Introduction

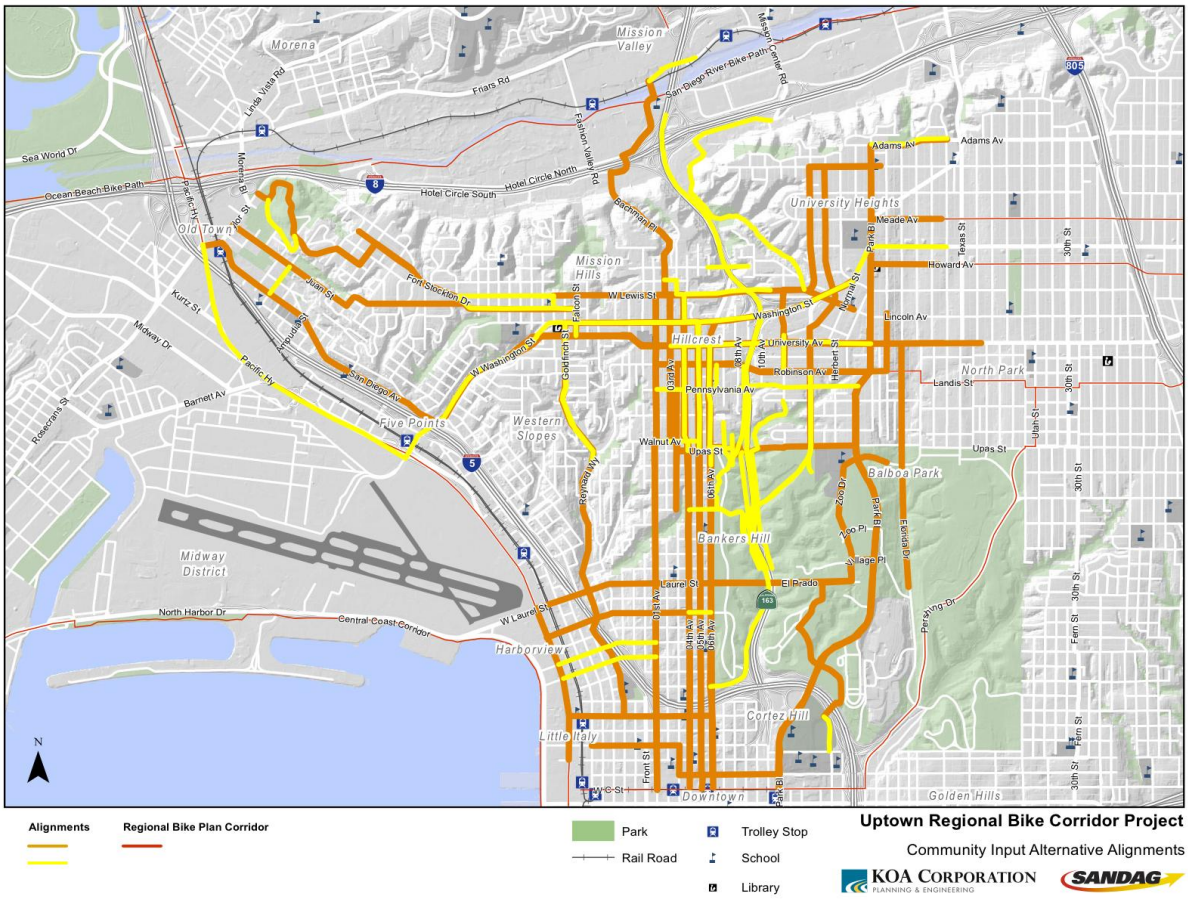
The purpose of the Tier II Alternatives Analysis was to evaluate the 25 alignments resulting from the Tier I evaluation. The highest ranking alignments from Tier II analysis are recommended for the Tier III analysis.

Tier I Summary

The alternatives for the Uptown Regional Bike Corridor Project were developed starting with the corridors identified in the SANDAG Regional Bike Plan (Bike Plan) and incorporating additional alignments based on community input.

