

APPENDIX C

Technical Memorandum #3: Implementation Strategy



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TO: Ryan Zellers, Michael Baker International; and Melissa Garcia, City of San Diego
FROM: Sherry Ryan, Chen Ryan Associates
DATE: 9/16/2016
RE: Linda Vista CATS Implementation Strategy

Overview

This implementation strategy is intended to support the recommendations identified in the Linda Vista CATS by providing the following information:

- Project prioritization overview and results
- Project phasing
- Cost estimates
- An overview of potential funding sources

Project Prioritization

Two types of project areas were identified for the Linda Vista CATS plan: *project corridors*, which represent modifications to roadway cross-sections; and *project improvement areas*, which are focused on improvements to intersections or small districts. **Table 1** shows the five project corridor extents that were considered for prioritization.

Table 1: Linda Vista CATS Refined Project Corridors

#	Corridor	From	To
1	Linda Vista Road	Mesa College Drive	Alcala Knolls Drive
2	Mesa College Drive	Armstrong Street	Linda Vista Road
3	Genesee Avenue	Linda Vista Road	Whitney Street
4	Ulric Street	Tait Street	Friars Road
5	Via Las Cumbres	Linda Vista Road	Friars Road

Source: Chen Ryan Associates (July, 2016)

The selection of project improvement areas was based on the following considerations:

- Locations receiving comments for needing improvement during the public outreach process;
- Pedestrian and bicycle generating and attracting land uses, such as neighborhood commercial centers, parks, and schools (also including University of San Diego); and
- Locations adjacent to freeways where high speed transitions and other pedestrian and bicycle conflicts occur.

Table 2 shows the 10 project improvement areas identified using the criteria listed above.

Table 2: Linda Vista CATS Project Improvement Areas

#	Improvement Area	Reason(s) for Consideration
A	Mesa College Dr from Linda Vista Rd to SR-163 On-Ramps	Received Public Comment, Conflicts with high speed freeway transitions
B	Linda Vista Road and Mesa College Drive	Received Public Comment, Proximity to Schools
C	Linda Vista Road and Korink Avenue	Received Public Comment, Proximity to Schools
D	Ulric St at intersection of Osler St; Eastman St and Fulton St	Received Public Comment, Proximity to Schools and Park
E	Linda Vista Road and Genesee Avenue	Received Public Comment, Proximity to Schools
F	Genesee Avenue and SR-163 SB On-Ramp	Received Public Comment, Conflicts with high speed freeway transitions
G & I	Area bound by Morley St, Ulric St and Comstock St	Received Public Comment, Neighborhood Commercial Center
J	Linda Vista Road between Brunner St and Goshen St	Received Public Comment, Proximity to University
K	Via Las Cumbres and Linda Vista Road	Received Public Comment, Proximity to Schools
L	Kramer St and Coolidge St Intersection; Coolidge St south of intersection east of school	Received Public Comment, Proximity to Schools

Source: Chen Ryan Associates (July, 2016)

Prioritization scoring was applied to the five project corridors and 10 project improvements areas. The prioritization process utilized seven key criteria – four are need-based and four criteria are based on project-readiness. The need-based criteria consists of traffic collisions per mile, pedestrian and bicycle demand, average daily vehicular traffic volumes and public workshop preference; the project-readiness criteria include curb impacts, right-of-way impacts, and potential utility relocation.

Needs-Based Prioritization Criteria

Table 3 describes the need-based prioritization criteria and associated point assignments. The need-based prioritization criteria are generally indicative of high levels of use and conflict among multiple transportation modes. As shown, the traffic collisions per mile criteria received a maximum of six points, making it the highest weighted of the need-based criteria. These inputs capture demand from automobile, pedestrian and bicyclist use.

Table 4 shows the need-based points earned from each criteria for the project corridors and improvements areas. Project Improvement Areas G&I (area bound by Morley Street, Ulric Street and Comstock Street) and E (Linda Vista Road and Genesee Avenue) scored the highest in the needs-based criteria, each receiving 10 points.

