,000 \$172,500 1 LS \$100,000.00 \$150,000 \$2230,000 \$30,000 \$230,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 \$230,000 \$230,000 \$230,000 \$230,000 \$2430,000 \$2430,000 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$1,819,314 \$1,819,314 \$1,21,288 \$121,288 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$121,288 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575 \$242,575		1	LS	\$20.000.00	\$20.000	\$3,000	\$23 000
3,000 LF \$50.00 \$150,000 \$22,500 \$172,500 1 LS \$100,000.00 \$1100,000 \$150,000 \$115,000 \$115,000 \$115,000 \$115,000 \$1230,000 \$230,000 \$230,000 \$230,000 \$2242,575 Option 3 Subtotal \$12,128,761 Permit and inspection fees (2%): \$242,575 Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffit and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190		1	LS	\$100,000.00	\$100,000	\$15,000	\$115,000
1 LS \$100,000 \$15,000 \$15,000 \$15,000 8 EA \$25,000.00 \$200,000 \$30,000 \$230,000 Option 3 Subtotal \$12,128,761 Permit and inspection fees (2%): \$242,575 Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%):							\$230,000 \$172,500
Option 3 Subtotal \$12,128,761 Permit and inspection fees (2%): \$242,575 Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190		1	LS	\$100,000.00	\$100,000	\$15,000	\$115,000
Permit and inspection fees (2%): \$242,575 Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190		8	EA	\$25,000.00			\$230,000
Design, Engineering, Management & Environmental Review (15%): \$1,819,314 As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190							
As-built record drawings(1%): \$121,288 90 day landscape, graffiti and trash maintenance period (2%): \$242,575 Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190			Design, Enain	eering, Managem		,	
Bond - Payment and performance (1%): \$121,288 Contingency (25%): \$3,032,190					As-built r	ecord drawings(1%):	\$121,288
Contingency (25%): \$3,032,190			90 day l				
				600	u - rayment ar		\$121,288 \$3,032,190

Bayshore Bikeway: Harbor Drive Segment

Table 7: Option 4 (Bridge and Roadway Reconfigurations) Initial Cost Estimates

Bayshore Bikeway: Harbor Drive Segmen	t	Preli	minary C	ost Est	imate	OPTION 4
Note: These costs are preliminary and do not reflect the level of refinement the plan will be adjusted to once more detailed design, engineering and utility research has been completed.	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
SUMMARY						
Non-ROW 1: NASSCO Parking Lots (32nd Street to S	ampson S	itreet)				
1. Parking Lot Construction						\$3,195,5
Project fees / Contingency						\$1,469,9
						\$4,665,4
Option 4: Full Roadway Rebuild (Full Roadway Rebui	ild & Draiı	nage Imp	rovements))		
2. Roadway Reconstruction						\$10,903,6
3. Median Improvements						\$1,173,2
4. Roadway Infrastructure						\$457,1
5. Bike / Pedestrian Facilities						\$3,309,8
6. Identity Signage						\$421,7
7. Bridge Cantilevers						\$1,555,3
8. Landscape and Irrigation						\$1,096,2
9. Utility Connections & Relocations						\$885,5
Project fees / Contingency						\$6,138,8
			Option 4: t	otal:		\$25,941,4
	Grar	nd Total	Estimated	Constru	ction Costs:	\$30,606,8

