City of Irvine Pedestrian and Bicycle Bridge Prioritization Study

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FIGURES

TABLES

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CHAPTER 01
INTRODUCTION

01

INTRODUCTION

Project Background

The Irvine Pedestrian and Bicycle Bridge Prioritization Study prioritizes candidate locations for bridges to improve access, safety, and mobility for all roadway users who live, work, and study in the City of Irvine. Bridges, serving both pedestrian and bicyclists or underpasses below freeways and major roads, separate roadway users to reduce conflicts and improve traffic flow. Existing bridges in Irvine are commonly found where major roads intersect pedestrian and bicycle friendly land-uses and in the City's extensive multi-use path network. The Irvine Pedestrian and Bicycle Bridge Prioritization Study will assist the City's efforts in expanding its multimodal bridge network by highlighting potential locations that will be highly effective in improving access and safety, shown in Figure 1.

The Study builds upon and leverages past planning studies that the City conducted to determine pedestrian and bicycle bridges and their prioritization. The Study analyzed bridges found in previous plans' recommendations, from first/last mile plans to active transportation plans, along with locations new to the Study. This Study reviewed the following plans:

- Irvine Strategic Active Transportation Plan (ISATP)
- Irvine Station First Last Mile Plan
- Jamboree Pedestrian Bridge Traffic Analysis
- Irvine Business Complex (IBC) Trail Feasibility Study and Implementation Plan
- City of Irvine Capital Improvement Program

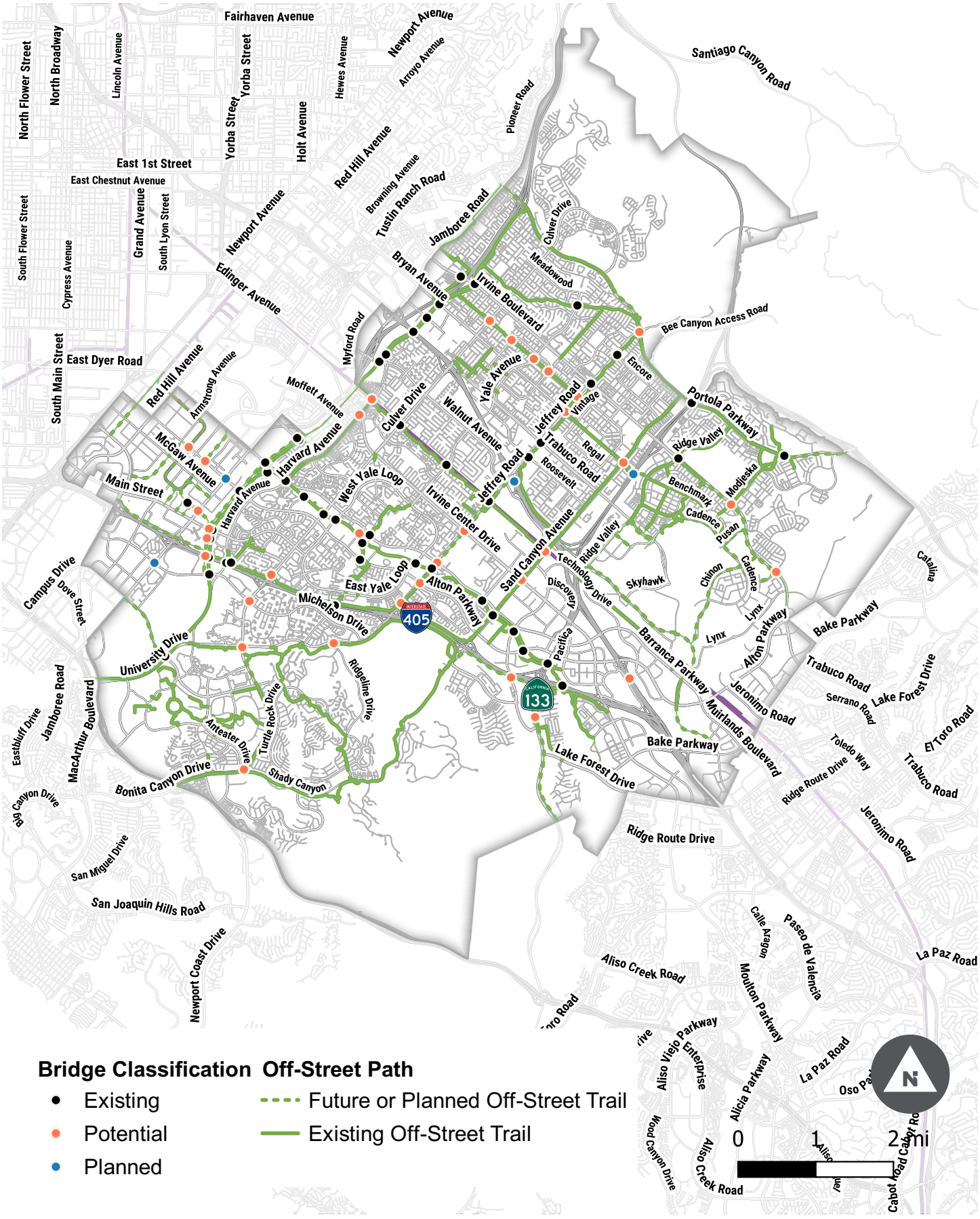
The Study's purpose is to refine and evaluate potential pedestrian and bicycle bridges based on quantitative and spatial analyses, complemented with qualitative data gathered from public comment. This Study will assist the City in allocating its resources wisely when initiating new bridge projects.

Project Description

The City of Irvine conducted a study to identify and prioritize candidates for bicycle and pedestrian bridges. Some of the prioritization criteria included feasibility, gap closures, pedestrian and bicycle level of traffic stress, school proximity, and pedestrian and bicycle collision prevention. On top of these factors, the City of Irvine also considered public comments to determine bridge priotity. Prioritization is a critical component in the City's efforts to most efficiently allocate resources to bridges that will provide the most benefit.

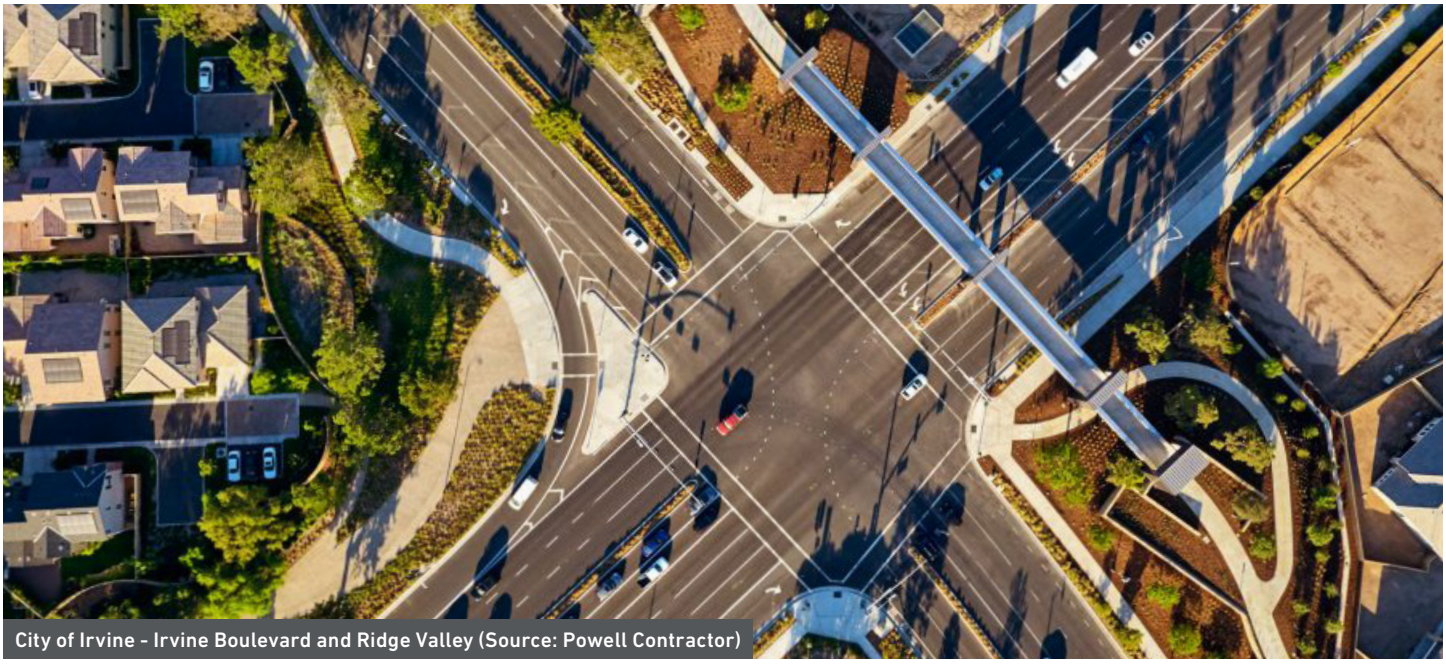
Bridge benefits will improve existing conditions for all roadway users. First, bridges will improve comfort and safety for pedestrians and bicyclists by removing them from crash conflict points. Further, pedestrians and bicyclists may cross at any time without a need to wait for a pedestrian crossing signal. Secondly, bridges will improve traffic flow for drivers by removing a crosswalk at one leg of the intersection.

Figure 1: Bridge Classifications (Existing, Potential, and Planned)



City of Irvine - Highway 133 and Venta Spur Trail (Source: Irvine Standard)

City of Irvine - Irvine Boulevard and Ridge Valley (Source: Powell Contractor)



City of Irvine - Irvine Boulevard and Ridge Valley (Source: Powell Contractor)

University of California Irvine - East Peltason Drive (Source: UCI)

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CHAPTER 02
PLAN REVIEW

02

PLAN REVIEW

This section reviews existing planning documents relevant to the City of Irvine's Pedestrian and Bicycle Bridge Prioritization Study, with an emphasis on plan sections that overlap with potential candidate bridge locations.

Sites Reviewed in Previous Planning Documents

The plans that were reviewed and are detailed in later pages include the Irvine Strategic Active Transportation Plan, Irvine Business Complex (IBC) Trail Feasibility Study, Capital Improvement Program amongst others shown in Figure 2 and listed in Table 1 and Table 2. Sites that were observed to be existing bridge sites and not represented in the plan review were excluded from these lists. However, sites that are existing and were represented in the plan review are shown in the lists. Bridge locations are categorized based on the plans under which they were featured or proposed and include status.

Table 1: Plan Review Categorization - Existing, Alternative, and Planned[1]

Status	Street X	Street Y	Plan Review	Crossing Type
Alternative	San Diego Creek Trail	Creek Road	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Venta Spur Trail	Amargosa	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Qual Hill (East Leg)	Shady Canyon	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Dovecreek	Foxchase	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Arborwood	380' West of Timberwood	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Quall Hill (West Leg)	Shady Canyon	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	San Marino	San Carlo	Capital Improvement Program	Rectangular Rapid Flashing Beacon
Alternative	Yale Loop	Yale	ISATP	Potential Safety Improvement
Alternative	Venta Spur Trail	Rosenblum	ISATP	Potential Safety Improvement
Alternative	Venta Spur Trail	Vintage	ISATP	Potential Safety Improvement
Alternative	Venta Spur Trail	Sanctuary	ISATP	Potential Safety Improvement
Alternative	Venta Spur Trail	Revival	ISATP	Potential Safety Improvement
Alternative	Venta Spur Trail	Hallmark	ISATP	Potential Safety Improvement
Existing	Alton Parkway	San Diego Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Existing	Barranca Parkway	San Diego Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Existing	Warner Avenue	San Diego Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Existing	Irvine Boulevard	Jeffrey Open Space Trail	Irvine Bicycle Transportation Plan	Bicycle and Pedestrian Bridge
Existing	Trabuco Road	Jeffrey Open Space Trail	Irvine Bicycle Transportation Plan	Bicycle and Pedestrian Bridge
Existing	Irvine Station Platform	N/A	Irvine Station First Last Mile Plan	Bicycle and Pedestrian Bridge
Existing	Barranca Channel	West of Jamboree Road	ISATP	Bicycle and Pedestrian Bridge
Planned	Jeffrey Open Space Trail	I-5	ISATP	Bicycle and Pedestrian Bridge
Planned	Venta Spur Trail	SR-133	ISATP	Bicycle and Pedestrian Bridge
Planned	Michelson Drive	Jamboree Road	ISATP	Bicycle and Pedestrian Bridge
Planned	Alton Parkway	Jamboree Road	Jamboree Pedestrian Bridge Traffic Analysis	Bicycle and Pedestrian Bridge

[1] Planned (funded) locations can be in design or in contruction and/or planned for design, right-of-way, and/or construction.

Figure 2: Plan Review Sites

Plan Review Sites

- Jamboree Pedestrian Bridge Traffic Analysis
- Irvine Strategic Active Transportation Plan
- Irvine Station First Last Mile Plan
- IBC Trail Feasibility Study and Implementation Plan
- Capital Improvement Project
- Bicycle Transportation Plan
- Public Input

Off-Street Path

- Future or Planned Off-Street Trail
- Existing Off-Street Trail

Table 2: Plan Review Categorization - Potential

Status	Street X	Street Y	Plan Review	Crossing Type
Potential	Main Street	San Diego Creek Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Potential	Coronado	San Diego Creek Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Potential	I-405	San Diego Creek Creekwalk	IBC Trail Feasibility Study and Implementation Plan	Bicycle and Pedestrian Bridge
Potential	South of Alton Parkway	I-5	Irvine Station First Last Mile Plan	Bicycle and Pedestrian Bridge
Potential	South of Irvine Station Platform	Rail Line	Irvine Station First Last Mile Plan	Bicycle and Pedestrian Bridge
Potential	University Drive	Culver Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	Barranca Channel	Jamboree Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Shady Canyon	Culver Drive / Bonita Canyon Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	University Drive	Ridgeline Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	Freeway Trail	Jeffrey Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Michelson Drive	Culver Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	Freeway Trail	Culver Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	Metrolink Tracks	Marine Way	ISATP	Bicycle and Pedestrian Bridge
Potential	I-405	Laguna Canyon Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Irvine Boulevard	Merit	ISATP	Bicycle and Pedestrian Bridge
Potential	Irvine Boulevard	Modjeska	ISATP	Bicycle and Pedestrian Bridge
Potential	Bryan Avenue	Jeffrey Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Towngate	Sand Canyon Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	Jeffrey Road	Portola Parkway	ISATP	Bicycle and Pedestrian Bridge
Potential	Venta Spur Trail	Eastwood	ISATP	Bicycle and Pedestrian Bridge
Potential	Venta Spur Trail	Yale Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	Venta Spur Trail	Westwood	ISATP	Bicycle and Pedestrian Bridge
Potential	Venta Spur Trail	Culver Drive	ISATP	Bicycle and Pedestrian Bridge
Potential	Walnut Trail	Harvard Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	Irvine Center Drive	Harvard Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	Barranca Parkway	Jeffrey Road	ISATP	Bicycle and Pedestrian Bridge
Potential	San Diego Creek Trail	Lake Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Alton Parkway	Jeffrey Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Irvine Center Drive	Jeffrey Road	ISATP	Bicycle and Pedestrian Bridge
Potential	Irvine Center Drive	Sand Canyon Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	Walnut Trail	Sand Canyon Avenue	ISATP	Bicycle and Pedestrian Bridge
Potential	West of Cipresso	SR-133	ISATP	Bicycle and Pedestrian Bridge
Potential	Alton Parkway	Barranca Channel	ISATP	Bicycle and Pedestrian Bridge
Potential	Alton Parkway	BNSF Railway	ISATP	Bicycle and Pedestrian Bridge
Potential	Jeffrey Road	Venta SpurTrail	Public Input	Bicycle and Pedestrian Bridge

City Plans

Irvine Strategic Active Transportation Plan (2020)

The Irvine Strategic Active Transportation Plan (ISATP) incorporates a diverse set of strategies to accomplish the five following goals:

- **Plan for system significance:** Make local and regional trips to significant destinations seamless
- **Improve safety:** Use cost-effective treatments to improve vulnerable road users' safety and comfort
- **Enhance accessibility:** Create a pedestrian and bicycle network that meets the needs of Irvine's diverse residents and visitors
- **Create healthier options:** Encourage active transportation to improve public health outcomes
- **Bolster economic and environmental sustainability:** Utilize cost-effective and financially feasible improvements

The ISATP conducted an extensive review of existing conditions, a variety of community engagement opportunities to develop bicycle and pedestrian network improvements and recommendations. An implementation plan supports the network improvements and recommendations. Network improvements and recommendations are divided into phases (such as short-term or long-term) based on the speed they can be implemented, with a prioritization methodology that ranks projects based on feasibility, level of community support, and system significance.

The ISATP proposed a total of 35 potential pedestrian and bicycle bridge locations, and of the total three bridges have been funded, advancing these locations forward towards completion. These locations are identified in Table 1. Bridges proposed in this plan are found over large freeways and arterial streets, such as the Interstate 5, that are barriers to a seamless, well-connected bicycle and pedestrian network.

Irvine Station First Last Mile Plan (2021)

The Irvine Station First Last Mile Plan reviews the existing conditions within a one-mile radius around Irvine Station to improve multi-modal connectivity and comfort to the station and its surrounding environment. Outside of roadway improvements, such as bikeways and pedestrian improvements, the First Last Mile Plan includes capital improvements at the Irvine Station. This includes amenities that improve the passenger experience, such as bus stop shelters and arrival time signage, and wayfinding treatments that improves transit and automobile drop-off efficiency at the station.

The First Last Mile Plan uses a project prioritization methodology that scores projects on the following categories to prioritize resources on the most effective measures:

- Citations and Collisions (citations issued and bicycle/pedestrian crashes)
- Transit access (bus stops and routes)
- Comfort (bicycle and pedestrian level of traffic stress)
- Connectivity (corridor level of access to Irvine Station)
- Project Implementation (feasibility and regional coordination)

Funding resources at the local, regional, state, and federal level complement the prioritization methodology.

A potential bicycle and pedestrian bridge is proposed over the Interstate 5 to connect Irvine Station to the Irvine Spectrum via Ada. The bridge requires a feasibility and engineering study, as well as coordination with Caltrans and the Orange County Transportation Authority (OCTA) prior to build out. In addition, the Plan provides three bridge locations that support proposed first last mile connections, and these locations are rooted in surrounding build-out planning documents. Of the three grade separations, two are underpasses (with one fully constructed during time of writing) that connect Irvine Station to future development in the Orange County Great Park to the station's north. The third is a vehicular grade separation that would connect two unlinked segments of Marine Drive.

Bicycle Transportation Plan (2011)

The Bicycle Transportation Plan, adopted in 2011, identifies gaps in the existing bicycle network, proposes treatments with an implementation methodology, and funding and programming opportunities to bolster support for bicycling in Irvine. The Plan was developed to qualify for the California eligibility requirements for the then Bicycle

Transportation Account funding program, which the current Active Transportation Program would replace.