During the second Community Advisory Group meeting, community members identified 57 alignments that were analyzed as part of the Tier I Analysis. Figure 2 shows the alignments identified by the community. Orange represents those alignments identified in either the regional or city bike plan or routes with existing bicycle facilities (Class II or III) that community members thought provide direct or viable connections to neighborhoods within the project area. Yellow represents additional alignment ideas generated and discussed by meeting participants.

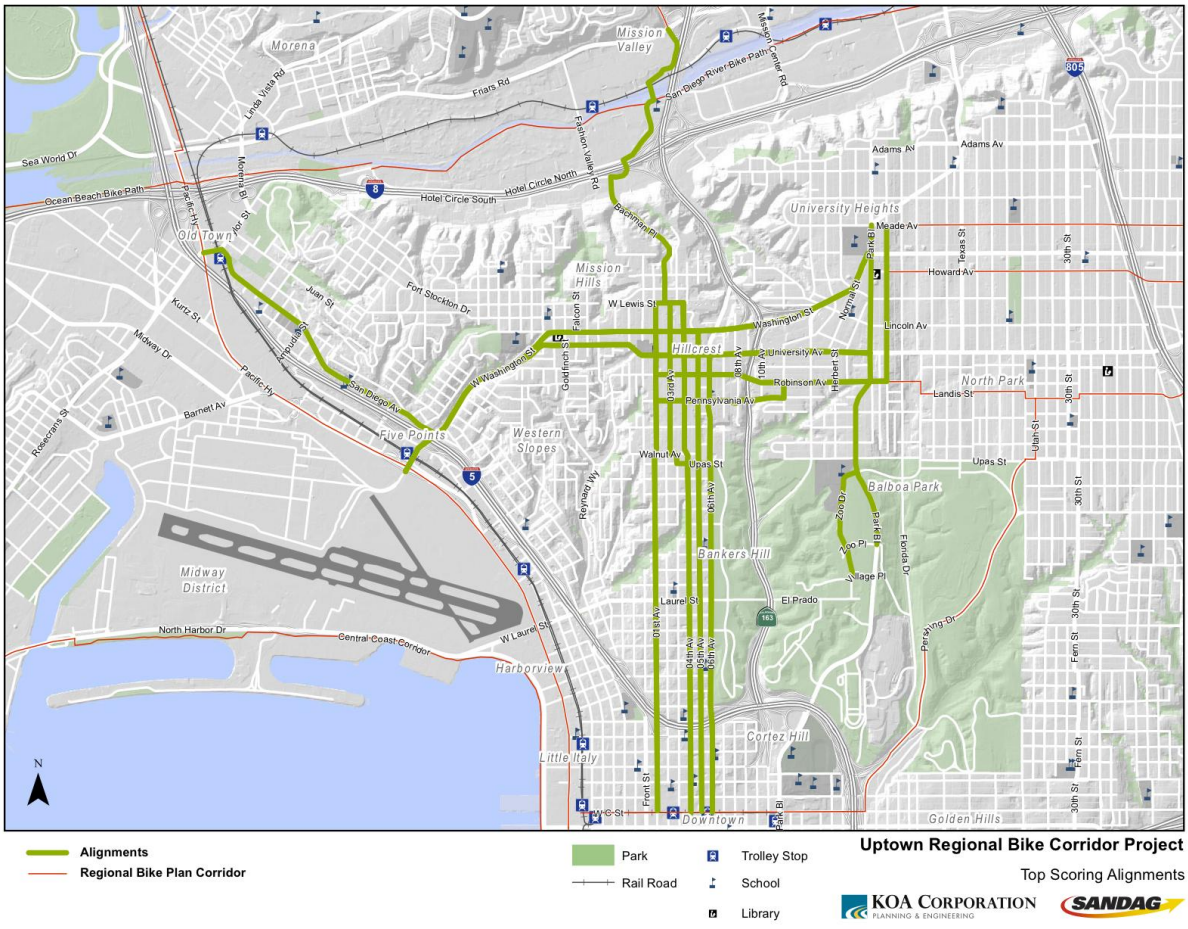
Figure 2 – Community Input Alternative Alignments



Based on the results of the Tier I analysis, the 25 alignments that met the all five Tier I evaluation criteria were further evaluated as part of the Tier II analysis.

The alignments evaluated further in the Tier II screening are illustrated in Figure 1.