Table 3: Need-Based Prioritization Criteria and Associated Points

Traffic Collisions per Mile	Highest Traffic Collisions per Mile along Project Segment	Category	Prioritization Points
All traffic collisions in the Community Planning Area, including vehicular-vehicular, vehicular-bicyclist, vehicular-pedestrian collisions, between 2008 and 2013 were summarized by project segment. Project segment length was used to determine collisions per mile. More points were awarded to project corridors with higher collisions per mile. Collision records were obtained from City of San Diego.	300 per mile or greater	Very High	6
	250-299 per mile	High	5
	200-249 per mile	Medium-High	4
	150-199 per mile	Medium	3
	100-149 per mile	Medium-Low	2
	50-99 per mile	Low	1
	Less than 50 per mile	Very Low	0
Pedestrian and Bicycle Demand	Average Weighted Pedestrian and Bicycle Demand Model Score along Project Segment	Category	Prioritization Points
This input is a composite of the Pedestrian Priority Model from the City's Pedestrian Master Plan and the Inter- and Intra-Community Demand Model from the City's Bicycle Master Plan. For each project segment, an average weighted score was calculated along the extent of the project segment. The six ranges were determined by the natural breaks of the average weighted scores of all the projects.	66 points or greater	Very High	5
	61-66 points	High	4
	53-61 points	Medium-High	3
	45-52 points	Medium-Low	2
	41-45 points	Low	1
	Less than 41 points	Very Low	0
Average Daily Vehicular Traffic Volumes	Highest Average Daily Traffic (ADT) Volumes along Project Segment	Category	Prioritization Points
Points were awarded based on the highest average daily vehicular traffic (ADT) volume along a project segment. Higher vehicular traffic volumes are indicative of being more stressful facilities for non-motorized users. ADTs were obtained from SANDAG's regional traffic count database (2010).	50,000 ADT or greater	Very High	3
	25,000-50,000 ADT	High	2
	5,000-24,999 ADT	Medium	1
	Less than 5,000 ADT	Low	0
Public Workshop Preference	Workshop Participants Assigning Weighted Preference Votes to Project Areas	Category	Prioritization Points
Members of the public who attended the Linda Vista CATS workshops were each assigned 5 votes to allocate to voting on which improvement areas were of the highest priority. Voting was weighted, meaning participants could decide to assign as many or as few of their 5 votes to an improvement area as they preferred.	10 or more votes	Very High	3
	6-9 votes	High	2
	2-5 votes	Medium	1
	0-1 votes	Low	0

Source: Chen Ryan Associates (July, 2016)

Table 4: Need-Based Prioritization Points

Project ID	Project Extents	Traffic Collisions per Mile Points	Average Pedestrian and Bicycle Demand Points	Average Daily Traffic Volumes Points	Public Workshop Preference	Need-Based Prioritization Points
Project Improvement Areas						
G & I	Area bound by Morley Street, Ulric Street and Comstock Street	1	5	1	3	10
E	Linda Vista Road and Genesee Avenue	3	4	2	1	10
B	Linda Vista Road and Mesa College Drive	2	4	1	1	8
D	Ulric Street at intersections of Osler Street; Eastman Street; and Fulton Street	0	4	1	2	7
J	Linda Vista Road between Brunner Street and Goshen Street	0	4	1	1	6
A	Mesa College Drive from Linda Vista Road to SR-163 Ramps	1	2	2	0	5
F	SR-163 On-Ramp and Genesee Avenue	2	1	2	0	5
C	Linda Vista Road and Korink Avenue	0	2	1	1	4
L	Coolidge Street from Kramer Street to Howe Court	0	0	0	2	2
Project Corridors						
1	Linda Vista Road from Mesa College Drive to Alcalá Knolls Road	0	5	2	n/a	7
3	Genesee Avenue from Whitney Street to Linda Vista Road	3	2	1	n/a	6
4	Ulric Street from Tait Street to Friars Road	1	4	1	n/a	6
2	Mesa College Drive from Armstrong Street to Linda Vista Road	1	2	1	n/a	4
5	Via Las Cumbres from Linda Vista Road to Friars Road	1	0	1	n/a	2

Source: Chen Ryan Associates (July, 2016)

Project-Readiness-Based Prioritization

Table 5 describes the project-readiness-based prioritization criteria and associated point assignment. Project-readiness-based prioritization considers right-of-way impacts, curb line reconfiguration or construction impacts, and utility conflicts. There are a total possible 12 project-readiness-based prioritization points.

Table 5: Project-Readiness Prioritization Criteria and Associated Points

Right-of-Way Impact	Category	Prioritization Points
The dimension of the proposed project was compared to the available right-of-way to determine the potential need for right-of-way acquisition.	No Impact – Right-of-way is sufficient to construct proposed project	4
	Impact – Right-of-way will need to be acquired	0
Curb Impact	Category	Prioritization Points
The dimension of the proposed project was compared to the existing curb lines to determine the potential need for curb line reconfiguration or project requires new curb construction.	No Impact – No curb line reconfiguration required	4
	Impact – Curb line reconfiguration is required	0
Utility Conflict	Category	Prioritization Points
The project imposes impacts to any of the following utilities: <ul style="list-style-type: none"> ▪ Traffic Lights ▪ Street Lights ▪ Transformers ▪ Vaults ▪ Storm Drains ▪ Fire Hydrants ▪ Cable/Phone Risers ▪ Bus Stops ▪ Water Meters ▪ Power Poles 	No Impact – No relocation of utility infrastructure is required	4
	Impact – Relocation of utility infrastructure is required	0