The Bicycle Transportation Plan used data that was accumulated through its community engagement strategy, specifically data collected during survey outreach. The Plan found that survey respondents would like more off-street bikeway options that access important work and recreation destinations, such as the Irvine Spectrum Center and the University of California, Irvine.

Chapter 4 of the Bicycle Transportation Plan examines the existing bikeways system, infrastructure, and amenities currently offered in the existing bikeways. Specifically, Section 4.3 identifies that existing grade separations (bridges), both overcrossings and undercrossings, are typically located along off-street multi-use paths. Bridges are usually located in sites where the off-street paths cross bodies of water or under major arterial streets.

Chapter 5 covers the Plan's proposed bike network. Further, it provides detail over proposed bridges, shown in Table 1. The Plan separates proposed bridges based on funding type. The categories are as follows:

- **Developer obligated:** Constructed using funds collected from developers or constructed by developers
- **Partial developer funding:** Funding partially provided by developers
- **Unfunded:** Projects that have not received funding and is yet to be determined

The proposed grade separations in the Plan mainly focus on connecting existing trail segments over an intersection that may be uncomfortable to bike or walk on. For example, the constructed overcrossing on Irvine Boulevard and Jeffrey Road links the Jeffrey Open Space trail over Irvine Boulevard. Of the locations identified, two grade separations have been constructed.

Suggested Routes to School Program (2020/2021)

The City of Irvine, along with the Irvine Police Department and the City's Neighborhood Traffic Division, developed a Suggested Route to School program that aids parents in determining low-stress routes for children to take on their way to school. Further, it provides the location of signalized intersections, where children can safely cross, and identifies crossing guard's locations.

The Suggested Route to School program does not cover bridges or other types of crossings.

Irvine Business Complex Trail Feasibility Study and Implementation Plan (2021)

The Irvine Business Complex Trail Feasibility Study and Implementation Plan, adopted in 2021, identifies opportunities in eight study corridors to construct multi-use paths. The study corridors are under-used or abandoned rail rights-of-way or flood control channels. The Plan's geographic focus is the Irvine Business Complex (IBC), located on Irvine's southwest periphery, bounded by Santa Ana, Tustin, Newport Beach, and Costa Mesa. Primarily composed of office and industrial land uses, land uses in the IBC have recently shifted to include residential communities and retail, in turn creating a mixed-land use environment. This shift in land uses necessitates mobility infrastructure that looks beyond commuting trips in the area. Implementation emphasizes infrastructure that connects people to jobs, industry, and retail within the Complex.

Chapter 2 of the Plan incorporates data collected through its community involvement and feedback periods. In-person community engagement occurred at six pop-up events and one open house/public workshop event during the summer and fall of 2020. Participants noted that they would like to see a blend of active and passive activations on the trails. For example, active uses include opportunities for fitness, while passive uses include opportunities to use the trails for fitness and relaxations, as well as an events space. Some concerns were shared about the project as well, though less about the project but connections to the trails themselves. People who bike stated in the open house that they find the existing Class II bicycle lanes to be uncomfortable, owing to the high posted speeds in the area, and gaps in the network.

Chapter 5 of the Plan includes a table that outlines proposed street crossing types (such as a pedestrian under-pass), grade (such as at-grade crossings or pedestrian undercrossing), and location. Most street crossing treatments are still to be determined at the time of the Plan's implementation, though there are several under and above grade crossings proposed. The plan proposes three undercrossings, all at the proposed San Diego Creek Creekwalk (located on the west side of the channel), and one above grade crossing for the Barranca Channel segment. Other crossings are either constructed or are at-grade. Two identified undercrossings in the Plan are constructed.

Jamboree Pedestrian Bridge Analysis (2022)

The Jamboree Pedestrian Bridge Analysis reviews and evaluated potential locations for a pedestrian bridge over Jamboree Road. The project aimed to improve pedestrian safety, reduce waiting times for pedestrians crossing the street, and improve traffic flow at the intersection. The Analysis considered two pedestrian crossing opportunities from Alton Parkway at the northern end of the corridor to Main Street at the southern end. A mostly quantitative effort, the Analysis used traffic analysis and vehicular/pedestrian counts at four intersections to measure the pedestrian bridge's effects and benefits. The Analysis concluded that the logical route and potential safety benefits associated with Alton Parkway Pedestrian Bridge make it a more ideal candidate location than the Main Street Pedestrian Bridge.

Capital Improvement Program

The following section summarizes fact sheets for in-progress bridge projects identified in the City of Irvine's Capital Improvement Program.

Jamboree Open Space Trail / I-5 Pedestrian and Bicycle Bridge

A Class I shared-use path bridge that will connect the Jeffrey Open Space Trail over the Interstate 5, closing a significant gap and linking the trail to the broader trails network and communities across Irvine.

Jamboree Pedestrian Bridge

A proposed bridge on Jamboree Road and Michelson Drive that would allow Pedestrians to safely cross Jamboree Road.

Venta Spur / SR-133 Pedestrian and Bicycle Bridge

A Class I shared-use path bridge that will connect residential neighborhoods on the west to the Great Park neighborhoods on the east by closing the barrier created by State Route 133. The bridge was under construction at the time this Study was undertaken.

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CHAPTER 03
PUBLIC ENGAGEMENT

03

PUBLIC ENGAGEMENT

Engagement efforts were made to thoughtfully reach a broad spectrum of the public. These represent people of all ages and ability levels within the City of Irvine, as well as those outside of the City who utilize the network of off-street paths and bridges. Understanding key areas of priority from the public allowed the City to ensure planning was representative of the community.

A variety of engagement methods were used to communicate essential project messages and milestones. A public survey was created to understand pedestrian and bicycle travel needs as it relates to bridges within the City; in total 370 responses were received. A virtual public workshop was hosted with dynamic participation, and was a time for stakeholders to learn more and ask questions. Appendix A summarizes these engagement activities.

Engagement Methods

Information was broadcast to the public across multiple City communication channels. These included Twitter, Facebook, Instagram, Nextdoor, Irvine Shares the Way website, email, and LinkedIn. Anyone who was a resident, worked within the City, went to school in the City, or was a visitor of the City was identified as a potential stakeholder. Diverse feedback was important for the City to hear from bicyclist and pedestrians independent of their affiliation with the City to understand a consensus relevant to bridge prioritization. A notable communication point aside from social media was the virtual public workshop hosted by the City to discuss the Study.

Public Survey

The Irvine Pedestrian and Bicycle Bridge Prioritization survey was posted on the Irvine Shares the Way website online from June 24, 2022 until August 25, 2022. The survey requested residents, visitors, and stakeholders share where and why they in Irvine, as well as where they would like to have a new bridge construction. This section analyzes survey response data and presents findings. Appendix A shows complete survey results.

Response Rate and Results

Survey Response Rate

The survey received 370 total responses. Of the 370 responses, 209 were complete responses and 161 were partial responses.

Relation to the City of Irvine

The survey asked participants about their relation to the City of Irvine, such as whether they are a resident or if they work in the City. Respondents had the opportunity to choose more than one option, resulting in total responses going over 100%. Almost all respondents (95%) stated that they were an Irvine resident, with about one-third (34%) stating that they worked in Irvine. Very few stated that they attended school in Irvine (5%) or that they were a visitor (2%).

Reasons or Destinations for Off-Street Paths

Most respondents (91%) stated that they use the off-street paths for recreation or exercise, with running errands or social reasons following at 46%. About one-third (34%) stated that they used the off-street paths for commuting to school or work.

Barriers as a Pedestrian and/or Bicyclist

The survey also asked participants to share what barriers they encountered while using Irvine's off-street paths. The three most common barriers that respondents found were:

- It is difficult to connect to off-street paths by way of on-street bike lane (60%)
- The off-street paths do not connect me to destinations key to me (55%)
- Long waiting times to cross the street (49%)

Survey Response Heatmap

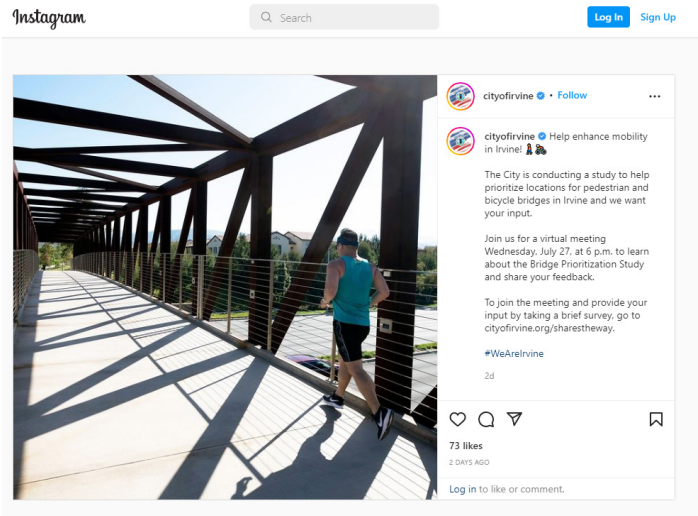
The Irvine Bridge Survey presented respondents with a map showing existing, potential, and planned bridges. Respondents were able to place a point in the map, up to five, along with a comment to locate where they would

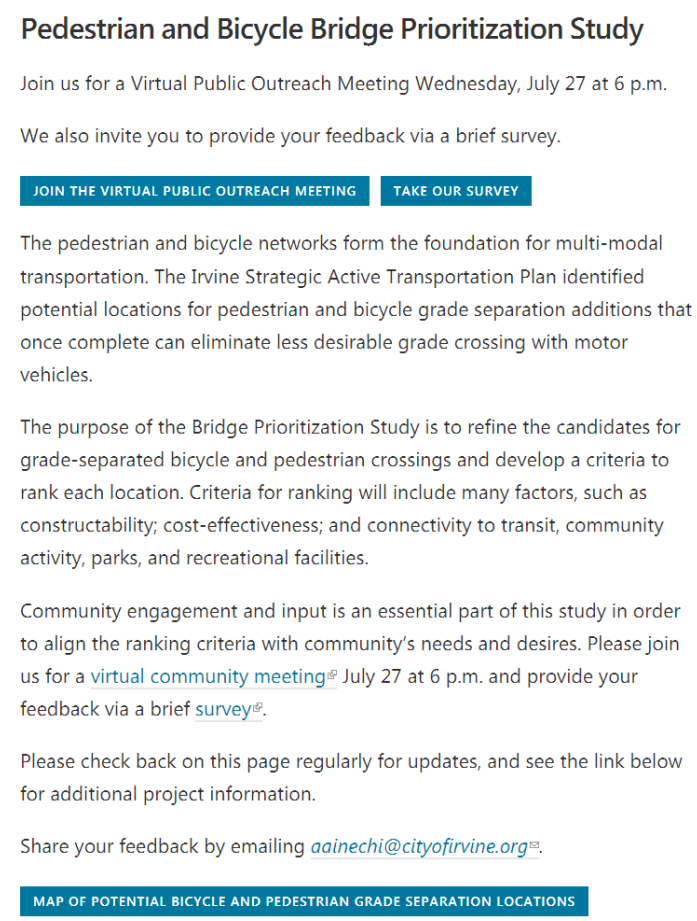
like the City to prioritize bridges. The heatmap (Figure 3) provides a visualization of where the most points were placed, with a "hotter" reading indicating higher point density.

Survey Response Heatmap Results

The map was "hottest" in a triangle bounded by the Interstate 5, Jeffery Road, and Sand Canyon Avenue. A secondary hot spot runs as a corridor on Northwood from Culver Drive to Sand Canyon Avenue. The last hot spot, before tapering off, is the intersection of Culver Drive and the Interstate 405.

A list of comments of the barriers participants faced are captured in Appendix A.





Pedestrian and Bicycle Bridge Prioritization Study

Join us for a Virtual Public Outreach Meeting Wednesday, July 27 at 6 p.m.

We also invite you to provide your feedback via a brief survey.

JOIN THE VIRTUAL PUBLIC OUTREACH MEETING | TAKE OUR SURVEY

The pedestrian and bicycle networks form the foundation for multi-modal transportation. The Irvine Strategic Active Transportation Plan identified potential locations for pedestrian and bicycle grade separation additions that once complete can eliminate less desirable grade crossing with motor vehicles.

The purpose of the Bridge Prioritization Study is to refine the candidates for grade-separated bicycle and pedestrian crossings and develop a criteria to rank each location. Criteria for ranking will include many factors, such as constructability; cost-effectiveness; and connectivity to transit, community activity, parks, and recreational facilities.

Community engagement and input is an essential part of this study in order to align the ranking criteria with community's needs and desires. Please join us for a virtual community meeting July 27 at 6 p.m. and provide your feedback via a brief survey.

Please check back on this page regularly for updates, and see the link below for additional project information.

Share your feedback by emailing aainechi@cityofirvine.org.

MAP OF POTENTIAL BICYCLE AND PEDESTRIAN GRADE SEPARATION LOCATIONS

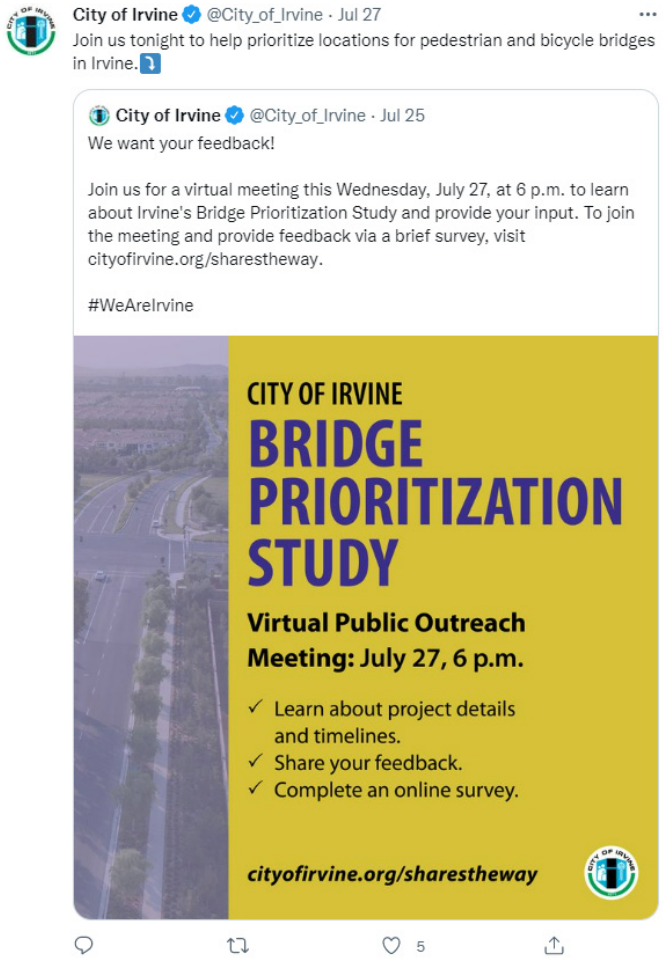


Figure 3: Survey Response Heatmap

Virtual Public Workshop

The Virtual Public Workshop was hosted by the City on July 27, 2022 at 6:00 p.m. via Zoom. The meeting was broadcast via previously mentioned promotion methods. Participants attended the meeting and engaged with the City in a question and answer portion as well as heard the presentation from the City on the Study progression. In addition to the event being promoted extensively, the video link was made available after on the Irvine Shares the Way website for public viewing. The City added a staff email to the website for questions to be sent to after the event was concluded.

Virtual Public Workshop Presented Content

- Project Background and Plan Review
- Potential Bridge Locations
- Study Goals
- Initial Ranking Criteria
- Public Survey
- Discussion
- Next Steps and Schedule

Feedback during the question and answer portion was relevant to the consensus building for bridge prioritization. Comments were received regarding perceived safety while using the off-street paths and on-street bicycle network, positive impacts bridges make on traffic, specific location based comments on bridges, active transportation project promotion, and connectivity of new neighborhoods to broaden the bicycle and pedestrian network.

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CHAPTER 04
PRIORITIZATION ANALYSIS

04

PRIORITIZATION ANALYSIS

The City of Irvine is host to 52 existing bridges that separate bicycle and pedestrian facilities from roadways carrying automobile traffic.

Since the adoption of the Irvine Strategic Active Transportation Plan (ISATP)[2], and the Jamboree Pedestrian Bridge Traffic Analysis four potential bridge locations have been planned (funded) for design, right-of-way, and/or construction. There are thirteen locations designated as "alternative" candidate sites represented by seven funded Rectangular Rapid Flashing Beacons (RRFB)[3] locations allocated through the Capital Improvement Program, and six locations were designated safety improvement locations via the ISATP.

There were 35 potential candidate locations where 29 were informed by the ISATP findings, three founded in the Irvine Business Complex (IBC) Trail Feasibility Study and Implementation Plan, two rooted in the Irvine Station First/ Last Mile Plan, and one founded in public input. Details of these are expended on in Chapter 2 Plan Review and a summary of these classifications shown in Table 3. In addition, a visual summary of the potential pedestrian and bicycle bridge locations part of the initial ranking are displayed in Figure 1 in Chapter 1.

The potential candidate locations were representative of the locations that were ranked through an initial ranking and final prioritization. The process utilized nine initial ranking criteria and then progressed to a more detailed final prioritization scheme using ten criteria. For each of the initial ranking criteria, locations were tabulated as "1" or "0". Higher rank locations had higher point totals. The top ten locations after the final prioritization were used to prepare simple aerial concept plans of alignments (Chapter 5).

Initial Ranking

The initial ranking process assigned preliminary hierarchy to the potential bridge locations for subsequent final prioritization. Initial ranking criteria are based on binary responses. A point allocation of "1" for each criteria indicates higher rank compared to a point value of "0". The criteria are shown in Table 4 along with associated point value designations. A full display of the initial ranking results is shown in Table 5.

Initial Ranking Results

The top ten sites received a minimum cumulative point total of seven out of nine possible points; the top two initial ranking locations received a cumulative point total of eight out of nine. The results are listed in Table 5. The top ten initial ranking locations were then reviewed in-person for a site visit before moving into final ranking.

Table 3: Classifications for Bicycle and Pedestrian Bridge Locations

Classification	Count (Year 2022)
Existing Bridge Location	52
Planned Bridge Location[4]	4
Alternative Bridge Location	13
Potential Bridge Location	35

[2] This prioritization study uses data from ISATP to inform bridge locations. Further evaluation of the "potential" bridge locaitons at Irvine Boulevard and Modjeska and at Merit should be considered due to the lack of data and significant new construction at the time of the ISATP.

[3] These locations' need for a bridge could be revaluated in the future depending on the effectiveness of the RRFBs.

[4] Planned (funded) locations can be in design or in contruction and/or planned for design, right-of-way, and/or construction.