Figure 1 – Tier I Recommended Alignments



Vision and Goals

All alternatives under consideration were evaluated based on the project goals established by the Community Advisory Group (Table 2). The project goals are as follows:

- **Mobility:** Increase choices, connect communities
- **Experience:** Improve travel safety for everyone, create an exceptional biking experience
- **Community**: Build on and support related community initiatives
- **Placemaking:** Enhance community identity and public spaces
- **Economic Development:** Improve public infrastructure and strengthen opportunities for community and business development

The project goals were used to develop more specific evaluation criteria shown in Table 2.

Tier II Overview

The Tier II analysis evaluated the 25 alternative alignments, that were the result of the Tier I screening, with a corresponding facility type.

During the design concept process, Robinson Ave, and University Ave alignments in the Hillcrest-Hillcrest and Hillcrest-North Park corridors and Park Blvd in the University Heights-Balboa Park corridor were further developed into constrained and unconstrained alternatives to consider potential impacts to traffic operations and parking. This increased the number of alignments analyzed to 30. With the constrained alternatives, both existing parking and vehicular travel lanes were preserved. With the unconstrained alternatives, parking and/or vehicular travel lanes were reduced to accommodate dedicated bicycle facilities. Table 1 summarizes each alignment evaluated and its respective facility type.

Table 1 – Alignments and Facility Types

Corridor	Alignment	Facility Description
Mission Valley - Hillcrest	Hotel Circle/Bachman Pl	Multi-use path (Ulric) - Two-way cycle track (Cno de la Reina) - Two way buffered bike lanes (I-8 Underpass) - Sharrow/bike lane (Bachman NB/SB)
Hillcrest - Bankers Hill	1st	Bike lanes
	3rd/Upas	Shared facility
	4th	Two-way cycle track
	5th	Two-way cycle track
	6th	One-way cycle track & buffered bike lane
Bankers Hill - Downtown	1st	One-way cycle track
	4th	One-way cycle track
	5th	One-way cycle track
	6th	One-way cycle track
Old Town - Five Points	Congress/San Diego Ave	Shared facility (Congress St)- Buffered bike lane (San Diego Ave)
Five Points - Mission Hills	Washington Ave	Buffered bike lane & bike/ped sidepath
Mission Hills - Hillcrest	Washington Ave	Buffered bike lanes
	University Ave	Bike Boulevard
Hillcrest - Hillcrest	Washington Ave	Buffered bike lanes
	University Ave	
	Constrained	Shared facility (Front-5th, Normal-Park) - bike lanes (5th-9th)
	Unconstrained	Cycle track (Front-3rd, 4th-9th)
	Robinson Ave	
	Constrained	Shared facility (1st-8th)
	Unconstrained	Cycle track (4th-8th)
	Pennsylvania Ave	Bike Boulevard
Hillcrest - North Park	Washington Ave	Buffered bike lanes
	University Ave	
	Constrained	Buffered bike lanes (9th-10th) - bike/ped sidepath (10th-Normal)
	Unconstrained	Cycle track (Vermont-Normal, Centre-Park) bike/ped sidepath (Normal-Centre, at Park)
	Robinson Ave	
	Constrained	Shared facility (SR-163 bridge WB) - Bike lane (SR-163 bridge EB) Buffered bike lanes (10th-Park)
	Unconstrained	Buffered bike lanes (SR-163 bridge)
	Pennsylvania Ave	Bike Boulevard
University Heights - Balboa Park	Park Blvd	
	Constrained	Shared facility (Adams-Meade, El Cajon-Lincoln) - Bike lanes (Meade-El Cajon)
	Unconstrained	Cycle track (Meade-Upas) - bike/ped sidepath (Upas-Zoo)
	Georgia St	Bike Boulevard

The Tier II analysis involved a quantitative evaluation of the alignments based on seven evaluation criteria. The evaluation criteria and their corresponding performance measures were scored on a scale of zero to two. The evaluation criteria were applied relative to other alignments in the same corridor. For example, the alignment on Washington Street in the Mission Hills–Hillcrest corridor was evaluated against the University Avenue alignment in the same corridor. However, it was not compared to the Pennsylvania Avenue alignment in the Hillcrest–North Park corridor.