Source: Chen Ryan Associates (July, 2016)

Prioritization points are assigned if the proposed project dimensions do not exceed the right-of-way width of the roadway. Likewise, prioritization points are assigned if projects have no curb reconfiguration impacts, meaning the project does not differ from the existing curb-to-curb width or result in the removal or construction of a median. Project improvements which require additional right-of-way were examined for utility conflicts. **Table 6** shows the project-readiness-based points assigned to each of the project improvement areas and corridors.

Table 6: Project-Readiness-Based Prioritization Points

Project ID	Project Extents	Right-of-Way Impacts	Curb Impacts	Utility Conflicts	Need-Based Prioritization Points
Project Improvement Areas					
A	Mesa College Drive from Linda Vista Road to SR-163 Ramps	4	0	4	8
B	Linda Vista Road and Mesa College Drive	4	0	4	8
C	Linda Vista Road and Korink Avenue	4	0	4	8
D	Ulric Street at intersections of Osler Street; Eastman Street; and Fulton Street	4	0	4	8
F	SR-163 On-Ramp and Genesee Avenue	4	0	4	8
G & I	Area bound by Morley Street, Ulric Street and Comstock Street	4	0	4	8
J	Linda Vista Road between Brunner Street and Goshen Street	4	0	4	8
L	Coolidge Street from Kramer Street to Howe Court	4	0	4	8
E	Linda Vista Road and Genesee Avenue	0	0	0	0
Project Corridors					
1	Linda Vista Road from Mesa College Drive to Alcala Knolls Road	4	4	4	12
2	Mesa College Drive from Armstrong Street to Linda Vista Road	4	4	4	12
3	Genesee Avenue from Whitney Street to Linda Vista Road	4	4	4	12
4	Ulric Street from Tait Street to Friars Road	4	0	4	8
5	Via Las Cumbres from Linda Vista Road to Friars Road	4	0	0	4

Source: Chen Ryan Associates (July, 2016)

Combined Needs-Based and Project-Readiness-Based Prioritization

Table 7 presents the combined need and project-readiness-based prioritization scoring by project segment to establish the final prioritization results. The project improvement areas and project corridors are sorted from highest to lowest priority. The resulting projects were categorized as priority level 1, 2, or 3 based on the top third, middle third, and bottom third scores. Due to the large disparity in project corridor scores, the three highest scoring project corridors were categorized as priority level 1, one project corridor as priority level 2, and one project corridor as priority level 3.

Project Improvement Area G & I (the area bound by Morley Street, Ulric Street and Comstock Street) scored the highest, receiving 18 combined points. Project Improvement Area B (Linda Vista Road and Mesa College Drive) was the next highest scoring location, with 16 points. In terms of project corridors, Linda Vista Road, between Mesa College Drive and Alcala Knolls Road, scored the highest of the five project corridors.

Table 7: Final Prioritization Points

Project ID	Project Extents	Need-Based Prioritization Points	Project-Readiness Prioritization Points	Total Prioritization Points	Priority Level
Project Improvement Areas					
G & I	Area bound by Morley Street, Ulric Street and Comstock Street	10	8	18	1
B	Linda Vista Road and Mesa College Drive	8	8	16	1
D	Ulric Street at intersections of Osler Street; Eastman Street; and Fulton Street	7	8	15	1
J	Linda Vista Road between Brunner Street and Goshen Street	6	8	14	2
A	Mesa College Drive from Linda Vista Road to SR-163 Ramps	5	8	13	2
F	SR-163 On-Ramp and Genesee Avenue	5	8	13	2
C	Linda Vista Road and Korink Avenue	4	8	12	3
E	Linda Vista Road and Genesee Avenue	10	0	10	3
L	Coolidge Street from Kramer Street to Howe Court	2	8	10	3
Project Corridors					
1	Linda Vista Road from Mesa College Drive to Alcala Knolls Road	7	12	19	1
2	Mesa College Drive from Armstrong Street to Linda Vista Road	6	12	18	1
3	Genesee Avenue from Whitney Street to Linda Vista Road	6	12	18	1
4	Ulric Street from Tait Street to Friars Road	4	8	12	2
5	Via Las Cumbres from Linda Vista Road to Friars Road	2	0	2	3

Source: Chen Ryan Associates (July, 2016)

Phasing Plan

The previous section described the process used to prioritize the project improvement areas and project corridors. The prioritization results were broken into thirds based on total prioritization points for the project improvement areas and the project corridors to identify a priority level. The priority level is used in **Table 8** to identify which projects to target for near-term (0-5 years), mid-term (5-10 years), and long-term (more than 10 years) implementation.