Table 4: Initial Ranking Criteria

Criteria	Initial Ranking Criteria	Point Value 0	Point Value 1
1[5]	Location is designated as a "potential" candidate location*	0 = Site is existing, alternative, or planned	1 = Site is classified as potential
2	Location is along a planned and/or existing off-street path	0 = Site is not along a planned/existing off-street path	1 = Site is located along a planned/existing off-street path
3	Location crosses an intersection without a signal (classified as an uncontrolled intersection)	0 = Site crosses a controlled intersection (i.e. signal)	1 = Site crosses an uncontrolled intersection
4	Location closes a gap between two or more existing off-street paths	0 = Location does not close a gap in the existing off-street network (i.e. is at the end of a trail and does not link to another segment of trail)	1 = Project closes a gap in the existing low-stress network (connects a trail from one side of the street to the other)
5	Location is along a trail or side path that is significantly separated from the vehicles (classified as LTS 1A in the ISATP)	0 = Site is along path that is not separated significantly from roadway (LTS 1B) or no value present	1 = Site is along path that is separated significantly from roadway or (LTS 1A); if both LTS 1A and 1B intersect site, LTS 1A is used
6	Location has high pedestrian and bicycle use (measured with the average combined pedestrian and bicycle weekday and weekend count from the ISATP)	0 = Pedestrian and bicycle use equals or is less than 200 average combined pedestrian and bicycle week-day and weekend count	1 = Pedestrian and bicycle use equals or is more than 201 average combined pedestrian and bicycle weekday and weekend count
7	Location is close to a school site (K-12) and within that school's attendance boundary	0 = site is not within approximately 0.25 miles of a school site and/or on a border of one or more school boundaries	1 = site is within approximately 0.25 miles of a school parcel and is not on a border of one or more school boundaries
8	Locations pedestrian and bicycle crash history within 0.25 miles (Source: TIMS 01/01/2013 - 12/31/2018)	0 = Site has 2 or less combined bicycle and pedestrian collisions within 0.25 miles	1 = Site has 3 or more combined bicycle and pedestrian collisions within 0.25 miles
9	Locations crossing distance (number of lanes the potential site would cross over/under on the existing roadway network)	0 = Site crosses over a roadway with 3 or less lanes of travel	1 = Site crosses over 4 or more lanes of travel

[5] "Potential" locations exclude "existing", "alternative", and "planned" locations as detailed in the introduction and were not moved forward in the prioritization analysis.

Table 5: Initial Ranking Summary (All Sites)

ID	E/W Street	N/S Street	Criteria Number (Ref. Table 04)									Score Total	Rank Group
			1	2	3	4	5	6	7	8	9		
40	San Diego Creek Trail	Lake Road	1	1	1	1	1	1	1	1	0	8	1[6]
31	Towngate	Sand Canyon Avenue	1	1	0	1	1	1	1	1	1	8	1[6]
2	University Drive	Culver Drive	1	1	0	1	1	0	1	1	1	7	2[6]
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	1	1	0	1	0	1	1	1	1	7	2[6]
22	University Drive	Ridgeline Drive	1	1	0	1	1	0	1	1	1	7	2[6]
23	Freeway Trail	Jeffrey Road	1	1	1	1	1	0	0	1	1	7	2[6]
34	Venta Spur Trail	Yale Avenue	1	1	1	1	1	0	0	1	1	7	2[6]
35	Venta Spur Trail	Westwood	1	1	1	1	1	0	1	1	0	7	2[6]
37	Walnut Trail	Harvard Avenue	1	1	1	1	1	1	0	1	0	7	2[6]
106	Venta Spur Trail	Jeffrey Road	1	1	1	1	1	1	0	0	1	7	2[6]
25	Freeway Trail	Culver Drive	1	1	0	1	1	0	0	1	1	6	3
30	Bryan Avenue	Jeffrey Road	1	1	0	1	1	1	0	0	1	6	3
33	Venta Spur Trail	Eastwood	1	1	1	1	1	0	0	1	0	6	3
36	Venta Spur Trail	Culver Drive	1	1	0	1	1	0	0	1	1	6	3
39	Barranca Parkway	Jeffrey Road	1	1	0	1	0	1	0	1	1	6	3
41	Alton Parkway	Jeffrey Road	1	1	0	1	0	1	0	1	1	6	3
44	Walnut Trail	Sand Canyon Avenue	1	1	1	0	1	0	0	1	1	6	3
15	Barranca Channel	Jamboree Road	1	1	1	0	0	0	0	1	1	5	4
32	Jeffrey Road	Portola Parkway	1	1	0	1	0	1	0	0	1	5	4
38	Irvine Center Drive	Harvard Avenue	1	1	0	1	0	0	0	1	1	5	4
95	Main Street	San Diego Creek Creekwalk	1	1	1	0	0	0	0	1	1	5	4
96	Coronado	San Diego Creek Creekwalk	1	1	1	0	0	0	0	1	1	5	4
101	Alton Parkway	Barranca Channel	1	1	1	0	0	0	0	1	1	5	4
102	Alton Parkway	BNSF Railway	1	1	1	0	0	0	0	1	1	5	4
1	South of Alton Parkway	I-5	1	0	1	0	0	0	0	1	1	4	5
28	Irvine Boulevard	Merit	1	1	0	0	0	0	1	0	1	4	5
29	Irvine Boulevard	Modjeska	1	1	0	1	0	0	0	0	1	4	5
42	Irvine Center Drive	Jeffrey Road	1	1	0	0	0	0	0	1	1	4	5
43	Irvine Center Drive	Sand Canyon Avenue	1	1	0	1	0	0	0	0	1	4	5
46	West of Cipresso	SR-133	1	1	1	0	0	0	0	0	1	4	5
98	I-405	San Diego Creek Creekwalk	1	1	1	0	0	0	0	0	1	4	5
27	I-405	Laguna Canyon Road	1	1	1	0	0	0	0	0	0	3	6
100	South of Irvine Station Platform	Rail Line	1	1	1	0	0	0	0	0	0	3	6
26	Metrolink Tracks	Marine Way	1	1	1	0	0	0	0	0	0	3	6
24	Michelson Drive	Culver Drive	1	0	0	0	0	0	0	0	1	2	7

[6] "Potential" locations exclude "existing", "alternative", and "planned" locations as detailed in the introduction and were not moved forward in the prioritization analysis.

Glossary of Terms

- **Truss**: A framework of individual members arranged in a grid to maximize structural efficiency. As a bridge system, trusses are ideal for long spans and minimizing bridge weight. For this project, trusses will most likely be composed of steel framing in a box shape which has a truss frame on both sides, and the top and bottom. The riding surface will be a concrete or composite material deck supported by the truss.
- **Slab**: A rectangular concrete section that spans between supports. The most simple of bridge superstructures with low construction complexity and low costs. Not able to span long distances efficiently.
- **Embankment**: An elevated slope or section of soil that supports a roadway, usually man-made, and requires an increasingly wide footprint as the height increases. Side slopes usually range from 2:1 at the steepest (horizontal : vertical), to 4:1, but can be constructed beyond these bounds in some cases. This is the most cost-effective method of elevating a roadway when the backfill material is available and the footprint is not constrained.
- **Retaining wall**: An earth retaining structure that supports a backfill or slope with a face that is much steeper that would be possible with just soil alone. The structural face of most retaining walls are vertical, or near vertical, require a foundation to balance the soil loading, and are useful in reducing the footprint of a project compared to a typical embankment.

Table 6: Initial Ranking Top Ten Potential Bridge Locaitons

ID	E/W Street	N/S Street	Crossing Street
40	San Diego Creek Trail	Lake Road	Lake Road
31	Towngate	Sand Canyon Avenue	San Canyon
2	University Drive	Culver Drive	Culver Drive
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive
22	University Drive	Ridgeline Drive	Ridgeline Drive
23	Freeway Trail	Jeffrey Road	Jeffrey Road
34	Venta Spur Trail	Yale Avenue	Yale Avenue
35	Venta Spur Trail	Westwood	Westwood
37	Walnut Trail	Harvard Avenue	Harvard Avenue
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road

- **Span**: The horizontal portion of a bridge that is supported by two consecutive substructure elements, those being either columns and a bent cap, abutments, or other foundational supports. Spans are usually constructed of concrete or steel members and are the element in a bridge frame that carry facilities over obstructions such as waterways, roadways, or sensitive resources.

Field Review

Field review took place for each of the top ten locations (Table 6). The focus of field review was to collect data for final prioritization criteria and review barriers and opportunities. The findings and essential field review notes and imagery are listed below for each of the top ten ranked locations. These data were instrumental in the formation of final prioritization, as discussed in the next section.

Field Review Structure Assumptions Applicable to All Locations:

- Truss bridge structure (spans range from 90 ft to 170 ft) over roadways.
- Structure depth below the driving surface for truss structure range from 1'-0" to 2'-0" which is one of the most efficient structure types where vertical clearance is a main concern.
- A slab (cast in place or precast) bridge/approach structure is assumed beyond the main spans. Structure depth for this type of structure is relatively deeper than truss, however it is one of the most economical structure types for shorter spans supported on single pile extensions. This structure type is assumed for profile heights ranging from 10 ft to 16 ft.
- Embankments or retaining walls are assumed for profile heights less than 10 ft.
- Retaining walls are assumed where available space is comparatively narrow, or the embankments would impact available space.
- Landscaped/turfed embankments are assumed for profile heights less than 10' and where there is sufficient space available. 1V:2H embankment side slope assumed.
- A maximum of 5% longitudinal grade is assumed.

Field Review: Location Specific Assumptions and Observations

University Drive and Culver Drive (ID 2)

1. Usual utilities, no or minimal conflict anticipated.
2. Bridge connecting existing trails.
3. Anticipated minimal disruption to pedestrian and vehicular traffic during construction. Ample room to detour pedestrians.
4. No permanent disruption. Far from nearby/immediate residential properties.
5. Ownership of land on both sides is OC Parks and easements will be necessary for improvements.
6. Bridge will be connecting to a park on west end and open natural growth area on the east end. Some minor environmental impact is likely.
7. Some design complexity due to approaches being sloped down away from main span with almost 90 degrees alignment bend at one end.
8. Long embankments are possible instead of an approach span on at least one side.

Culver Drive at University Drive - south view onto University Trail


Culver Drive at University Drive - north view toward intersection

Culver Drive at University Drive - south view

Field Review: Location Specific Assumptions and Observations

Shady Canyon Drive and Culver Drive / Bonita Canyon Drive (ID 21)

1. Several large utility vaults for power and water along Bonita Canyon Drive. Multiple smaller utility access points also visible. Moderate utility conflict is possible.
2. Bridge connecting existing trail and sidewalks.
3. Anticipated moderate disruption to pedestrian and vehicular traffic during construction with some disturbance during construction due to nearby properties. Limited space available for laydown and work areas along Bonita Canyon Road. Pedestrian detour and traffic lane closures may be needed.
4. No permanent disruption to nearby properties. Elevated portions beyond immediate view of homes.
5. The bridge will be connecting to open parkway and sidewalks/trails at both ends.
6. No design risk due to geometry, flat area.
7. Location of bridge and approach spans appears to be within public open space.
8. Limited room for embankment placement.

Shady Canyon Trail looking east, e/o Culver Drive


Culver Drive and Shady Canyon Drive looking east across intersection

Culver Drive looking north at sidepath n/o Shady Canyon Drive

Field Review: Location Specific Assumptions and Observations

University Drive and Ridgeline Drive (ID 22)

1. Usual utilities but conflict level could change depending on whether bridge is near intersection or aligned further away from the intersection.

2. Bridge connecting existing trail and sidewalks but some level of additional realigning/connection may be required due to current location/alignment.

3. Anticipated minimal disruption to pedestrian and vehicular traffic during construction. Detours and roadway space available for lane closures.

4. No permanent disruption to nearby properties.

5. The bridge will be connecting to trails surrounded by vegetation at both ends. Significant growth within channel needs to be cleared environmentally but an alignment through the channel is the most cost-effective.

6. Some design risk due to current location and possible steeper and longer approaches.

7. Location of bridge and approach spans appears to be within public land or parks. OC Parks owns the property on the west approach and, depending on alignment, easements may be needed to complete the tie-in.

8. Long approach structures will be required at both ends due to the slope/topography.

Ridgeline Drive looking south, s/o University Drive

Ridgeline Drive looking west, s/o University Drive

Ridgeline Drive looking east, s/o University Drive

Field Review: Location Specific Assumptions and Observations

Freeway Trail and Jeffrey Road (ID 23)

1. Power poles, signals, and sewer lines nearby. Conflict possible depending on bridge location.
2. Bridge connecting existing trail and sidewalks.
3. Anticipated minimal disruption to pedestrian and vehicular traffic during construction. Some closures may be needed near the freeway on ramps to facilitate construction. Vegetation clearing likely along embankment to make room for construction along on ramp.
4. Nearby properties. Some construction related disturbance is likely.
5. There may be some visual impacts to nearby properties due to height of structure along back yards of adjacent properties. Further analysis of visual impacts in next phase.
6. The bridge will be connecting to open parkway and sidewalks/trails at both ends.
7. Geometry and setting of the current trail between busy road and nearby residential area and property walls likely add risk and design complexity.

Jeffrey Road looking south onto the Freeway Trail

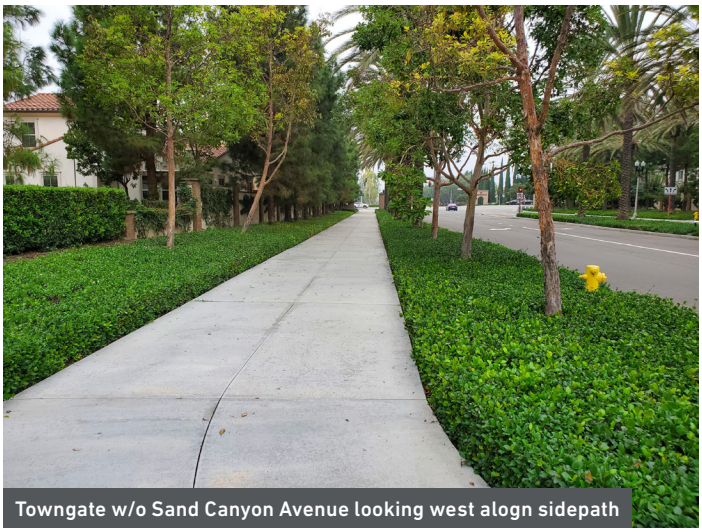

Jeffrey Road looking north toward Quailcreek


I-405 NB Offramp and University Drive looking east

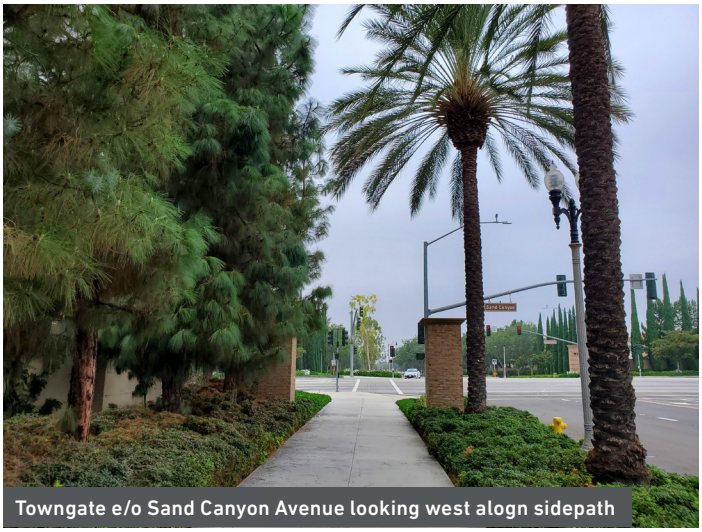
Field Review: Location Specific Assumptions and Observations

Towngate and Sand Canyon Avenue (ID 31)

1. No environmental impacts expected due to built-up urban setting between roadways and residential area.
2. It appears that the homeowner's association is the owner of the sidewalk/trail and parkway and the City has an easement. Obtaining additional easements may be necessary.
3. Usual utilities near residential area.
4. Bridge connecting existing trail/sidewalks.
5. Nearby properties along one side of both approaches.
6. Some construction related disturbance is likely due to limited space for laydown and work areas. Long-term lane closures may be needed.
7. Visual impacts to nearby properties likely, due to height of bridge compared to adjacent homes and back yards. Further analysis of visual impacts in next phase.
8. No design risk due to geometry, flat area.
9. Embankments not practical at approaches as the location is along existing sidewalks along roadway and residential area.



Towngate w/o Sand Canyon Avenue looking west alogn sidepath



Towngate e/o Sand Canyon Avenue looking west alogn sidepath

Towngate and Sand Canyon Avenue looking east across intersection

Field Review: Location Specific Assumptions and Observations

Venta Spur Trail and Yale Avenue (ID 34)

1. Proposed structure will be in public open area. Right-of-way acquisition is not expected.
2. No environmental impacts expected due to built-up urban setting between residential area and existing trail.
3. Usual utilities.
4. Bridge connecting existing trail/sidewalks.
5. Nearby properties along both side of both approaches.
6. Some construction related disturbance is likely.
7. Visual impacts to nearby properties, due to height of profile above back yards. Further analysis of visual impacts in next phase.
8. No design risk due to geometry, flat area.
9. Embankments not practical at approaches as the available open space width is limited.

Yale Avenue looking west on Venta Spur Trail

Yale Avenue looking east on Venta Spur Trail landscape

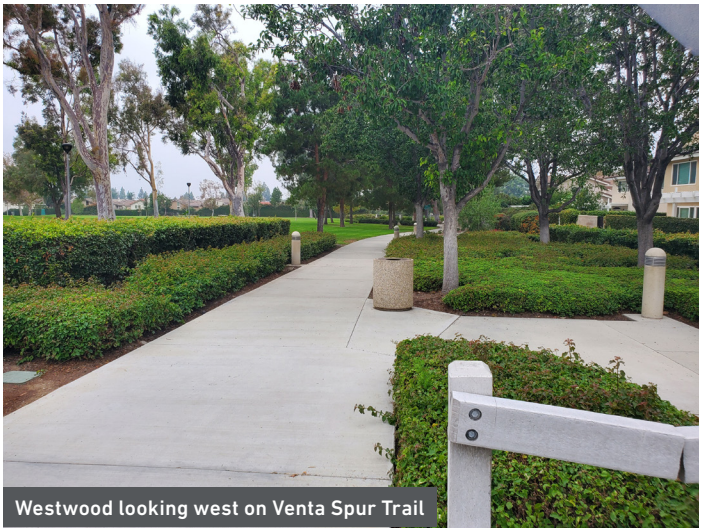
Yale Avenue looking east toward Venta Spur Trail across median

Field Review: Location Specific Assumptions and Observations

Venta Spur Trail and Westwood (ID 35)

1. Propose structure will be in public open area. Right of way acquisition is not expected.
2. No environmental impacts expected due to built-up urban setting between residential area and existing trail and park.
3. Usual utilities.
4. Bridge connecting existing trail/sidewalks.
5. Nearby properties along both sides of one approach and on one side of other approach.
6. Some construction related disturbance is likely due to creation of laydown and workspace areas.
7. There may be some visual impacts to nearby properties or will need further analysis of visual impacts in next phase. Further analysis of visual impacts in next phase.
8. No design risk due to geometry, flat area.
9. Embankments not practical at one approach as the available open space width is limited. Other approach along park can have embankments.