Table 2 summarizes the evaluation criteria that were used in the analysis of alternatives alignments, the description of each criterion, and the associated scoring measures. Regional connectivity, neighborhood connectivity, and independent utility were Tier I analysis criteria. If alignments score "yes" for these criteria, they were evaluated in the Tier II analysis.

The route concepts to each alignment can be found in Appendix A.

Table 2 – Evaluation Criteria

Evaluation Criteria	Performance Measure		
Project Goal	**Criteria**	**Description**	**Scoring Measure**
System Connectivity	Regional Connectivity	Does the proposed alignment connect two or more regional corridors identified in the Regional Bike Plan?	(Yes/No)
	City Plan Connectivity	Does the proposed alignment compliment the City of San Diego Bike Plan?	(Yes/No)
	Neighborhood Connectivity	Does the proposed alignment connect two or more project area neighborhood nodes?	(Yes/No)
	Deficiency	Is there an existing deficiency that the alignment is addressing?	- Alignment has no facility. - Alignment has a facility, but facility doesn't serve average person, therefore, it is not adequate. - A parallel alignment has adequate facilities. - Alignment has adequate facilities.
	Independent Utility	Does the alignment have independent utility (i.e. does it make sense as a stand alone project)?	(Yes/No)
	Couplet Clossness	Is the proposed alignment close to the proposed couplet?. It only applies to competing alignments on the same corridor where a couplet is proposed.	(Yes/No)
	Directness	Is the proposed alignment a direct alignment to the regional or neighborhood connection?	(Yes/No)
Placemaking	Multimodal Connectivity	Ability to transfer to various transit modes (bus, trolley, train, shuttle service).	- High number of transit nodes connected to alignment. - Medium number of transit nodes connected to alignment. - Low number of transit nodes connected to alignment.
	Activity Center Proximity	Are there proximate activity centers along the alignment?	- High number of activity centers within 2 blocks of alignment. - Medium number of activity centers within 2 blocks of alignment. - Low number of activity centers within 2 blocks of alignment.
	Population	Population served by connected LTS network.	- High number of people connected to through LTS 1 & 2 streets and people on the alignment. '- Medium number of people connected to through LTS 1 & 2 streets and people on the alignment. '- Low number of people connected to through LTS 1 & 2 streets and people on the alignment.
Design Concept	Traffic Operations	How is the vehicular LOS affected by the alignment and facility type?	-High vehicle LOS disruption. -Medium vehicle LOS disruption. -Low vehicle LOS disruption.
	Parking	How is on-street parking affected by the alignment and facility type?	-High number of parking spaces displaced. -Medium number of parking spaces displaced. -Low number of parking spaces displaced.
	Geometric Feasibility	Is the alignment/facility type feasible in the existing R/W?	(Yes/No)
Safety Considerations	Collisions	Would alignment reduce the number of existing collisions?	-High number of bike-collisions along alignment. -Medium number of bike-collisions along alignment. -Low number of bike-collisions along alignment.
	Achievable LTS	Can we achieve a facility that provides for the average person (i.e. an LTS of 1 or 2)?	(Yes/No)
Community Input	Alignments	Alignments that received high, medium-level or low public support.	-High level of public support. -Medium level of public support. -Low level of public support.
Environment	Environmental Impacts	Potential environmental impacts caused by the alignment and facility type. Not including traffic impact.	-High level of environmental impact. -Medium level of environmental impact. -Low level of environmental impact.
Financial	Cost	What is the alignment/facility overall cost (including engineering, environmental, planning, permits, etc)?	-High potential cost (not quantified). -Medium potential cost (not quantified). -Low potential cost (not quantified).

Tier II – Summary of Key Findings

This section summarizes the results of the Tier II analysis based on the previously described criteria.