Table 8: Project Phasing

Project ID	Project Type	Project Extents	Priority Level	Phase
G & I	Improvement Area	Area bound by Morley Street, Ulric Street and Comstock Street	1	Near Term 0-5 years
B	Improvement Area	Linda Vista Road and Mesa College Drive	1	
D	Improvement Area	Ulric Street at intersections of Osler Street; Eastman Street; and Fulton Street	1	
1	Corridor	Linda Vista Road from Mesa College Drive to Alcala Knolls Road	1	
2	Corridor	Mesa College Drive from Armstrong Street to Linda Vista Road	1	
3	Corridor	Genesee Avenue from Whitney Street to Linda Vista Road	1	
J	Improvement Area	Linda Vista Road between Brunner Street and Goshen Street	2	Mid-Term 5-10 years
A	Improvement Area	Mesa College Drive from Linda Vista Road to SR-163 Ramps	2	
F	Improvement Area	SR-163 On-Ramp and Genesee Avenue	2	
4	Corridor	Ulric Street from Tait Street to Friars Road	2	
C	Improvement Area	Linda Vista Road and Korink Avenue	3	Long-Term > 10 years
E	Improvement Area	Linda Vista Road and Genesee Avenue	3	
L	Improvement Area	Coolidge Street from Kramer Street to Howe Court	3	
5	Corridor	Via Las Cumbres from Linda Vista Road to Friars Road	3	

Source: Chen Ryan Associates (August, 2016)

Cost Estimates

Table 9 presents cost estimates for each of the project improvement areas and the project corridors. The estimates were performed at the planning level and include design, engineering, construction and 20% contingency.

As shown, implementation of Near Term project areas and corridors is estimated to cost approximately \$3.3 million, while Mid Term projects would cost about \$2.4 million, and Long Terms projects would cost approximately \$1.1 million. In total, implementation of all projects would cost approximately \$6.9 million.

A detailed breakdown of the cost estimates can be found in **Attachment 1**, identifying the various components, quantities, and unit costs included in the estimations.

Table 9: Project Cost Estimates

Project ID	Project Type	Project Extents	Phase	Cost Estimate
G & I	Improvement Area	Area bound by Morley Street, Ulric Street and Comstock Street	Near Term 0-5 years	\$1,514,000 ¹
B	Improvement Area	Linda Vista Road and Mesa College Drive		\$520,000
D	Improvement Area	Ulric Street at intersections of Osler Street; Eastman Street; and Fulton Street		\$474,000 ²
1	Corridor	Linda Vista Road from Mesa College Drive to Alcalá Knolls Road		\$311,000
2	Corridor	Mesa College Drive from Armstrong Street to Linda Vista Road		\$460,000
3	Corridor	Genesee Avenue from Whitney Street to Linda Vista Road		\$33,000
Near Term Cost Estimates				\$3,312,000
J	Improvement Area	Linda Vista Road between Brunner Street and Goshen Street	Mid-Term 5-10 years	\$206,400
A	Improvement Area	Mesa College Drive from Linda Vista Road to SR-163 Ramps		\$152,000 ³
F	Improvement Area	SR-163 On-Ramp and Genesee Avenue		\$257,000 ⁴
4	Corridor	Ulric Street from Tait Street to Friars Road		\$1,833,000
Mid Term Cost Estimates				\$2,448,400
C	Improvement Area	Linda Vista Road and Korink Avenue	Long-Term > 10 years	\$83,000 ⁵
E	Improvement Area	Linda Vista Road and Genesee Avenue		\$532,000 ⁶
L	Improvement Area	Coolidge Street from Kramer Street to Howe Court		\$176,000 ⁷
5	Corridor	Via Las Cumbres from Linda Vista Road to Friars Road		\$351,000
Long Term Cost Estimates				\$1,142,000
Total Project Area and Corridor Cost Estimates				\$6,902,400

Source: Michael Baker International (September, 2016)

Notes:

1. An alternative design for Improvement Areas G & I proposes a partial closure for one-way travel along Morley Street, with an estimated cost of \$1,554,000.
2. An alternative design for Improvement Area D proposes a full traffic signal at the Ulric Street and Osler Street intersection, with an estimated cost of \$522,000.
3. An alternative design for Improvement Area A proposes to realign the ramps, with an estimated cost of \$3,600,000.
4. An alternative design for Improvement Area F proposes to realign the ramp, with an estimated cost of \$1,800,000.
5. An alternative design for Improvement Area C proposes full signal, with an estimated cost of \$317,000.
6. An alternative design for Improvement Area E proposes a 2-lane roundabout, with an estimated cost of \$2,400,000.
7. An alternative design for Improvement Area L proposes a traffic circle at the intersection of Kramer Street and Coolidge Street, with an estimated cost of \$173,000.