Westwood looking east on Venta Spur Trail



Westwood looking west on Venta Spur Trail

Westwood looking east on Venta Spur Trail across median

Field Review: Location Specific Assumptions and Observations

Walnut Trail and Harvard Avenue (ID 37)

1. Proposed structure will span over roadway, railroad, and a channel.
2. Some right-of-way easements/acquistions are likely required.
3. No environmental impacts expected due to built-up urban setting between residential area and existing rail road and roadways.
4. Usual utilities. Large overhead power poles must be considered for alignment and clearance, but not a major constraint due to ample available space around them.
5. Bridge connecting existing trail/sidewalks.
6. Nearby properties.
7. Some construction related disturbance is likely. However, train traffic likely is already an existing noise and disturbance.
8. There may be some visual impacts to nearby properties or will need further analysis of visual impacts in next phase.
9. Design risk due to geometry and limited open area for structure and construction.
10. Embankments likely not practical.

Walnut Trail e/o Harvard Avenue looking east

Harvard Avenue looking north, n/o Walnut Trail

Harvard Avenue looking south, n/o Walnut Trail

Field Review: Location Specific Assumptions and Observations

San Diego Creek Trail and Lake Road (ID 40)

1. Proposed structure will span over roadway. Approach span may need to run along top of a channel bank.
2. Limited space on one side of approach while an abrupt direction/alignment change with longitudinal slope.
3. Some right-of-way easements/acquisitions are likely required due to limited public open area.
4. Environmental impacts will need to be evaluated if long approach along the channel cannot be avoided. Otherwise, limited environmental impact due to built-up urban setting between residential area and existing roadways.
5. Conflict with water lines, valves and electric vaults at possible bridge abutment location.
6. Bridge connecting existing trail/sidewalks.
7. Nearby properties and tight clearances.
8. Some construction related disturbance is likely to nearby residents and trail users.
9. There may be some visual impacts to nearby properties or will need further analysis of visual impacts in next phase.
10. Design risk due to limited space available. Longer approach will be along channel banks. Multiple alignment options should be considered.

San Diego Creek Trail e/o Lake Road looking east

San Diego Creek Trail w/o Lake Road looking west

Lake Road looking north, s/o San Diego Creek Trail

Field Review: Location Specific Assumptions and Observations

Venta Spur Trail and Jeffrey Road (ID 106)

1. Proposed structure will be in public open area. The City seems to have a trail easment west of Jeffrey. Also, east of Jeffrey the land immediately adjacent to the street is owned by flood control. May need additional easements on both sides of Jeffrey Road.

2. No environmental impacts are expected due to built-up urban setting on one side. Minimal impact on the other side to existing turf/park.

3. At the other end connects to existing trail/ park/ parkway. Align approach to match existing embankment/ berm to streamline profile design and minimize impacts.

4. Usual minimal utilities.

5. Bridge connecting existing trail/sidewalks.

6. Not immediately adjacent to residential area. Near warehouse and trailer park.

7. Minimal construction related disturbance to trail users.

8. No visual impacts to nearby properties expected. Temporary impacts to the park vegetation for laydown and work areas.

9. No design risk due to geometry, alignment, terrain.

10. One side of approach can be mostly embankment with some retaining wall.

Jeffrey Open Space Trail looking south

Jeffrey Road looking east, e/o Venta Spur Trail across median

Venta Spur Trail access off Jeffrey Road

Final Prioritization

At the conclusion of the initial ranking phase, field review and data analysis of top ten ranked sites was conducted to collect data for the final prioritization criteria. A total of ten final prioritization criteria were established. An even weighting of ten points were assigned to each of the ten final prioritization criteria for optimized site comparison.

Final Prioritization Criteria

Right-of-Way *(weight 10 / 100)*

- Tier 1: Right-of-way available within City parcels
- Tier 2: May need temporary construction easements
- Tier 3: May need permanent easements or fee takes of open areas/minor obstructions
- Tier 4: Right-of-way impact is significant, could require building demolition

Planning Level Probable Design/Construction Cost; 2022 Grand Total *(weight 10 / 100)*

- Tier 1: Project Cost < $5 million
- Tier 2: Project Cost > $5 million and < $6 million
- Tier 3: Project Cost > $6 million and < $7 million
- Tier 4: Project Cost > $7 million

Utility Impact *(weight 10 / 100)*

Tier 1: No expected utility conflicts

Tier 2: Minimal/usual utility conflicts and some relocations

Tier 3: Minor utility conflicts and some relocations

Tier 4: Multiple significant utility conflicts, relocations, and utility agreements required

Additional sidewalk, shared use path, and/or bike lane investment needed to link the bridge to the existing sidewalk or bicycle network *(weight 10 / 100)*

- Tier 1: No investment required to link with existing network
- Tier 2: Minor investment required to link with existing network
- Tier 3: Major investment required to link with existing network

Temporary disruption to nearby neighborhoods/homes during construction, including construction vehicle traffic and material staging *(weight 10 / 100)*

- Tier 1: No disruption
- Tier 2: Minimal Disruption possible during construction
- Tier 3: Disruption possible during construction
- Tier 4: Disruption possible/likely during construction

Long term disruption to nearby neighborhoods/ homes during operations, including noise and security *(weight 10 / 100)*

- Tier 1: No disruption
- Tier 2: Disruption possible long term while trail segment is operational
- Tier 3: Disruption possible/likely while trail segment is operational

Combined average Bicycle Level of Traffic Stress (LTS) and Pedestrian Level of Comfort (LOC) over existing roadway crossing[7] *(weight 10 / 100)*

- Tier 1: Average LTS & LOC = 4.0
- Tier 2: Average LTS & LOC = 3.0 to 3.5
- Tier 3: Average LTS & LOC = 2.0 to 2.5
- Tier 4: Average LTS & LOC = 1.0 to 1.5

[7] See further ISATP Section 2.5

Final design phase risks and complexity, including drainage, clearances, profile, alignment, grade *(weight 10 / 100)*

- Tier 1: Managed risk and low complexity
- Tier 2: Moderate risk and complexity
- Tier 3: High risk and challenging design complexity

Environmental Constraints *(weight 10 / 100)*

- Tier 1: Minimal or no apparent environmental sensitivity, low level environmental document expected
- Tier 2: Some environmental impacts that require mitigation are expected, mid-level environmental document expected
- Tier 3: Extensive or unmitigated impacts, high-level environmental document expected

Uncontrolled Crossing *(weight 10 / 100)*

- Tier 1: Site crosses an uncontrolled crossing
- Tier 2: Site crosses a controlled crossing

Final Prioritization Results

The final prioritization results are displayed in Table 7 and Figure 4. The top three locations were Venta Spur and Jeffrey Road (crossing over Jeffrey Road) – 83 points, Venta Spur and Yale Avenue (crossing over Yale Avenue) – 73 points, and Venta Spur and Westwood (crossing over Westwood) – 70 points. The average score of all sites was 58 points of a possible 100, the minimum score was 28 points, and the maximum was 83 points.

Final prioritization showed a tie in scoring between Venta Spur and Westwood and Shady Canyon Drive and Culver Drive/Bonita Canyon Drive with 70 points each. Venta Spur and Westwood received a higher priority score than Shady Canyon and Culver Drive/Bonita Canyon Drive based on the rationale that the former crosses at an uncontrolled crossing while the latter crosses at a controlled crossing.

Expanded prioritization results are shown in Table 8, Table 9, and Table 10.

Table 7: Final Prioritization Summary

ID	E/W Street	N/S Street	Crossing Street	Final Score	Priority
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road	83	1
34	Venta Spur Trail	Yale Avenue	Yale Avenue	73	2
35	Venta Spur Trail	Westwood	Westwood	70	3
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive	70	4
2	University Drive	Culver Drive	Culver Drive	60	5
31	Towngate	Sand Canyon Avenue	Sand Canyon	55	6
23	Freeway Trail	Jeffrey Road	Jeffrey Road	53	7
37	Walnut Trail	Harvard Avenue	Harvard Avenue	50	8
22	University Drive	Ridgeline Drive	Ridgeline Drive	40	9
40	San Diego Creek Trail	Lake Road	Lake Road	28	10

Figure 4: Top Ten Final Prioritization Bridge Locations

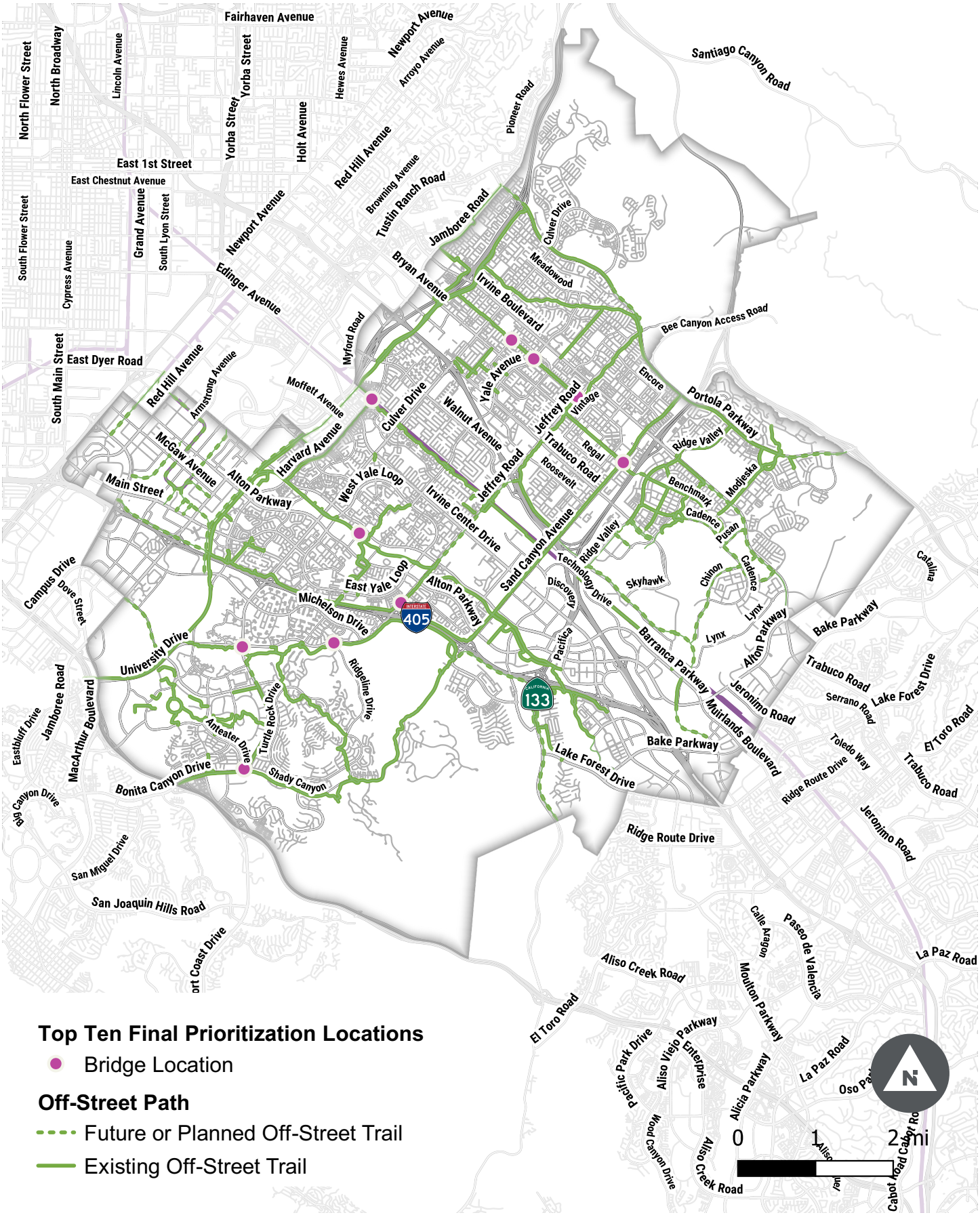


Table 8: Final Prioritization Expanded (Criteria 1 - 4)

ID	E/W Street	N/S Street	Crossing Street	Final Score	Right of Way	Normalized Score	Planning Level Probable Cost (2022 Grand Total)	Normalized Score	Utility Impact	Normalized Score	Addition of sidewalk, paths, and/ or bike lane investment needed to link the bridge to the existing sidewalk or bicycle network	Normalized Score
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road	**83**	3.0	3.3	2.0	6.7	2.0	6.7	1.0	10.0
34	Venta Spur Trail	Yale Avenue	Yale Avenue	**73**	1.0	10.0	2.0	6.7	2.0	6.7	1.0	10.0
35	Venta Spur Trail	Westwood	Westwood	**70**	1.0	10.0	2.0	6.7	2.0	6.7	1.0	10.0
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive	**70**	1.0	10.0	2.0	6.7	2.0	6.7	1.0	10.0
2	University Drive	Culver Drive	Culver Drive	**60**	3.0	3.3	2.0	6.7	2.0	6.7	1.0	10.0
31	Towngate	Sand Canyon Avenue	Sand Canyon	**55**	3.0	3.3	4.0	0.0	2.0	6.7	1.0	10.0
23	Freeway Trail	Jeffrey Road	Jeffrey Road	**53**	3.0	3.3	2.0	6.7	3.0	3.3	2.0	5.0
37	Walnut Trail	Harvard Avenue	Harvard Avenue	**50**	3.0	3.3	4.0	0.0	2.0	6.7	2.0	5.0
22	University Drive	Ridgeline Drive	Ridgeline Drive	**40**	3.0	3.3	4.0	0.0	3.0	3.3	2.0	5.0
40	San Diego Creek Trail	Lake Road	Lake Road	**28**	3.0	3.3	3.0	3.3	3.0	3.3	1.0	10.0
Tier Minimum					1		1		1		1	
Tier Maximum					4		4		4		3	
					Criteria 1		**Criteria 2**		**Criteria 3**		**Criteria 4**	

Table 9: Final Prioritization Expanded (Criteria 5 - 7) - continued

ID	E/W Street	N/S Street	Crossing Street	Final Score	Temporary disruption to nearby neighborhoods/ homes during construction (construction vehicle traffic and material staging)	Normalized Score	Long term disruption to nearby neighborhoods/ homes during operations (noise and security)	Normalized Score	Combined average LTS/ LOC over existing roadway crossing	Normalized Score
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road	**83**	1.0	10.0	1.0	10.0	2.0	6.7
34	Venta Spur Trail	Yale Avenue	Yale Avenue	**73**	3.0	3.3	3.0	0.0	2.0	6.7
35	Venta Spur Trail	Westwood	Westwood	**70**	3.0	3.3	3.0	0.0	3.0	3.3
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive	**70**	2.0	6.7	1.0	10.0	4.0	0.0
2	University Drive	Culver Drive	Culver Drive	**60**	2.0	6.7	1.0	10.0	2.0	6.7
31	Towngate	Sand Canyon Avenue	Sand Canyon	**55**	3.0	3.3	2.0	5.0	2.0	6.7
23	Freeway Trail	Jeffrey Road	Jeffrey Road	**53**	3.0	3.3	2.0	5.0	2.0	6.7
37	Walnut Trail	Harvard Avenue	Harvard Avenue	**50**	2.0	6.7	2.0	5.0	3.0	3.3
22	University Drive	Ridgeline Drive	Ridgeline Drive	**40**	2.0	6.7	1.0	10.0	2.0	6.7
40	San Diego Creek Trail	Lake Road	Lake Road	**28**	3.0	3.3	3.0	0.0	4.0	0.0
Tier Minimum					1		1		1	
Tier Maximum					4		3		4	
					Criteria 5		**Criteria 6**		**Criteria 7**	

Table 10: Final Prioritization Expanded (Criteria 8 - 10) - continued

ID	E/W Street	N/S Street	Crossing Street	Final Score	Final design phase risks and complexity	Normalized Score	Environmental contraints	Normalized Score	Uncontrolled Crossing	Normalized Score
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road	**83**	1.0	10.0	1.0	10.0	1.0	10.0
34	Venta Spur Trail	Yale Avenue	Yale Avenue	**73**	1.0	10.0	1.0	10.0	1.0	10.0
35	Venta Spur Trail	Westwood	Westwood	**70**	1.0	10.0	1.0	10.0	1.0	10.0
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive	**70**	1.0	10.0	1.0	10.0	2.0	0.0
2	University Drive	Culver Drive	Culver Drive	**60**	2.0	5.0	2.0	5.0	2.0	0.0
31	Towngate	Sand Canyon Avenue	Sand Canyon	**55**	1.0	10.0	1.0	10.0	2.0	0.0
23	Freeway Trail	Jeffrey Road	Jeffrey Road	**53**	3.0	0.0	1.0	10.0	1.0	10.0
37	Walnut Trail	Harvard Avenue	Harvard Avenue	**50**	3.0	0.0	1.0	10.0	1.0	10.0
22	University Drive	Ridgeline Drive	Ridgeline Drive	**40**	3.0	0.0	2.0	5.0	2.0	0.0
40	San Diego Creek Trail	Lake Road	Lake Road	**28**	3.0	0.0	2.0	5.0	2.0	0.0
Tier Minimum					1		1		1	
Tier Maximum					3		3		2	
					Criteria 8		**Criteria 9**		**Criteria 10**	

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CHAPTER 05
CONNECTIVITY REVIEW

05

CONNECTIVITY REVIEW

At the conclusion of the final prioritization phase detailed in Chapter 4 a connectivity review was conducted for the top ten bridge locations. **Typical sections** were prepared that apply to the future application of bridge buildout. The typical sections are shown in Figure 5, Figure 6, Figure 7, and Figure 8 respectively.

Concept plans were prepared for the top ten bridge locations (Figures 9-18) showing planning level bridge alignment options as well as respective planning level construction cost estimations.

A **connectivity review** found that the existing infrastructure around the prioritized bridge locations was observed to be in good condition. In addition to the prepared concept plans showing the bridge alignments, collateral pedestrian and bicycle connectivity improvements could improve access to the bridges. Founded in the Irvine Strategic Active Transportation Plan (ISATP) are potential pedestrian and bicycle treatments that can be applied to the areas surrounding the bridge locations. Within the report these are shown in detail in Chapter 5 section 5.1 "Active Transportation Toolbox" as well as within Appendix D – Design Guidelines of the ISATP.