It should be noted that system connectivity and directness scores are weighted higher than the other evaluation criteria. Alignments that were not geometrically feasible, or where proposed facilities did not provide adequate facilities for the average user are eliminated and are not recommended for the Tier III analysis. These eliminated alignments include:

- Hillcrest-Bankers Hill: 1st Avenue
- Hillcrest-Hillcrest: University Avenue (Constrained)
- Hillcrest-Hillcrest: Robinson Avenue (Constrained)
- Hillcrest-Hillcrest: Robinson Avenue (Unconstrained)
- Hillcrest-North Park: University Avenue (Constrained)
- Hillcrest-North Park: Robinson Avenue (Constrained)
- University Heights-Balboa Park: Park Avenue (Constrained)
- University Heights-Balboa Park: Park Avenue (Unconstrained)

The individual scoring sheets and analysis for each performance measure are included in Appendix B.

Tier II Results

Based on the Tier II analysis of the evaluated alignments, the highest ranked alignments for each corridor and those recommended for further analysis are depicted in Figure 3. Table 3 provides the summary of analysis results and ranking of all alternatives. These alignments include:

1. Mission Valley-Hillcrest: Bachman
2. Hillcrest-Bankers Hill: 3rd Avenue
3. Hillcrest-Bankers Hill: 4th Avenue
4. Hillcrest-Bankers Hill: 5th Avenue
5. Bankers Hill-Downtown: 4th Avenue
6. Bankers Hill-Downtown: 5th Avenue
7. Old Town-Five Points: San Diego Avenue
8. Five Points-Mission Hills: Washington Street
9. Mission Hills-Hillcrest: Washington Street
10. Mission Hills-Hillcrest: University Avenue
11. Hillcrest-Hillcrest (east): Washington Street
12. Hillcrest-Hillcrest (east): University Avenue
13. Hillcrest-Hillcrest (east): Pennsylvania Avenue
14. Hillcrest (east)-North Park: University Avenue
15. Hillcrest (east)-North Park: Robinson Avenue
16. Hillcrest (east)-North Park: Pennsylvania Avenue
17. University Heights-Balboa Park: Georgia/Park
18. University Heights-Balboa Park: Georgia/Zoo Drive