Bayshore Bikeway: Harbor Drive Segment

Preliminary Cost Estimate

OPTION 4

Note: These costs are preliminary and do not reflect the level of refinement the pla will be adjusted to once more detailed design, engineering and utility research has been completed.		Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
Non-ROW 1: NASSCO Parking Lots (32nd Stree	t to Samp	son Stre	et)		15%	
1. Parking Lot Construction						
1.1 Existing parking lot demolition	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,27
1.2 Mass grading, compaction and final grading	159,400	SF	\$2.50	\$398,500	\$59,775	\$458,27
1.3 Drainage improvements including bio-swales	1	LS	\$60,000.00	\$60,000		\$69,00
1.4 Asphaltic concrete with 6" base	159,400	SF	\$8.50	\$1,354,900	\$203,235	\$1,558,13
1.5 Parking lot striping	508	Spaces	\$25.00	\$12,700	\$1,905	\$14,60
1.6 Curb and gutter	10,100	LF	\$20.00	\$202,000	\$30,300	\$232,30
1.7 Belt Street intersection grading, compaction and base	2,135	SF	\$5.00	\$10,675	\$1,601	\$12,27
1.8 Parking lot entry/exit signage	11	LS	\$500.00	\$5,500	\$825	\$6,32
1.9 Irrigation meter	4	EA	20,000.00	\$80,000	\$12,000	\$92,00
1.10 Irrigation backflow preventer	4	EA	2,500.00	\$10,000		\$11,50
1.11 New planting area irrigation	22,140	SF	\$3.00	\$66,420	\$9,963	\$76,38
1.12 Parking lot/ street trees (36" box)	116	EA	\$800.00	\$92,800	\$13,920	\$106,72
1.13 Slope native plantings	5,769	SF	\$3.00	\$17,307	\$2,596	\$19,90
1.14 Parking lot stream course rock and cobble	68	CY	\$50.00	\$3,400		\$3,91
1.15 Parking lot bark mulch or decomposed granite	84	CY	\$65.00	\$5,460		\$6,27
1.16 Parking lot edge native plantings	16,371	SF	\$3.70	\$60,543		\$69,62
					Subtotal	\$3,195,51
					inspection fees (2%):	\$63,91
		Design, Eng	ineering, Managem		nental Review (15%):	\$479,32
					ecord drawings (1%):	\$31,95
		90 day			tenance period (2%):	\$63,91
			Bon	id - Payment ar	nd performance (1%):	\$31,95
					Contingency (25%):	\$798,87
					Total	\$4,665,446

	These costs are preliminary and do not reflect the level of refinement the plan a adjusted to once more detailed design, engineering and utility research has been completed.
Opti	ion 4: Full Roadway Rebuild (Full Roadway R
2. R	oadway Reconstruction
2.1	Demolition of roadway pavements
2.2 2.3	Roadway grinding Roadway asphalt patching
2.3	Roadway concrete patching
2.3	Roadway grading
2.5	Base compaction
2.6 2.7	Roadway asphalt paving Roadway concrete paving
2.7	Roadway concrete dowelling and expansion joints
2.9	Roadway striping & botts dots
3. M	edian Improvements
3.1	Median drainage swales & subsurface excess piping
3.2	Median concrete curb with stormwater cut throughs
3.3 3.4	Median concrete gutter (where required) with stormwater cut throughs Median lighting (Large pole fixtures)
3.5	Enhanced paving
4. R	oadway Infrastructure
4.1	New traffic signal at Sicard Street
4.2	Pedestrian crossing signals
4.3 4.4	Class 2 bike lane signage and crossing markings
4.4	Roadway delineators New traffic signage, stops signs & other regulatory signs
	ike / Pedestrian Facilities
5.1	12' multi-use path grading
5.2	12' multi-use path base compaction
5.3	12' multi-use path concrete retaining wall (8')
5.4 5.5	12' multi-use path concrete retaining wall (4') with railing 12' multi-use concrete path
5.6	12' multi-use path striping
5.7	12' multi-use path lighting (Small pole fixtures)
5.8	12' multi-use path crossing
5.9 5.10	12' multi-use path signage and crossing markings 12' multi-use path: Concrete Protective Barrier (K-Rail)
5.11	Class 2 Bike Lane: 6" concrete curb & gutter
6. Id	lentity Signage
6.1	District markers
6.2	Light pole based artwork
6.3	District Monumentation signage
	ridge Cantilevers
7.1 7.2	Chollas Creek bridge cantilever Harbor Drive Bridge cantilever
7.3	Lane Restriping
7.4	Northbound sidewalk expansion w / k-rail
7.5	Move existing center divide k-rail
7.6	Northbound sidewalk expansion w/ class 2 added & k-rail
	andscape and Irrigation
8.1 8.2	Median Irrigation meter Median irrigation backflow preventer
8.3	New median planting area irrigation
8.4	Median stream course rock and cobble
8.5 8.6	Median native planting areas with significant mulch or DG areas Median native plantings
8.7	Median 36" box trees
8.8	Parkway Irrigation meter
8.9	Parkway irrigation backflow preventer
8.10 8.11	New parkway planting area irrigation Parkway 36" box trees
8.12	Parkway native plantings
8.13	Parkway stream course rock and cobble
8.14	Parkway native planting areas with significant mulch or DG areas
	tility Connections & Relocations
9.1	New electrical point of connection
9.2 9.3	Relocate below ground utilities in the way Relocate major drainage facilities in the way
9.4	Install subsurface trench, perforated piping & stand pipe
9.5	Remove existing street lighting and cap off utilities
9.6	New potable water point of connection