Types of improvements that could be considered include, but are not limited to: wayfinding signage, off-street paths, Class II Buffer Bike Lanes, pedestrian and bicycle lighting, leading pedestrian and bicycle signal intervals, accessible pedestrian push buttons and countdown heads, and high visibility crosswalks. Further analysis would need to be conducted to vet the location and type of treatments at potential bridge locations.

Typical Bridge Sections

Typical sections are applicable to the future development of bridges within the City of Irvine. One section was prepared for a steel truss bridge, one section was prepared for a cast-in-place (CIP) concrete slab bridge, one section was prepared for a retailing wall, and one section was prepared for an embankment. Different application of these typical sections derive from the final design structures used in the makeup of the bridge.

Figure 5: Typical Section - Steel Truss Bridge

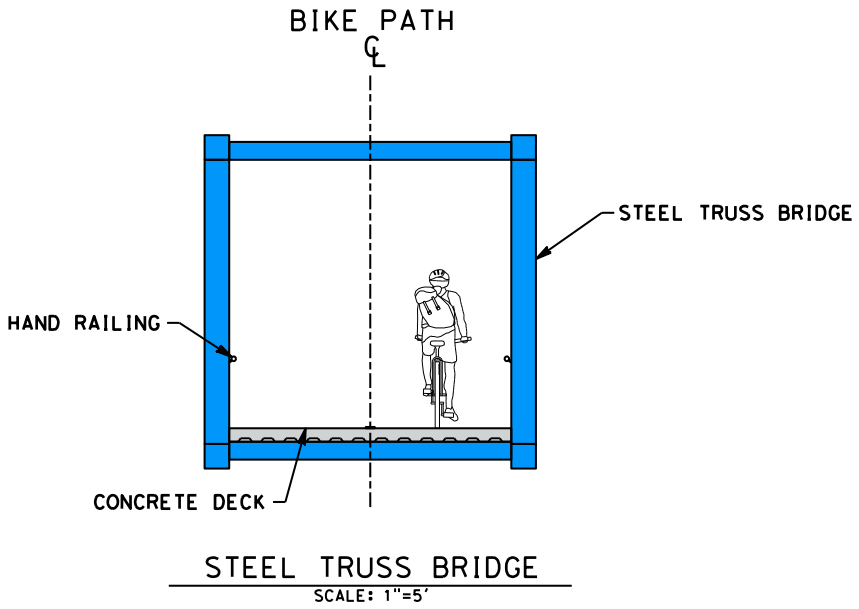


Figure 6: Typical Section - CIP Conctrete Slab Bridge

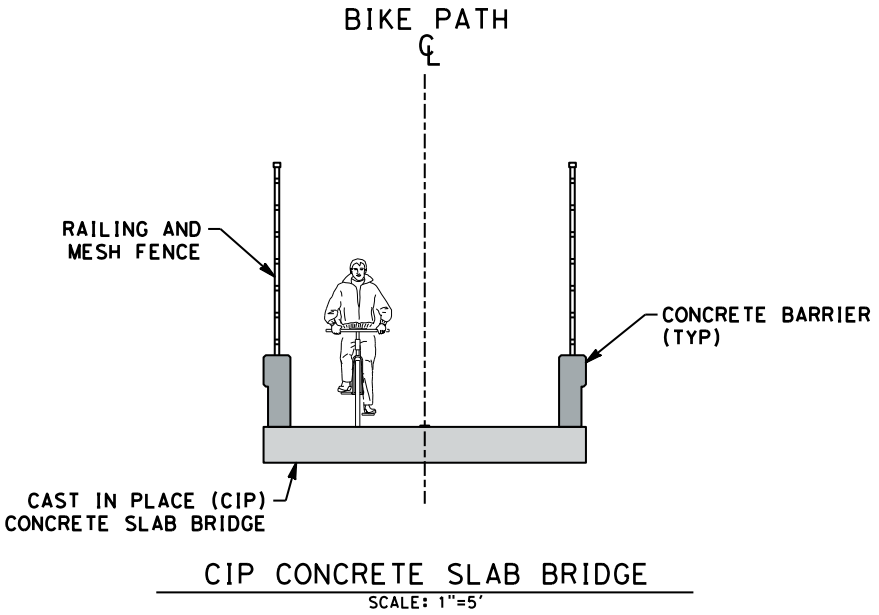


Figure 7: Typical Section - Retaining Walls

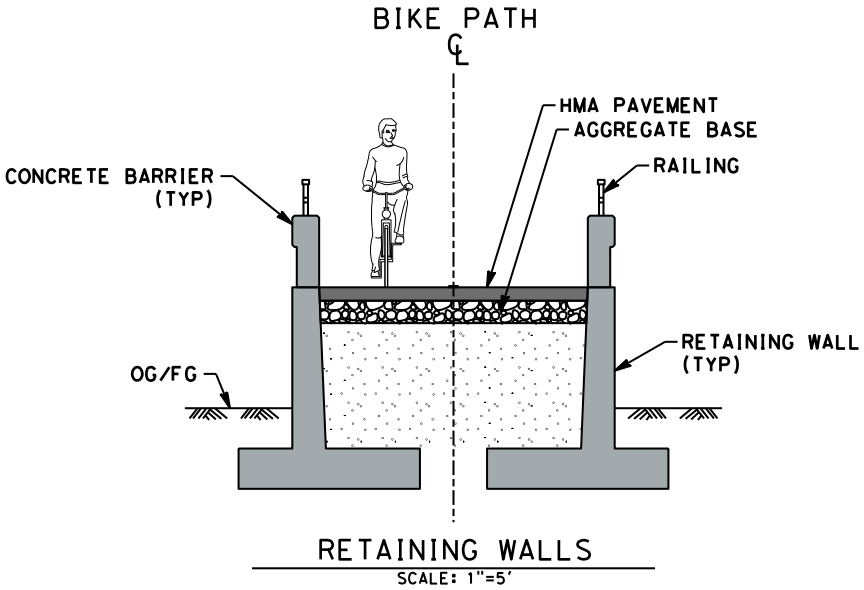
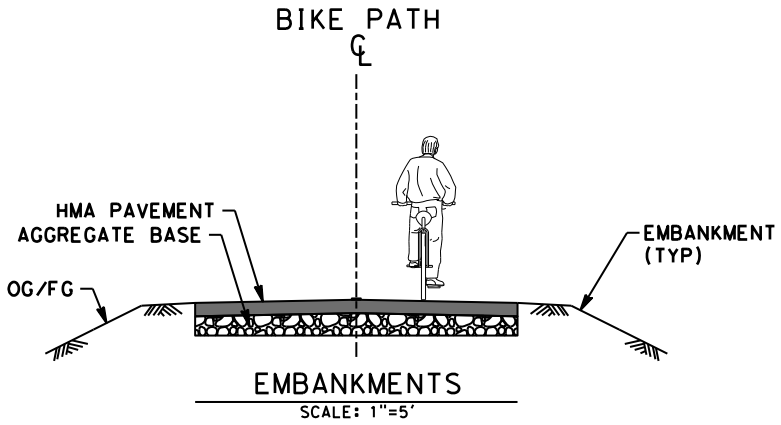


Figure 8: Typical Section - Embankments



Concept Plans

Concept plans for each of the top ten bridge locations were prepared, the locations are listed in Table 11. Concept plans are planning level showing recommended alignments, trusses, retaining walls, embankments, tie-ins to existing trains, right-of-way lines, and CIP concrete slabs over an aerial map. These are intended to support further development of the final design of bridges at preferential locations.

Concept Plan Cost Estimates

Planning level costs are tabulated for each of the top ten bridge locations in 2022 unit costs based on the alignments shown on the concept plans. A progression of these costs is estimated for years 2023 to 2025 at a 3% yearly increase. In addition to the itemized costs, miscellaneous costs, mobilization costs of 10%, contingency costs of 25%, PE costs of 25%, and CE costs of 15% are tabulated for a 2022 grand total cost. Table 12 shows a comprehensive breakdown of these planning level costs for each of the ten locations.

Table 11: Final Prioritization Summary

ID	E/W Street	N/S Street	Crossing Street	Final Score	Priority
106	Venta Spur Trail	Jeffrey Road	Jeffrey Road	83	1
34	Venta Spur Trail	Yale Avenue	Yale Avenue	73	2
35	Venta Spur Trail	Westwood	Westwood	70	3
21	Shady Canyon Drive	Culver Drive / Bonita Canyon Drive	Shady Canyon Drive	70	4
2	University Drive	Culver Drive	Culver Drive	60	5
31	Towngate	Sand Canyon Avenue	Sand Canyon	55	6
23	Freeway Trail	Jeffrey Road	Jeffrey Road	53	7
37	Walnut Trail	Harvard Avenue	Harvard Avenue	50	8
22	University Drive	Ridgeline Drive	Ridgeline Drive	40	9
40	San Diego Creek Trail	Lake Road	Lake Road	28	10

Table 12: Concept Plan Cost Estimates

Locatin ID	2	21	22	23	31	34	35	37	40	106
Bridge Width (out to out)	12	12	12	12	12	12	12	12	12	12
Main span(ft) Length	170	170	100	140	190	165	150	255	90	200
Str Type	Truss	Truss	Truss	Truss	Truss	Truss	Truss	Truss	Truss	Truss
Unit Cost	500	500	500	500	500	500	500	500	500	500
Area (SF)	2040	2040	1200	1680	2280	1980	1800	3060	1080	2400
Total Cost	$1,020,000	$1,020,000	$600,000	$840,000	$1,140,000	$990,000	$900,000	$1,530,000	$540,000	$1,200,000
Length of Approach 1 Segment 1	370	220	500	470	370	200	200	370	580	200
Str Type	Embank.	CIP Slab	Truss	CIP Slab	Precast	CIP Slab	CIP Slab	CIP Slab	CIP Slab	CIP Slab
Unit Cost	70	250	500	250	300	250	250	250	250	250
Area (SF)	4440	2640	6000	5640	4440	2400	2400	4440	6960	2400
Total Cost	$310,800	$660,000	$3,000,000	$1,410,000	$1,332,000	$600,000	$600,000	$1,110,000	$1,740,000	$600,000
Length of Approach 1 Segment 2	0	150	0	0	0	150	150	0	0	180
Str Type	None	Embank.	None	None	None	Ret Wall	Embank.	None	None	Ret Wall
Unit Cost	0	70	0	0	0	205	70	0	0	205
Area (SF)	0	1800	0	0	0	1800	1800	0	0	2160
Total Cost	$-	$126,000	$-	$-	$-	$369,000	$126,000	$-	$-	$442,800
Length of Approach 2 Segment 1	220	220	215	165	370	200	200	200	380	100
Str Type	CIP Slab	CIP Slab	Truss	CIP Slab	CIP Slab	CIP Slab	CIP Slab	CIP Slab	CIP Slab	Ret Wall
Unit Cost	250	250	500	250	250	250	250	250	250	205
Area (SF)	2640	2640	2580	1980	4440	2400	2400	2400	4560	1200
Total Cost	$660,000	$660,000	$1,290,000	$495,000	$1,110,000	$600,000	$600,000	$600,000	$1,140,000	$246,000
Length of Approach 2 Segment 2	150	150	150	200	0	150	150	170	0	220
Str Type	Ret Wall	Embank.	CIP Slab	Embank.	None	Ret Wall	Ret Wall	Ret Wall	None	Embank.
Unit Cost	205	70	250	70	0	205	205	205	0	70
Area (SF)	1800	1800	1800	2400	0	1800	1800	2040	0	2640
Total Cost	$369,000	$126,000	$450,000	$168,000	$-	$369,000	$369,000	$418,200	$-	$184,800
Miscellaneous Const =	$117,990	$129,600	$267,000	$145,650	$179,100	$146,400	$129,750	$182,910	$171,000	$133,680
Itemized Const Cost=	$2,477,790	$2,592,000	$5,340,000	$2,913,000	$3,582,000	$2,928,000	$2,595,000	$3,658,200	$3,420,000	$2,673,600
Mobilization 10% =	$275,310	$288,000	$593,333	$323,667	$398,000	$325,333	$288,333	$406,467	$380,000	$297,067
Contingencies 25%=	$717,773	$752,400	$1,550,083	$845,579	$1,039,775	$849,933	$753,271	$1,061,894	$992,750	$776,087
Total Const Cost=	$3,588,863	$3,762,000	$7,750,417	$4,227,896	$5,198,875	$4,249,667	$3,766,354	$5,309,471	$4,963,750	$3,880,433
PE Cost 25%=	$897,216	$940,500	$1,937,604	$1,056,974	$1,299,719	$1,062,417	$941,589	$1,327,368	$1,240,938	$970,108
CE Cost 15%=	$538,329	$564,300	$1,162,563	$634,184	$779,831	$637,450	$564,953	$796,421	$744,563	$582,065
2022 Grand Total=	$5,024,408	$5,266,800	$10,850,583	$5,919,054	$7,278,425	$5,949,533	$5,272,896	$7,433,259	$6,949,250	$5,432,607
Cost Escalation (@3%/Yr)										
2023 Grand Total =	$5,175,140	$5,424,804	$11,176,101	$6,096,626	$7,496,778	$6,128,019	$5,431,083	$7,656,257	$7,157,728	$5,595,585
2024 Grand Total =	$5,330,394	$5,587,548	$11,511,384	$6,279,525	$7,721,681	$6,311,860	$5,594,015	$7,885,945	$7,372,459	$5,763,452
2025 Grand Total =	$5,490,306	$5,755,175	$11,856,725	$6,467,910	$7,953,332	$6,501,216	$5,761,836	$8,122,523	$7,593,633	$5,936,356

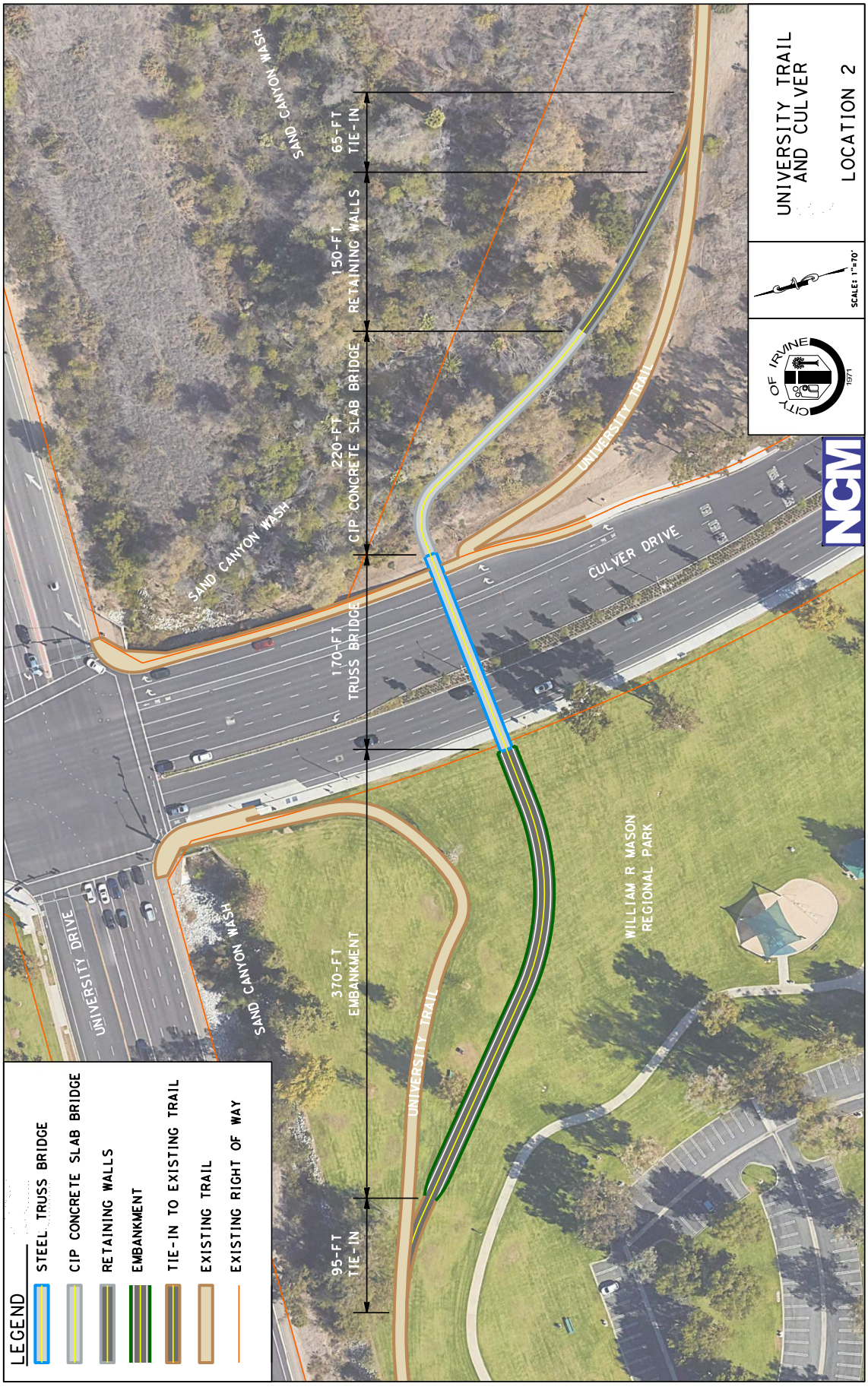


Figure 9: Concept Plan - University Drive and Culver Drive - ID 2

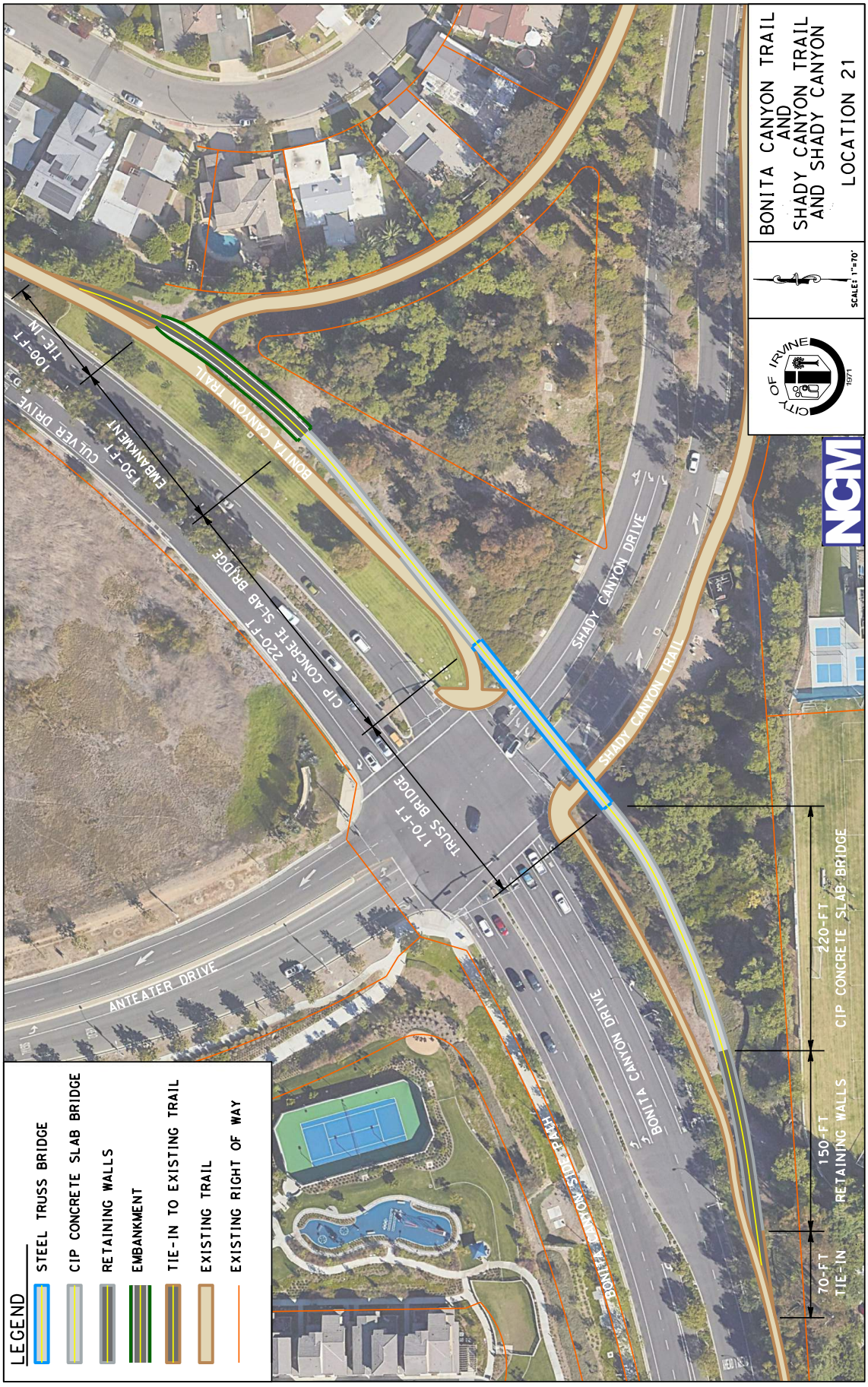


Figure 10: Concept Plan - Shady Canyon Drive and Culver Drive / Bonita Canyon Drive - ID 21