Figure 3 – Tier II Alignment Results

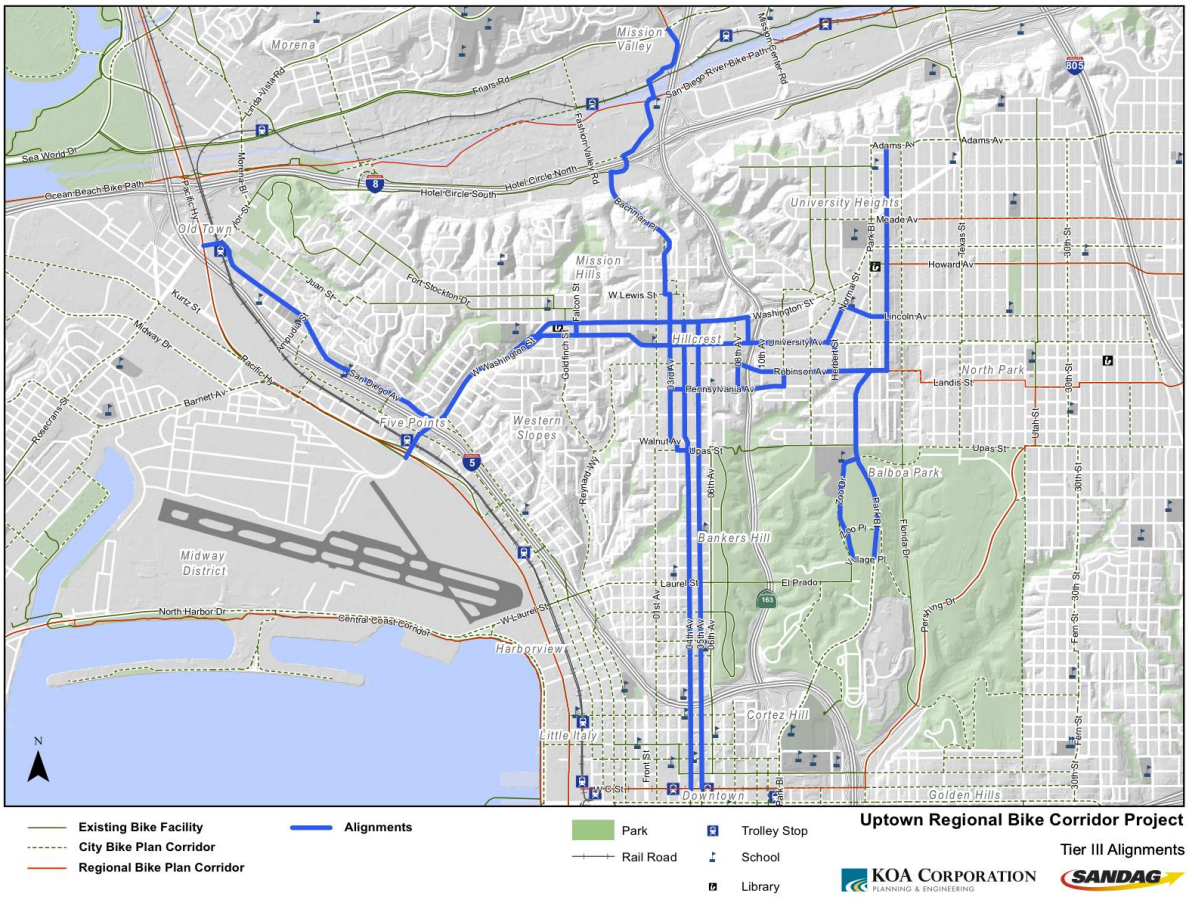


Table 3 – Tier II – Analysis Results and Rankings

Corridor	Alignment	Total Score	Rank	Evaluation Criteria																									
				System Connectivity								Placemaking				Design Concept				Safety Considerations			Community		Environment		Financial	
				Regional Connectivity	City Plan Connectivity	Neighborhood Connectivity	Deficiency	Independent Utility	Couplet Closeness	Directness	Score	Multimodal Proximity	Activity Center Proximity	Population Served	Score	Traffic Impact	Parking Impact	Geometric Feasibility	Score	Collisions	Achievable LTS	Score	Alignments	Score	Environmental Impacts	Score	Cost	Score
Mission Valley - Hillcrest	Hotel Circle/Bachman Pl	53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	High	2	Low	Low	Yes	2	Low	Yes	1	High	2	High	0.0	High	0.0
Hillcrest - Bankers Hill	1st	0	5	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	Low	Low	Medium	0.3	Medium	Low	Yes	1.7	High	No	0	High	2	Low	2.0	Low	2.0
Hillcrest - Bankers Hill	3rd/Upas	53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	Medium	Medium	Medium	1	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Low	2.0
Hillcrest - Bankers Hill	4th	53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	Medium	High	High	1.7	Low	Low	Yes	2	Medium	Yes	1.5	High	2	Low	2.0	Medium	1.0
Hillcrest - Bankers Hill	5th	53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	Low	1.3	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - Bankers Hill	6th	38	4	Yes	Yes	Yes	No Facility	Yes	NA	Shorter	3.1	Medium	High	High	1.7	High	Low	Yes	1.3	High	Yes	2	High	2	Low	2.0	Medium	1.0
Bankers Hill - Downtown	1st	49	4	Yes	Yes	Yes	No Facility	Yes	Close	Shortest	4.3	High	Low	High	1.3	Low	Low	Yes	2	Low	Yes	1	High	2	Low	2.0	Low	2.0
Bankers Hill - Downtown	4th	52	1	Yes	Yes	Yes	No Facility	Yes	Closer	Shortest	4.4	Medium	High	High	1.7	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Medium	1.0
Bankers Hill - Downtown	5th	52	1	Yes	Yes	Yes	No Facility	Yes	Closest	Shortest	4.6	Medium	High	Low	1	High	Low	Yes	1.3	Medium	Yes	1.5	High	2	Low	2.0	Medium	1.0
Bankers Hill - Downtown	6th	50	3	Yes	Yes	Yes	No Facility	Yes	Closer	Shortest	4.4	Low	Medium	Low	0.3	Medium	Low	Yes	1.7	Medium	Yes	1.5	High	2	Low	2.0	Medium	1.0
Old Town - Five Points	Congress/San Diego Ave	54	1	Yes	Yes	Yes	No Adequate Facility	Yes	NA	Shortest	4.6	High	High	High	2	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Low	2.0
Five Points - Mission Hills	Washington Ave	53	1	Yes	Yes	Yes	No Adequate Facility	Yes	NA	Shortest	4.6	High	High	High	2	Low	Medium	Yes	1.7	Low	Yes	1	High	2	Medium	1.0	High	0.0
Mission Hills - Hillcrest	Washington Ave	54	1	Yes	Yes	Yes	No Adequate Facility	Yes	NA	Shortest	4.6	Medium	High	High	1.7	Low	Low	Yes	2	High	Yes	2	High	2	Medium	1.0	Medium	1.0