1						OPTION 4
ı	Quantity of Units	Unit of Measure	Unit Price (Installed)	Sub-total Cost	Contractor Profit and Markup (15%)	Full Program Budget
R	ebuild &	Drainag	e Improvei	nents)		
	659,494	SF	\$2.50	\$1,648,735	\$247,310	\$1,896,045
	0	SF SF	\$5.00 \$6.00	\$0 \$0	\$0 \$0	\$0 \$0
	0	SF	\$7.00	\$0 \$0	\$0 \$0	\$0 \$0
	659,494	SF	\$5.00	\$3,297,470	\$494,621	\$3,792,091
	659,494 659,494	SF SF	\$0.71 \$2.50	\$468,241 \$1,648,735	\$70,236 \$247,310	\$538,477 \$1,896,045
	659,494	SF SF	\$2.50	\$2,308,229	\$346.234	\$1,690,045
	1	LS	\$50,000.00	\$50,000	\$7,500	\$57,500
_	1	LS	\$60,000.00	\$60,000	\$9,000	\$69,000
_	6.579	LF	\$5.00	\$32,895	\$4,934	\$37,829
	20,661	LF	\$15.00	\$309,915	\$46,487	\$356,402
	0	LF	\$5.00	\$317,980	\$47,697	\$365,677
	70 11.853	EA SF	\$2,425.00 \$16.00	\$169,750 \$189,648	\$25,463 \$28,447	\$195,213 \$218,095
_	11,055	I OF	\$10.00	\$109,040	φ 20,447	\$210,095
	1	LS	\$175,000.00	\$175,000	\$26,250	\$201,250
	8	EA	\$5,000.00	\$40,000	\$6,000	\$46,000
	1	LS LS	\$2,500.00 \$5,000.00	\$2,500 \$5,000	\$375 \$750	\$2,875 \$5,750
~~~~	1	LS	\$5,000.00	\$5,000 \$175,001	\$26,250	\$5,750
					, ., .	· · · · ·
	141,861	SF	\$5.00	\$709,305	\$106,396	\$815,701
	141,861	SF	\$0.71	\$100,721	\$15,108	\$115,830
	231 85	CY CY	\$864.00 \$864.00	\$199,584 \$73,440	\$29,938 \$11,016	\$229,522 \$84,456
	141,861	SF	\$8.00	\$1,134,888	\$170,233	\$1,305,121
	1 118	LS EA	\$6,000.00	\$6,000	\$900 \$31,860	\$6,900 \$244,260
	110	LS EA	\$1,800.00 \$30,000.00	\$212,400 \$30,000	\$31,000	\$244,200
	1	LS	\$10,000.00	\$10,000	\$1,500	\$11,500
	1 7.635	LS	\$20,000.00 \$50.00	\$20,000 \$381.750	\$3,000 \$57,263	\$23,000 \$439.013
	7,030		\$50.00	9901'100	\$57,203	\$439.013
	6	EA	\$17,000.00	\$90,000	\$13,500	\$103,500
	60	EA	\$5,000.00	\$180,000	\$27,000	\$207,000
	2	EA	\$50,000.00	\$100,000	\$11,250	\$111,250
	1	LS	\$350,000.00	\$350,000	\$52,500	\$402,500
••••		LS	\$1,000,000.00	\$1,000,000	\$150,000	\$1,150,000
	1	LS	\$2,500.00	\$2,500	\$375	\$2,875
	0 0	LS	\$250,000.00 \$20,000.00	\$0 \$0	\$0 \$0	\$0 \$0
	0	LS	\$20,000.00 \$650,000.00	\$0 \$0	\$0 \$0	\$0
			+,			
	4	EA	\$20,000.00	\$80,000	\$12,000	\$92,000
	4	EA	\$2,500.00	\$10,000	\$1,500	\$11,500
	87,263 176	SF CY	\$2.50 \$50.00	\$218,158 \$8,800	\$32,724 \$1,320	\$250,881 \$10,120
	435	CY	\$65.00	\$28,275	\$4,241	\$32,516
	47,130	SF	\$1.54	\$72,621	\$10,893	\$83,514
	130 4	EA EA	\$800.00 \$20,000.00	\$104,000 \$80,000	\$15,600 \$12,000	\$119,600 \$92,000
	4	EA	\$2,500.00	\$10,000	\$1,500	\$11,500
	34,785	SF EA	\$2.50	\$86,963	\$13,044	\$100,007
	252 18,992	SF	\$800.00 \$1.93	\$201,600 \$36,684	\$30,240 \$5,503	\$231,840 \$42,187
	146	CY	\$50.00	\$7,300	\$1,095	\$8,395
	177	CY	\$50.00	\$8,850	\$1,328	\$10,178
	1	LS	\$20,000.00	\$20,000	\$3,000	\$23,000
~~~	1	LS	\$20,000.00	\$20,000	\$15,000	\$23,000
	1	LS	\$200,000.00	\$200,000	\$30,000	\$230,000
	3,000 1	LF LS	\$50.00 \$100,000.00	\$150,000 \$100,000	\$22,500 \$15,000	\$172,500 \$115,000
~~~~	8	EA	\$25,000.00	\$200,000	\$30,000	\$230,000