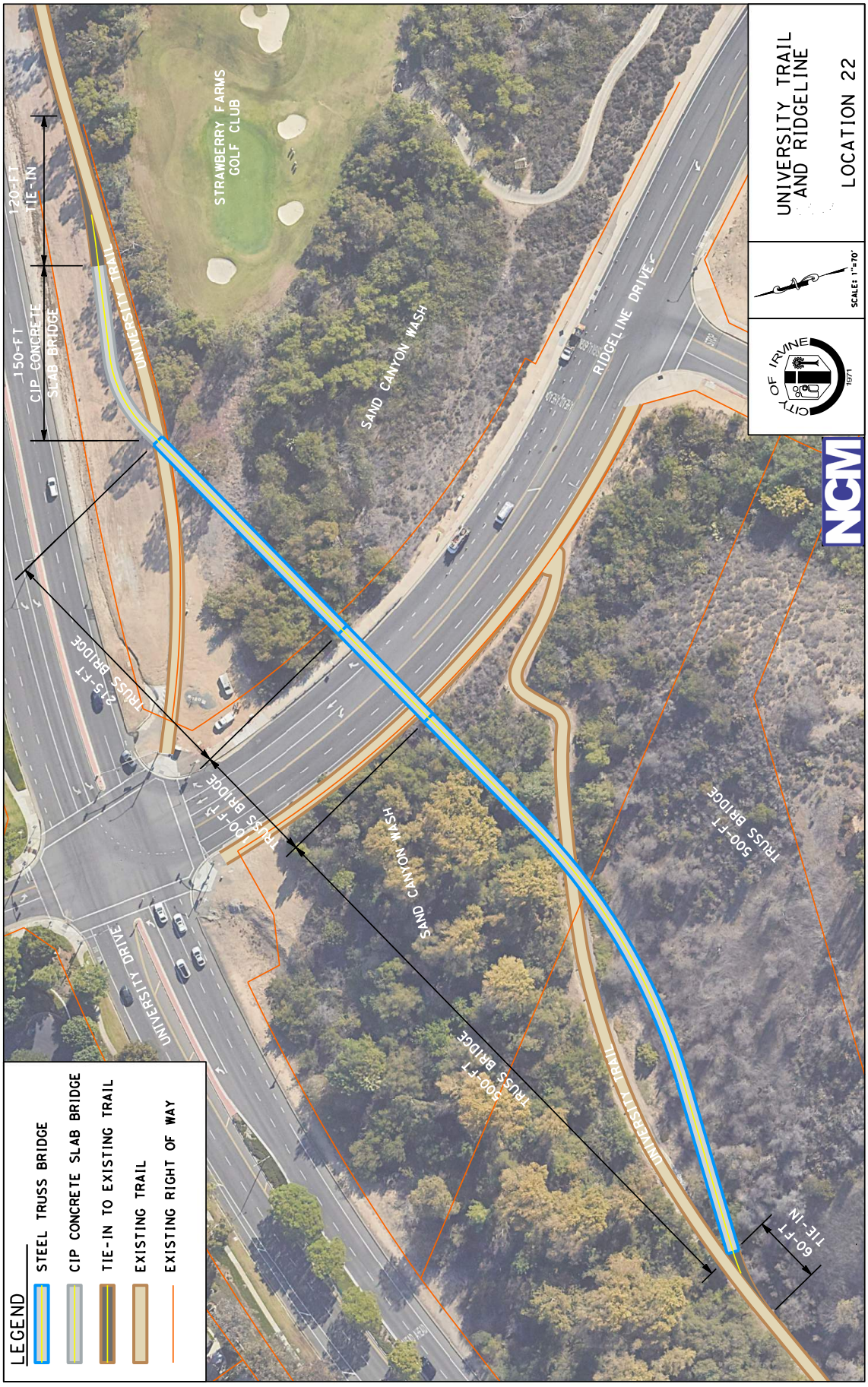


Figure 11: Concept Plan - University Drive and Ridegline Drive - ID 22

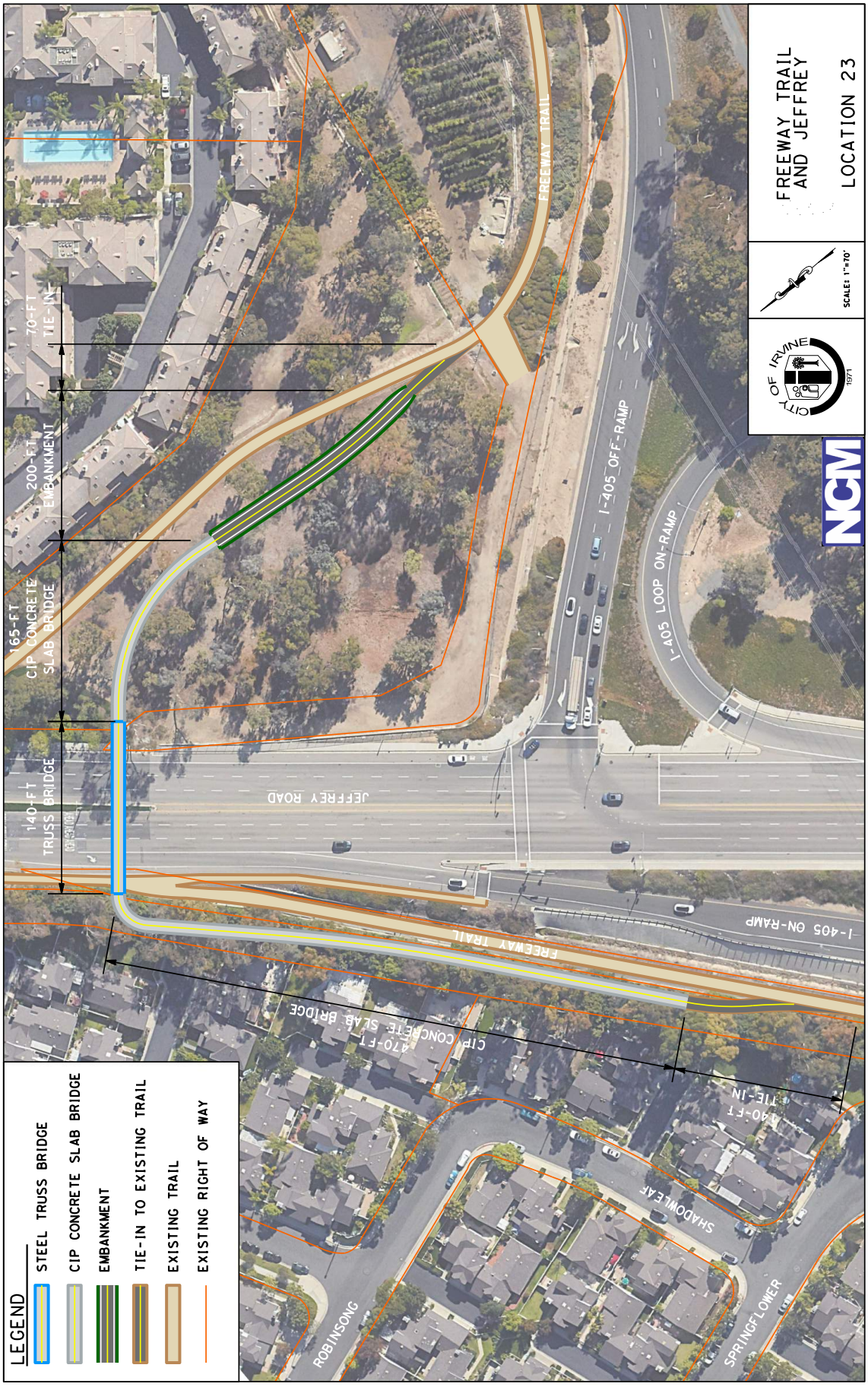


Figure 12: Concept Plan - Freeway Trail and Jeffrey Road - ID 23

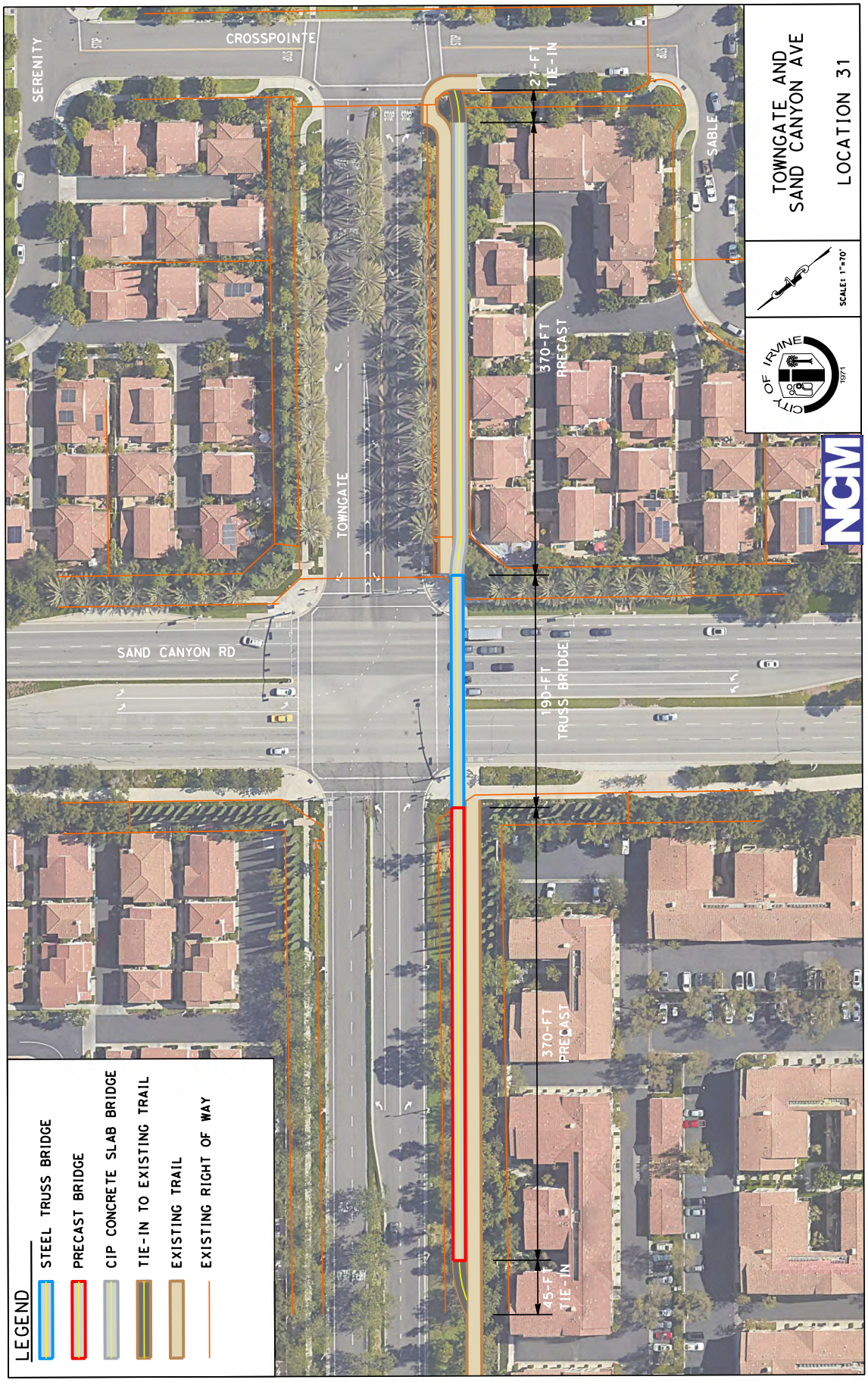


Figure 13: Concept Plan - Towngate and Sand Canyon Avenue - ID 31

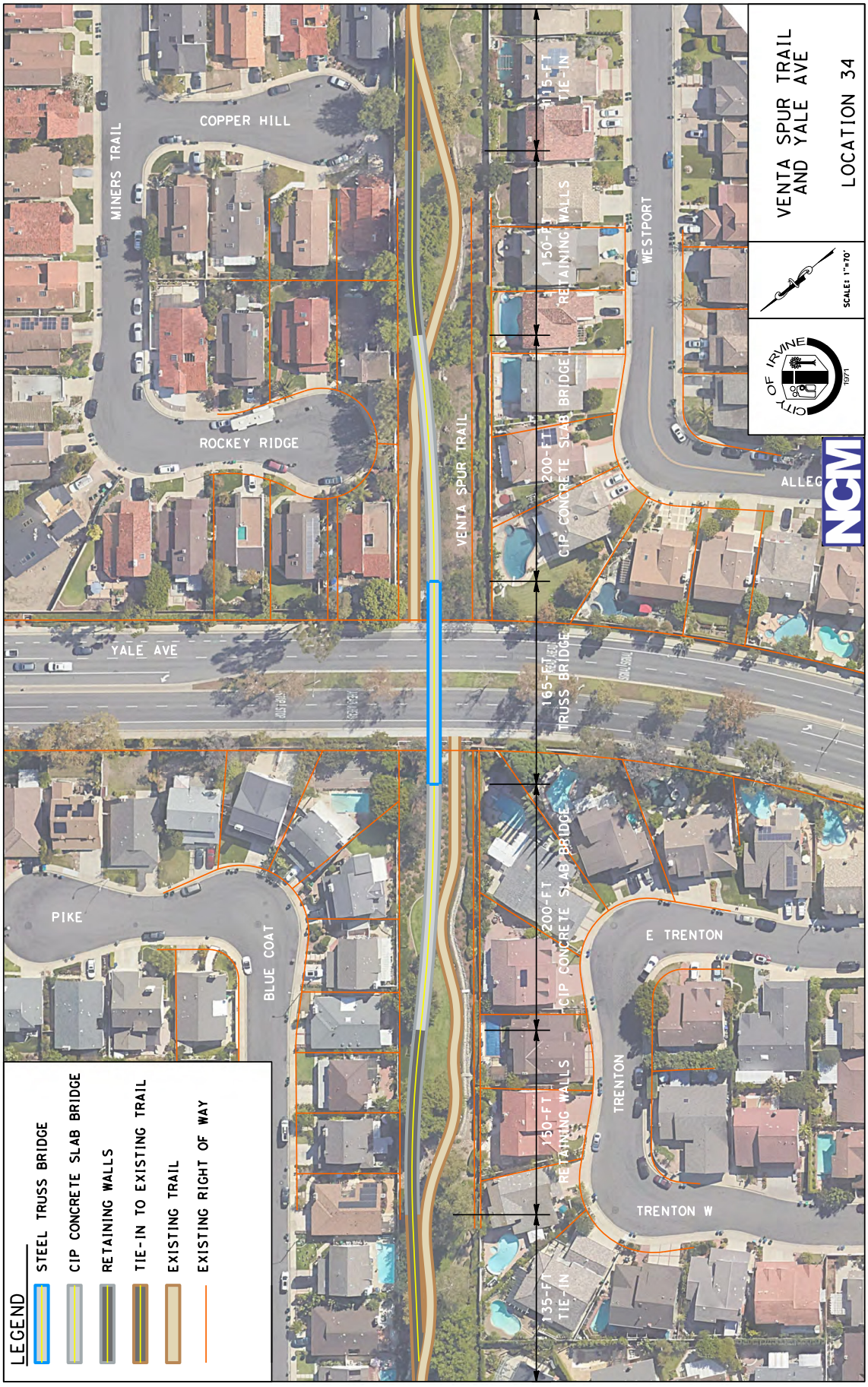


Figure 14: Concept Plan - Venta Spur Trail and Yale Avenue - ID 34

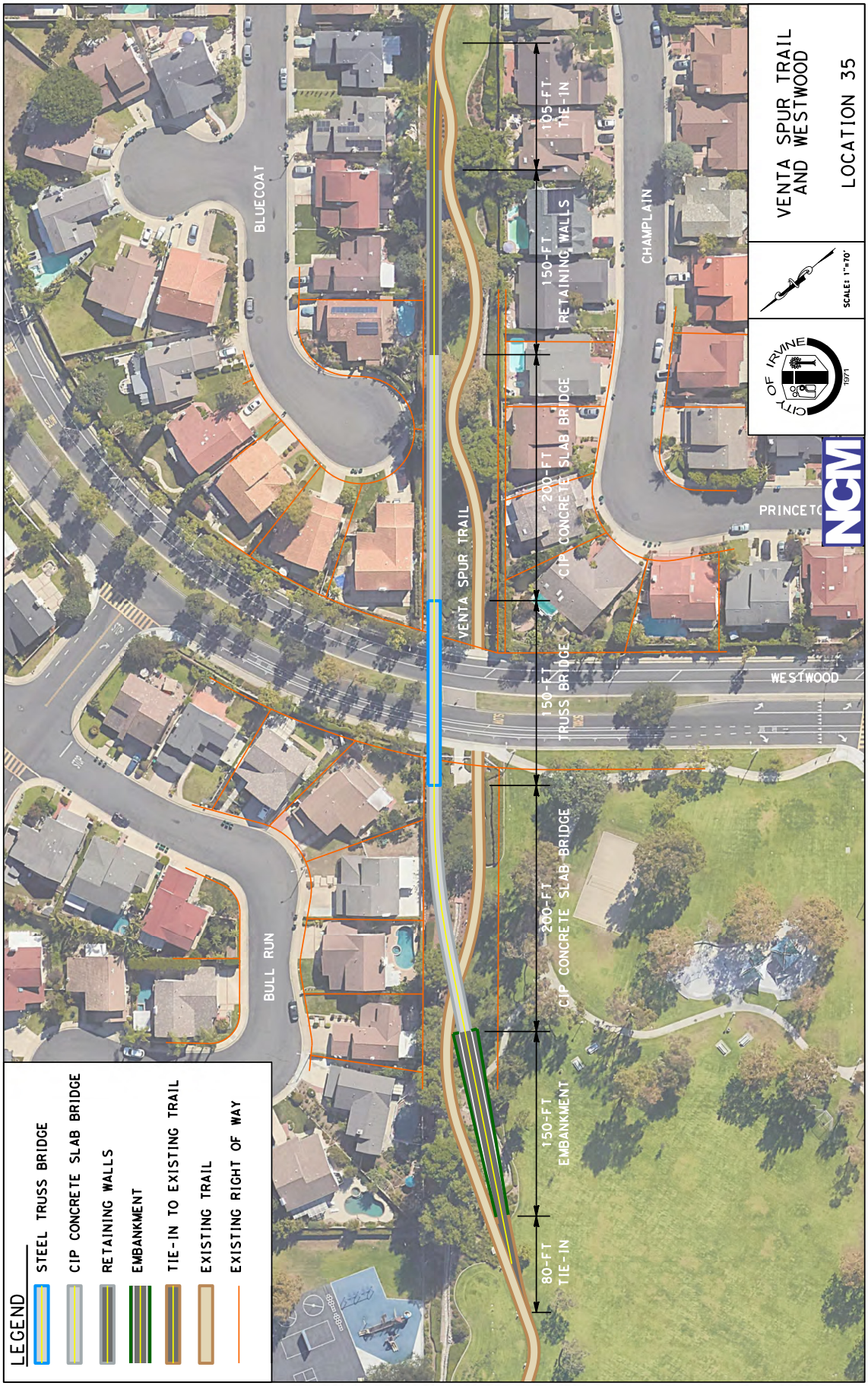