Mission Hills - Hillcrest	University Ave	52	2	Yes	Yes	Yes	No Adequate Facility	Yes	NA	Shortest	4.6	Low	Medium	Medium	0.7	Low	Low	Yes	2	Medium	Yes	1.5	High	2	Low	2.0	Low	2.0
Hillcrest - Hillcrest	Washington Ave	24	2	Yes	Yes	Yes	No Facility	Yes	NA	Short	1.7	Low	Medium	Medium	0.7	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - Hillcrest	University Ave																												
Constrained		0	4	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	Low	1.3	Low	High	Yes	1.3	High	No	0	High	2	Low	2.0	Low	2.0
Unconstrained		53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	Medium	1.7	Low	High	Yes	1.3	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - Hillcrest	Robinson Ave																												
Constrained		0	4	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	Low	Medium	Low	0.3	Low	Low	Yes	2	High	No	0	High	2	Low	2.0	Low	2.0
Unconstrained		0	4	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	Low	Medium	Medium	0.7	High	High	No	0	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - Hillcrest	Pennsylvania Ave	22	3	Yes	Yes	Yes	No Facility	Yes	NA	Short	1.7	Low	Low	High	0.7	Low	Low	Yes	2	Medium	Yes	1.5	Medium	1	Low	2.0	Low	2.0
Hillcrest - North Park	Washington St	24	4	Yes	Yes	Yes	No Facility	Yes	NA	Short	1.7	Medium	Medium	Medium	1	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - North Park	University Ave																												
Constrained		0	5	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	Low	1.3	Low	Low	Yes	2	High	No	0	High	2	Low	2.0	Low	2.0
Unconstrained		53	1	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	High	Medium	1.7	Low	High	Yes	1.3	High	Yes	2	High	2	Low	2.0	Medium	1.0
Hillcrest - North Park	Robinson Ave																												
Constrained		0	5	Yes	Yes	Yes	No Facility	Yes	NA	Shorter	3.1	Low	Medium	Low	0.3	Low	Low	Yes	2	Medium	No	0	High	2	Low	2.0	Low	2.0
Unconstrained		37	2	Yes	Yes	Yes	No Facility	Yes	NA	Shorter	3.1	Low	Medium	High	1	Medium	High	Yes	1	Medium	Yes	1.5	High	2	Low	2.0	Medium	1.0
Hillcrest - North Park	Pennsylvania Ave	35	3	Yes	Yes	Yes	No Facility	Yes	NA	Shorter	3.1	Low	Low	Medium	0.3	Low	Low	Yes	2	Low	Yes	1	Medium	1	High	0.0	High	0.0
University Heights - Balboa Park	Park Ave																												
Constrained		0	3	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	Medium	Low	1	Low	Low	Yes	2	Medium	No	0	High	2	Low	2.0	Low	2.0
Unconstrained		0	3	Yes	Yes	Yes	No Facility	Yes	NA	Shortest	4.6	High	Medium	High	1.7	Low	High	No	0.7	Medium	Yes	1.5	High	2	Medium	1.0	Medium	1.0
University Heights - Balboa Park	Georgia St	23	1	Yes	Yes	Yes	No Facility	Yes	NA	Short	1.7	Low	Low	Medium	0.3	Low	Low	Yes	2	High	Yes	2	High	2	Low	2.0	Low	2.0
University Heights - Balboa Park	Zoo Dr	23	1	Yes	Yes	Yes	No Facility	Yes	NA	Short	1.7	Low	Medium	Medium	0.7	Low	Low	Yes	2	Medium	Yes	1.5	High	2	Low	2.0	Low	2.0