					ion 1 Subtotal	\$19,802,628
					inspection fees (2%):	\$396,053
		Design, Engi	ineering, Managerr		nental Review (15%):	\$2,970,394
		00 dov	landscane graffiti		ecord drawings(1%): tenance period (2%):	\$198,026 \$396,053
		50 udy			id performance (1%):	\$198,025
					Contingency (25%):	\$4,950,657
					Option 1 Total	\$28,911,836

Table 8: Summary of Cost Estimates for all Options

	OPTION 1	OPTION 2	OPTION 3	OPTION 4
1. Parking Lot Construction	\$3,195,511	\$3,195,511	\$3,195,511	\$3,195,51
Project fees / Contingency	\$1,469,935	\$1,469,935	\$1,469,935	\$1,469,93
	\$4,665,446	\$4,665,446	\$4,665,446	\$4,665,446
. Roadway Reconstruction	\$369,828	\$1,602,438	\$3,662,315	\$10,903,62 ²
3. Median Improvements	\$1,173,216	\$1,173,216	\$1,173,216	\$1,173,216
I. Roadway Infrastructure	\$457,126	\$457,126	\$457,126	\$457,126
5. Bike / Pedestrian Facilities	\$2,653,773	\$3,189,742	\$3,189,742	\$3,309,802
6. Identity Signage	\$0	\$396,750	\$396,750	\$421,750
7. Bridge Cantilevers	\$692,875	\$715,875	\$1,267,875	\$1,555,375
3. Landscape and Irrigation	\$1,099,291	\$1,099,291	\$1,096,237	\$1,096,237
9. Utility Connections & Relocations	\$770,500	\$885,500	\$885,500	\$885,500
Project fees / Contingency	\$3,175,308	\$2,951,181	\$3,759,916	\$6,138,815
	\$10,391,918	\$12,471,118	\$15,888,678	\$25,941,442
<b>OPTION GRAND TOTALS:</b>	\$15,057,364	\$17,136,564	\$20,554,123	\$30,606,888

 Table 9: Maintenance Schedule and Quantities

Maintenance Quantities	Monthly	Quarterly	Annually	Unit	Maintenance Type and Frequency
Parkway stream course rock and cobble			15,768	SF	Annual inspection for loose rocks and weeding
Parkway native planting areas with significant mulch or DG areas	18,992			SF	Monthly inspection of irrigation and trash clean up
Count of plants in parkway native planting area		4,076		Plants	Quarterly inspection for plant replacement, disease control & weeding
Median stream course rock and cobble			19,146	SF	Annual inspection for loose rocks and weeding
Median native planting areas with significant mulch or DG areas	47,130			SF	Monthly inspection of irrigation and trash clean up
Median Concrete Maintenance Strip			20,679	SF	Very low maintenance, maybe some inspection for damage annually
Count of plants in median native planting area		8,069		Plants	Quarterly inspection for plant replacement, disease control & weeding
Turn lane stream course rock and cobble mortar set			5,405	SF	Annual inspection for loose rocks and weeding
Turn lane Concrete Maintenance Strip			6,448	SF	Very low maintenance, maybe some inspection for damage annually
Median 36" box trees			130	EA	Annual inspection for disease and pruning / shaping
Parkway 36" box trees			252	EA	Annual inspection for disease and pruning / shaping
Total Monthly Square Footage (all areas)	66,122				
Total Shrub, Groundcover Plant Cou	nt (all areas)	12,145			
Total Annual S	quare Foota	ge (all areas)	67,446		
Τα	otal Tree Cou	nt (all areas)	382		