Figure 15: Concept Plan - Venta Spur Trail and Westwood - ID 35

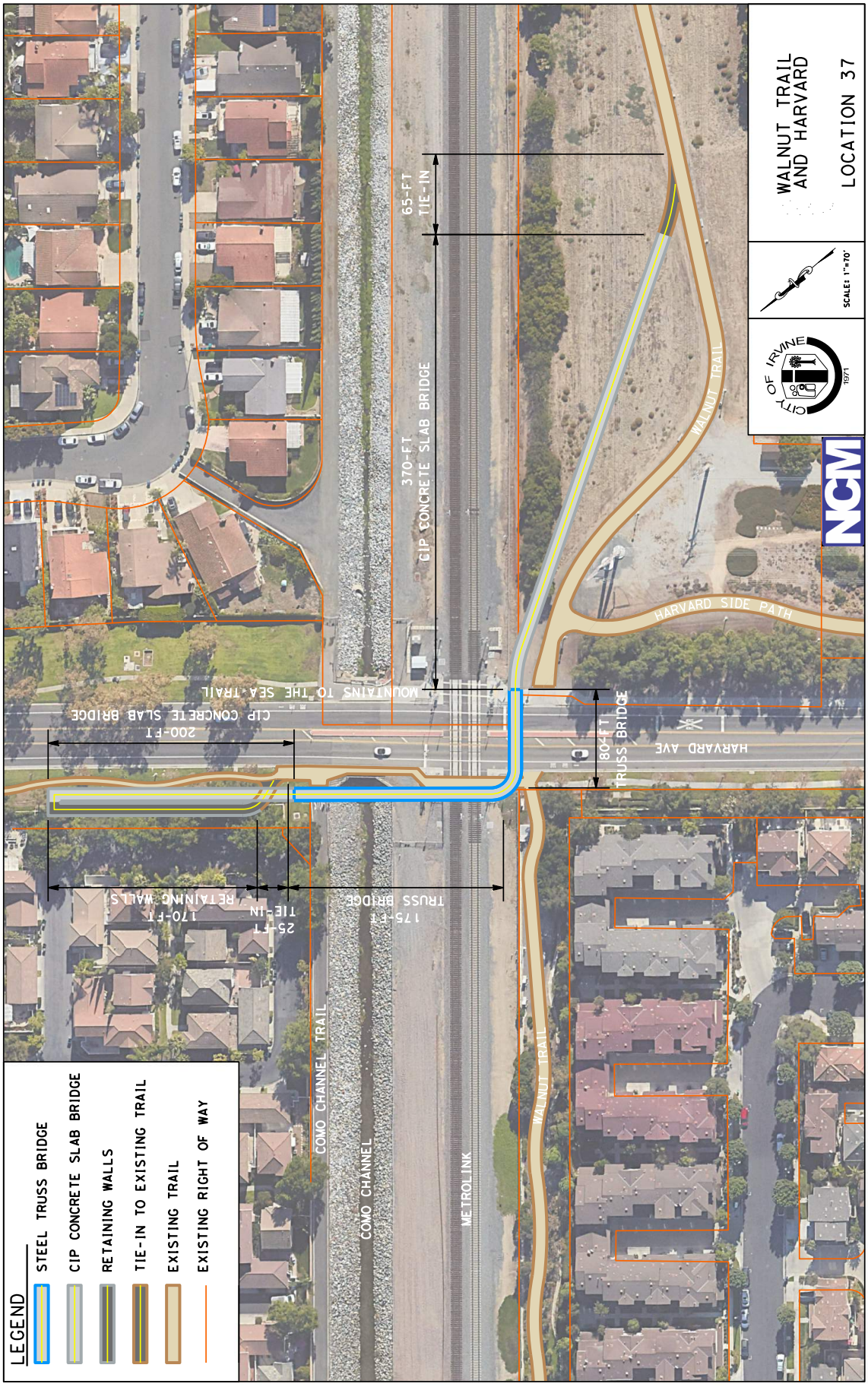


Figure 16: Concept Plan - Walnut Trail and Harvard Avenue - ID 37

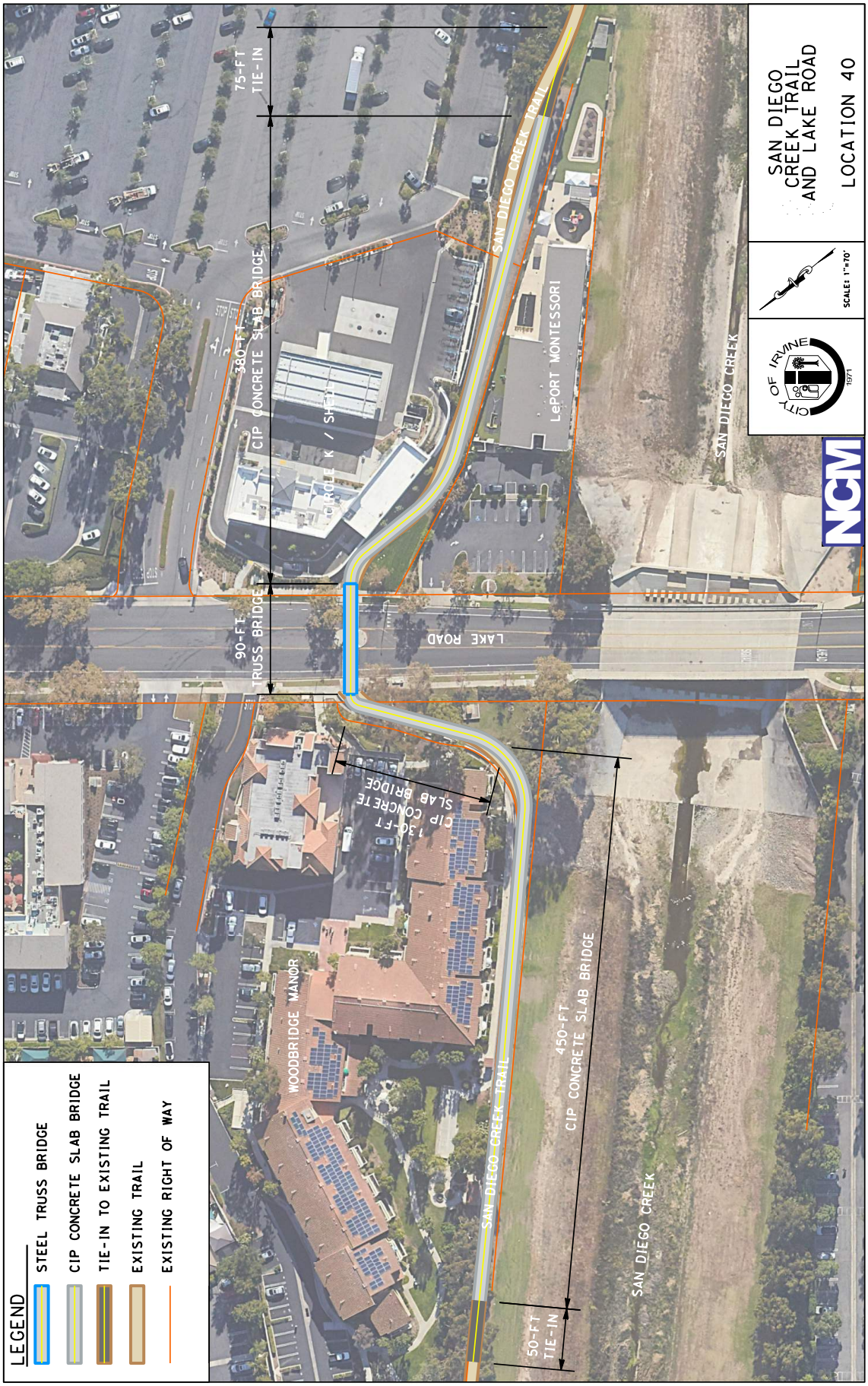


Figure 17: Concept Plan - San Diego Creek Trail and Lake Road - ID 40

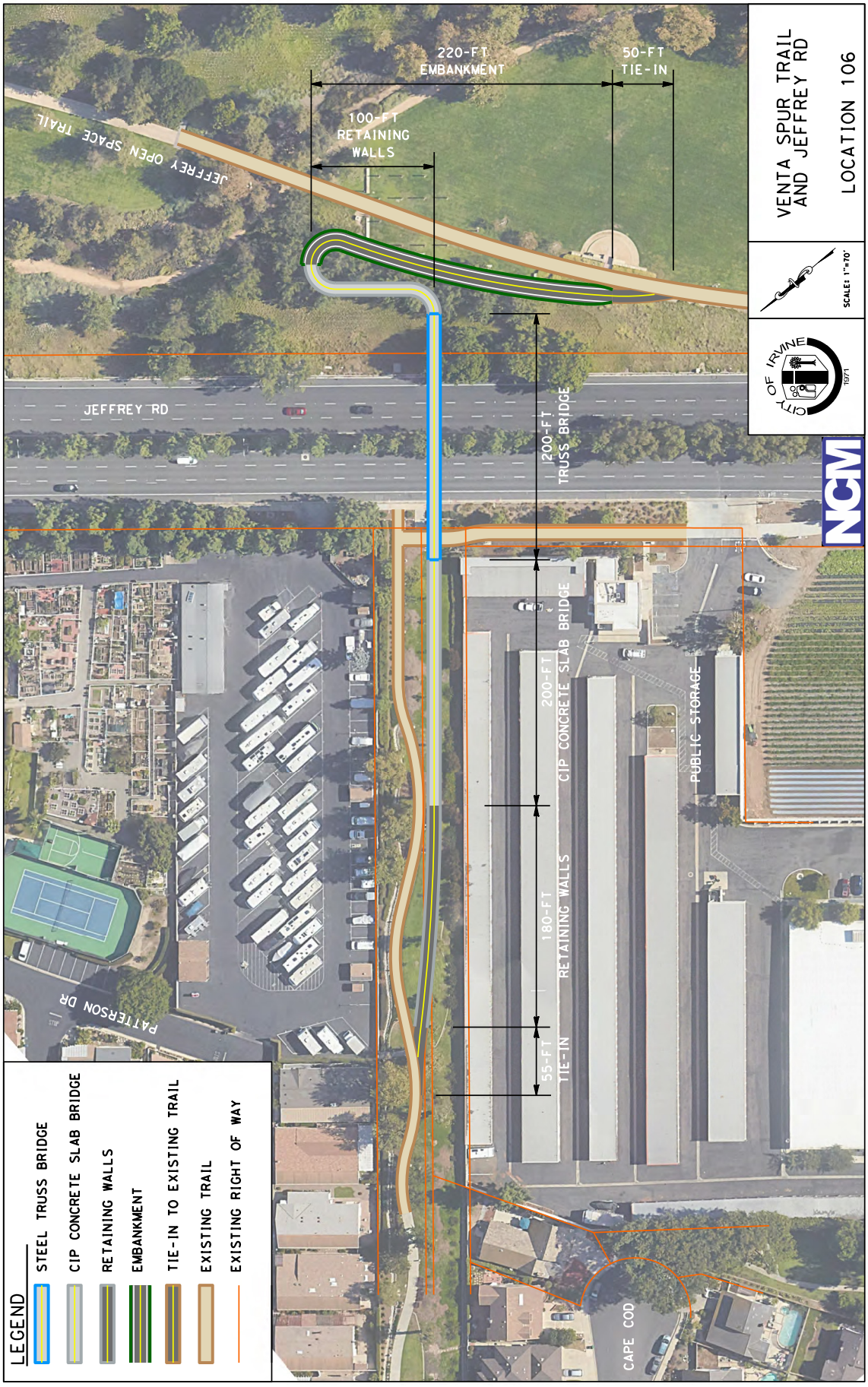


Figure 18: Concept Plan - Venta Spur Trail and Jeffrey Raod - ID 106

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APPENDIX A
PUBLIC ENGAGEMENT MATERIALS