Funding Sources

Potential funding sources to help implement infrastructure recommendations can be found at all levels of government. Many funding sources are highly competitive, making it necessary for local governments to stay informed about available funds and associated requirements so they are prepared to pursue when applications are open. This is not intended to be a fully comprehensive list, but rather a summary of potential funding sources to explore.

Active Transportation Program – Caltrans

The Active Transportation Program (ATP) was created to encourage increased use of biking and walking. Caltrans administers the ATP to fund capital improvements, including the environmental, design, right-of-way acquisition, and construction phases of a capital improvement project. Program funding is separated into three components, 1) 50% to the state for a statewide competitive program; 2) 10% to small urban and rural regions; and 3) 40% to Metropolitan Planning Organizations (MPO) in urban areas. The Caltrans Active Transportation Program is available once a year, with applications generally due in June. A local match is not required for the statewide competitive program.

Sustainable Transportation Planning Grant Program – Caltrans

The Sustainable Transportation Planning Grant Program was created to support Caltrans’ current Mission: *Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability.* The grants serve to promote a balanced, comprehensive multimodal transportation system with an emphasis on transportation planning efforts that promote sustainability. Some of the eligible activities/costs include data gathering and analysis, planning consultants; conceptual drawings and design; and community surveys, meetings, charrettes, and focus groups.

TransNet Active Transportation Grant Program – SANDAG

SANDAG administers the Active Transportation Grant Program for the San Diego region, funded by TransNet sales tax revenue. Eligible activities include bicycle facilities and connectivity improvements, pedestrian and walkable community projects, bicycle and pedestrian safety projects, and traffic calming projects. All applications must include a Resolution passed by the local city council or governing board, detailing source(s) of matching funds. SANDAG anticipates the Active Transportation Grant Program fourth cycle call for projects will be held in the fall/winter of 2017/2018, with grant awards made in the summer of 2018.

TransNet Smart Growth Incentive Program – SANDAG

SANDAG administers the Smart Growth Incentive program, funded by TransNet sales tax revenue. Funds may be used within designated Smart Growth Opportunity Area to fund local agency salaries, professional services, preliminary engineering, right-of-way acquisition, construction, project management costs, and other direct expenses incurred on behalf of the project. Three Smart Growth Opportunity Areas are identified within the Linda Vista community. A description of each of these areas is provided in **Table 10**, as presented in SANDAG’s *Smart Growth Concept Map Site Descriptions* (May 5, 2016).

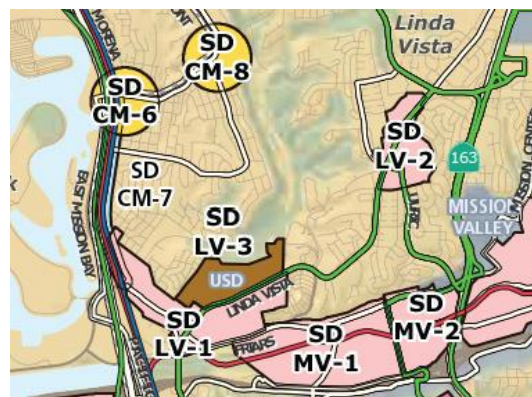


Image from Smart Growth Concept Map

Table 10: Linda Vista Smart Growth Concept Map Site Descriptions

Area	Location	Smart Growth Place Type	Land Use Description
SD-LV-1	Morena Boulevard from Tecolote Road to Linda Vista Road and between Linda Vista Road and Friars Road	Town Center	This town center spans the Linda Vista and Clairemont Mesa communities. The Linda Vista Community Plan designates this area for medium-high density residential (30 to 43 dwelling units per acre), office commercial, community commercial, and general commercial and industrial uses and encourages mixed-use developments adjacent to the light rail station at Napa Street.
SD-LV-2	Linda Vista Road from Tait Street to Fulton Street	Town Center	The Linda Vista Community Plan designates this area for community and office commercial and high-density residential (43 to 75 dwelling units per acre).
SD-LV-3	University of San Diego	Special Use Center	University of San Diego

Source: SANDAG *Smart Growth Concept Map Site Descriptions* (May 5, 2016)