A

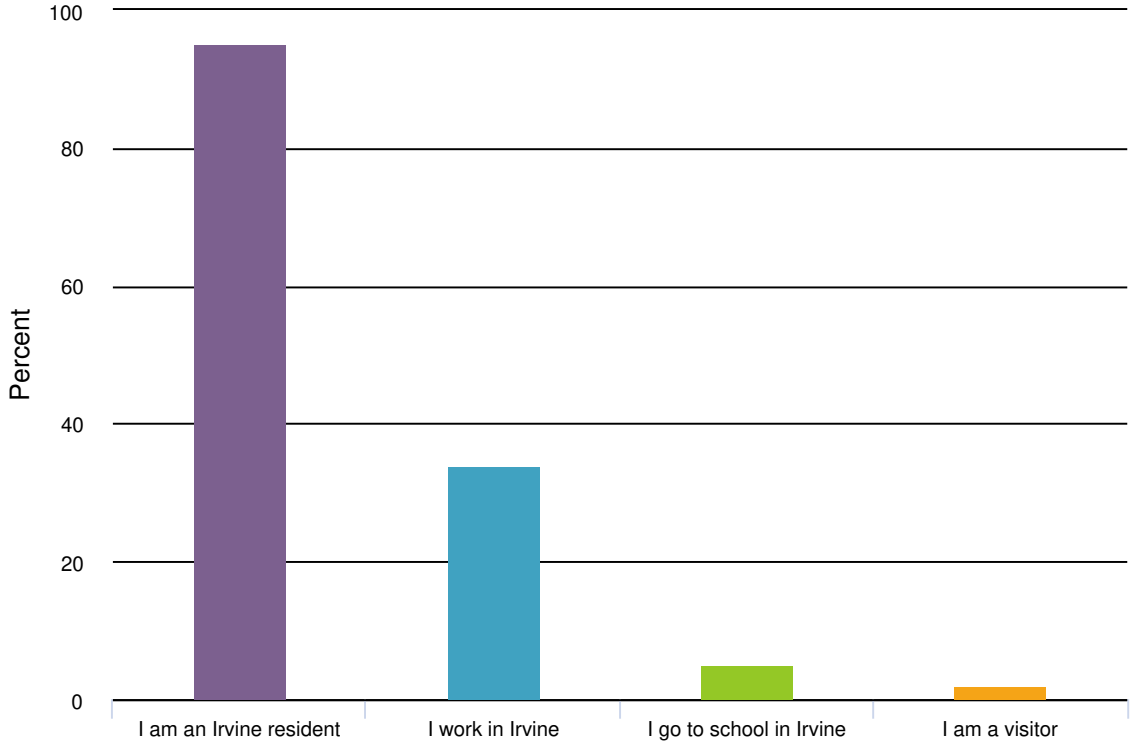
Report for Irvine Bridge Survey

Response Counts

Completion Rate:	**56.5%**		
	Complete		209
	Partial		161

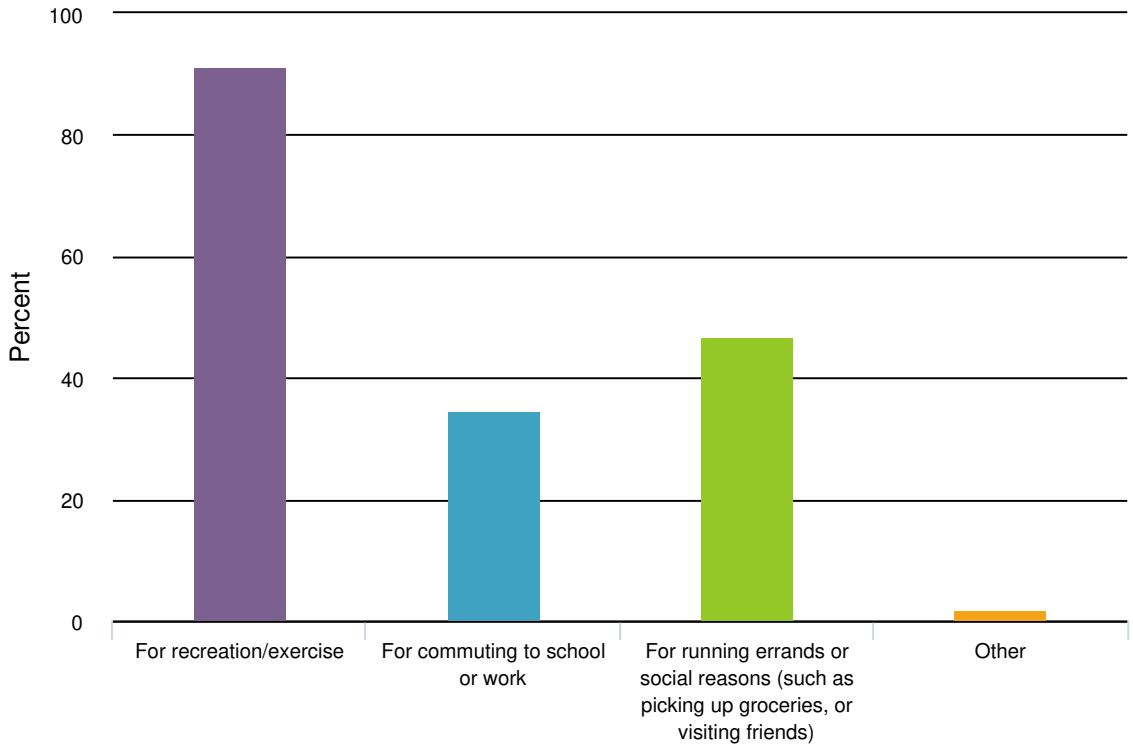
Totals: 370

1. What is your relation to the City of Irvine?



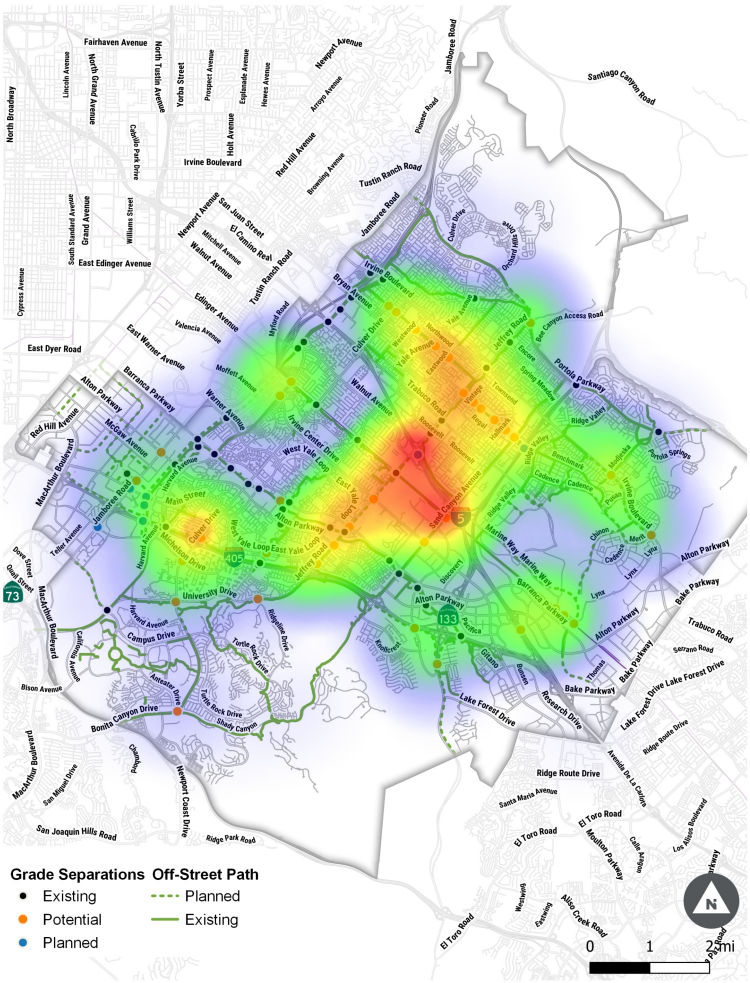
Value	Percent	Responses
I am an Irvine resident	95.2%	339
I work in Irvine	34.0%	121
I go to school in Irvine	5.1%	18
I am a visitor	2.0%	7

2. What are some typical reasons or destinations that you use the off-street paths?



Value	Percent	Responses
For recreation/exercise	91.5%	324
For commuting to school or work	34.7%	123
For running errands or social reasons (such as picking up groceries, or visiting friends)	46.9%	166
Other	2.0%	7

3. Use the map below to indicate where you would like the City to prioritize bridges, as well as comments about why you chose this location:Click on locations in the map below to put a pinpoint in the area where you would like to see these improvements. Please enter up to only five points.



	Value	Count		Comment
👁	Click to place a point on the map	485		192

ID		Option	Comment
30			

ID	Option	Comment
30		
30		
30		
32		
32		
32		
32		
32		
33		Bridge to cross 5 freeway
36		
36		
36		
36		
36		

ID	Option	Comment
38		more efficient and safer commute for work
39		
40		Culver x 405
41		The Peters Canyon trail is already complete from Warner to Walnut. All it lacks is for the North end gate to be unlocked at the railroad crossing underpass. It was already open once, a while back, but needs to be open all the time please.
41		The Jeffrey Trail is great, but currently dies before providing a safe way over the I-5. I'd like to see it continued South to at least the bike trail near Walnut.
42		Need connection to new housing in IBC!!
43		The only two crossings on the San Diego Creek Trail where trail users must cross the street. Even with the crossing light, drivers rarely yield to crossing traffic.
43		A convergence point between trains and cars on Harvard as well as the Walnut, Harvard, and Peters Canyon trails.
43		The beginning of the 133 toll freeway at Laguna Canyon Road is a dangerous intersection for cyclists heading northbound looking to enter Quail Hill. Cyclists must cross multiple lanes of high speed traffic to make a left turn when drivers are speeding up in anticipation of the beginning of a freeway. The need for a safer way to cross is immediate in this area.
43		There is a disconnect between the Jeffrey and Walnut trails at Sand Canyon and the 405 freeway underpass. Drivers getting on the freeway do not yield to cyclists or pedestrians crossing the onramp and there is heavy debris on the bike lane under the freeway. The Sand Canyon underpass for the railway only has bike lane markings for half of the crossing, causing confusion with drivers and cyclists.
43		Trail users wishing to connect between Hicks Canyon and Jeffrey Open Space Trails must cross Jeffrey at Portola where cars often enter the intersection at high speed and do not stop when making right turns. There is also frequent dump truck traffic at this intersection and they don't see pedestrians and cyclists well.

ID	Option	Comment
44		
44		
45		
45		
45		
53		There is a continuous bike path under this train bridge, but it's ALWAYS closed!! So, you have to go on a crowded sidewalk, cross train tracks, and I have recently seen an e-bike racing to get under the train signal coming down, and a bike crash between pedestrian and dog leash, because we are all sharing a sidewalk.
54		
54		
54		
56		
56		
56		
58		Jeffrey Trail is such a nice path, would love to prioritize the 5 Fwy overpass and the planned connectors

ID	Option	Comment
58		I live in Northwood, so anything that would make a bike ride easier to the Great Park should be prioritized. The Great Park is quickly become a center point for actvities & events so as many ways for residents to easily bike there would be great.
59		Connecting the freeway trail intersected by Jeffrey Road and the 405-North. Currently cyclists and pedestrians illegally cross the street instead of going to the closest light. A bridge connecting the freeway trail or crossing Alton Parkway near the Quailcreek intersection would be beneficial.
59		Connecting the Jeffrey Open Space Trail across Alton Parkway and Jeffrey Road.
59		Connecting the Jeffrey Open Space Trail across Barranca Parkway and Jeffrey Road.
59		Continue the Jeffrey Open Space Trail over/under Irvine Center Drive.
60		I would LOVE to see the Jeffrey Trail bridge and extension over the 5 freeway be completed. I regularly use the Jeffrey trail for exercise. However, if the bridge is extended over the 5, I would walk or bike to the many shopping areas near the 99 Ranch Market. I would use my car less and that frees up traffic and gas consumption. Also, it will extend my run/bike exercise and the Jeffrey trail extension will truly feel like a rural trail over this portion because the farms will be adjacent which will be beautiful.
61		Central Park/Viewpark bridge. This is the only traffic signal for Hicks Cyn Trail. It is a wide intersection so would be a perfect spot for a pedestrian bridge
65		
67		A bridge for residents of Orchard Hills to safely cross Culver to reach Orchard Hills shopping center would be great. Cars speed too often on this street, and traffic can get crazy with school drop off and pick up.
67		Orchard Hills Dr. loop is used as a racetrack for my cars and it's often dangerous for pedestrians to cross the street at this intersection of Ridge Gate, so a bridge would be appreciated.

ID		Option	Comment
67			Orchard Hills Dr. loop is used as a racetrack for my cars and it's often dangerous for pedestrians to cross the street at this intersection of New Point, especially with lots of Northwood High students around, so a bridge would be appreciated.
68			crossing the highway bridge on bike is never great, I would love to see this improved
69			
69			It is near impossible to get to/from the Great Park from the Walnut Trail, and Marine Way certainly isn't safe for bikes. Seriously, try to get across Sand Canyon from Marine Way. Go ahead, try it.
72			Making this section of bike path along the 405 more continuous will make it much more user friendly. Right now it intersects with several large streets
72			Connects a couple important bike paths (Shady Canyon, Alton, and along 405) across a large road that is not convenient to cross on bike
72			Coming northbound thru Laguna Canyon, this is a large road that is difficult to cross, and with the road turning into a freeway, bikes cannot continue straight
73			The Irvine Spectrum area and apartments need some sort of safer trail/pathway without forcing pedestrians to cross 8+ lanes of traffic.
73			A bridge should really exist to connect residents coming over from GP, Woodbury East, Cypress Village East, etc. to Woodbury Town Center. During rush hour, the pedestrian traffic slows down the flow of traffic. Additionally, residents are crossing 8+ lanes of traffic.
73			Great Park residents and Irvine Spectrum apartment residents have no way of getting to each location without taking a long detour.
76			
76			
78			Connectivity to the train station is very important to me, and having to take a long way around wide open land in the Tustin legacy area when there could be a path through it is disheartening.

ID	Option	Comment
81		
81		
81		
82		
82		This entire area is missing a safe separate bike path. I would be great to have a continuation of Jefferey trail for as far as possible
82		the area around the freeway is very dangerous for me when i'm not in a car. Drivers do not look and speed into the on ramps. I have to wait until a driver makes eye contact and fully stops before i can safely cross
82		
85		while I appreciate the improvements that have been made to the pedetrian/bicycle crossing at northbound Culver and the 405, the crossing on the on ramp to northbound 405 is still unsafe.
88		High school, k-8 school. too much traffic for kids crossing the street
89		San canyon under the 5 freeway is dangerous for bikers. A bridge over the train tracks would connect the great park community to trains and the spectrum.
89		Kids walk to elementary and high school and Irvine blvd has a high speed limit. The bend around the corner makes it harder for drivers to see. Also car traffic to high school is bad and ped bridge would make it safer.
93		No bridge over I-5 now. Need it right now!!!
93		Very dangerous cross I-5 on Sandy Canyon. Twice I was almost hit.

ID	Option	Comment
94		Culver and 405
94		Harvard and Irvine Center
96		Would help make freeway trail safer to have a bridge crossing at this high speed intersection. Would also save significant time since the intersection is out of the way from the other side of the trail and help connect mountains to sea trail with sand canyon and shady canyon trail.
96		Would make sand canyon trail much more accessible if had more non at-grade crossings. Would make it possible to bike from north side of irvine to UCI
96		Would make sand canyon trail much more accessible if had more non at-grade crossings. Would make it possible to bike from north side of irvine to UCI
96		Would help connect venta spur and jeffrey trail so don't have to cross high speed intersection of bryan/jeffrey
96		Would help connect jeffrey trail and hicks canyon trail. This is a high speed intersection and I have seen a bike accident here
97		
99		Once the Venta Spur pedestrian bridge over the 133 is complete, people will still need to cross over Sand Canyon at Towngate to follow the trail, so a bridge here would be really nice -- crossing Sand Canyon can be harrowing, especially during rush hour or at night. And cars wouldn't need to stop for pedestrians if there were a bridge, which would help keep traffic moving on Sand Canyon. Also, a bridge would give people who live northwest of Sand Canyon (like me) easier access to the Great Park, and people who live southeast of Sand Canyon would have easier access to the Woodbury shopping center.
99		There's currently no easy way to walk or bike from the Great Park to the Spectrum area, so a bike/pedestrian bridge that allows you to go from Marine Way over the train tracks would be helpful. I live in Woodbury and my office is at the Spectrum -- a bridge here would make me switch from driving to biking on many days.

ID	Option	Comment
100		Connection between Irvine train station and Irvine Spectrum would be very convenient
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104		This doesn't need to be a bridge, but going West->East on Main St loses the bike line right after MacArthur for an unfortunate block where I need to cross 2 car lanes to get to the shoulder. Keeping a bike lane going straight without crossing car lanes would feel much safer.
106		Leaving the neighborhood to access the rest of Irvine primarily happens here. This is the one area that I dread when I went to go places.
108		the main jamboree crossing is incredibly unsafe for bikes, due to the disruption of painted bike lanes approaching the intersection, a grade separation could help this issue a lot.
108		This potential crossing could provide good access to Diamond Jamboree and a lot of high density housing from the san diego creek bike trail.
109		There needs to be a safer connection to Marine way from both the Walnut Trail and the Jeffrey Trail. Much too much traffic makes for a very unsafe transition
110		This would allow for safer and more efficient commuter use of bike trails.
110		Safe freeway crossing is important.

ID	Option	Comment
110		Access to the southern edge of the city and into neighboring cities is important.
110		Safe freeway crossing is important.
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112		large intersection, high speed traffic and lots of ped. area to SE is already below street grade, maybe easier to install tunnel
112		unused space to east of intersection and NE makes easier for tunnel/bridge. also lots of homes nearby
112		same as culver/university
112		Dangerous intersection with fast, confused cars and lots of ped. traffic
112		High speed traffic at jeffrey, this would connect the bike paths adjacent to freeway, resulting in less friction between traffic and bikes/ped. Also, could add a tunnel similar to the one under the loop near alton square because jeffrey is already elevated above the forested area between bike path and 405 north freeway offramp
114		
116		There should be a bridge or safer alternative to allow crossing on Irvine Blvd across the freeway entrance
117		Safer access for Woodbury and GPN residents
117		Safer for kids going to or from HS
118		Safe access to Woodbury town center from Novel Park.

ID	Option	Comment
120		Connect the park
120		Make it safer
120		This area is un walkable
123		Crossing Culver Drive at the entrance and exits of the 405 is quite scary.
123		Crossing the on and off ramps from the 5 to Sand Canyon can be quite scary.
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127		This is a dangerous intersection for pedestrians trying to cross street on southwest corner. It’s a blind crossing (really difficult to see oncoming cars in right turn lane). I’m always nervous here when crossing.

ID	Option	Comment
127		JOST is so wonderful, but it abruptly ends just north of 5. Connecting JOST up to Barranca would be incredible
128		Venta spur trail to Jeffrey Trail over Jeffrey would be great!
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138		We need a pedestrian bridge from Laguna Altura to Quail Hill. Crossing the 133 as a pedestrian is terrifying.
139		A bridge to cross Ridgeline would be great for getting to Uni HS
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ID	Option	Comment
141		A bridge/road from GPN to Irvine Spectrum would be very very helpful! So many residents in GPN work in the Irvine spectrum area
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144		I commute to and from Cypress Village to Rivian's Waterworks location every day. I've never driven to work, and getting from once side of I-5 to the other is super sketchy. In general, Irvine has tried to make it look like bicycling is a good option with ample bicycle lanes, but every intersection was poorly thought out and is often difficult to navigate.
145		Would like protected bike access to Tustin area
145		Path over Barranca and Alton along jeffrey
145		Protected bike path to cross the 5 freeway
145		Protected path to move north/south over 5 freeway
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ID	Option	Comment
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152		Recently widened intersection means even more lanes of traffic to cross on an interrupted part of the Class I bikeway along University Drive.
152		Dangerous intersection where traffic for freeway ramps doesn't stop for pedestrians and bikes crossing within narrow, angled crosswalks.
152		Dangerous intersection where traffic for freeway ramps doesn't stop for pedestrians and bikes.
152		The Walnut Trail logically ought to extend east over Sand Canyon where the overpass structure already seems to be built, to continue along the railroad tracks to connect to Technology Dr and Barranca Pkwy.
152		Any method to be able to cross the railroad tracks from near the Irvine station to the Great Parks area would be much welcomed for access to the Great Parks amenities.
154		There should be pedestrian/bike improvements along Bryan and El Camino Real between the Serrano Apartment Homes and the Irvine Marketplace. Not only would this service the residents of Serrano (like myself) and Beckman High School students that patron the Marketplace after school, but it would also more safely connect users of the off-street trail to the Marketplace AND vice-versa the residents of future mixed-use projects in The Marketplace to the trail.
156		There needs to be a better route for the kids biking to Northwood High at the intersection of Yale & Meadowood. There is only one crosswalk at one side of the street and many kids cut off drivers making a right onto Meadowood.
159		This extension of the freeway trail and a safe crossing at jJamboree would be great. Currently we have to detour to Main Street to cross jamboree.

ID	Option	Comment
159		Easy, safe bike access to the District shopping center would be great
159		This is a very dangerous place for bikes to cross Culver. The zig zag crossing is hard to maneuver and cars just do not stop. A bike/pedestrian traffic signal would be the most efficient thing to implement on the northbound freeway on ramp from southbound Culver. We were so disappointed this was not addresses during during the recent repairs and bike detour to this area
159		This needs to be completed. Pedestrians, bikes and freeway on and off ramps are a recipe for accidents. I never understood why the bike path on Jeffrey doesn't continue to the college. It should be connected to bike traffic from both north and south of the city. I would have loved this when my kids attended classes their in high school.
159		Having a bike path directly to the Spectrum would be great for everyone. Maybe it could connect at some point to other paths from different parts of the city. It would be nice to see a safe off road way for teenagers to ride bikes there instead of their parents driving them and dropping them off. Kids get exercise and remove some cars off the roads.
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ID	Option	Comment
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167		There is an overpass needed from Turtle Rock Park over the Shady Canyon to Bommer Canyon. There is no sidewalk on Shady Canyon so people are walking along the road where it is not safe.
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168		Bridge over Shady Canyon Drive connecting Turtle Rock Park to The Bommer trail
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174		Intersection at Sand Canyon & Portola. Dangerous to cross for bikers and pedestrians due to double right turn lane and high speed limit. Portola Springs residents MUST cross to access Jeffrey Open Space Trail and Hicks Canyon Trail. Crean Lutheran High School cut off sidewalk path access to these trails on the opposite side of Portola. My father in law was hit by a car at this intersection while legally crossing on his bike. The community of Portola Springs has been largely neglected for bike and pedestrian friendly access to Irvine's trails.

ID	Option	Comment
175		Being able to safely and efficiently cross and canyon
177		More bike safety needed where cars are coming off/on the fwy
178		Need bridge for the safe crossing of marine and San canyon—basically connecting east Irvine to rest of the city.
178		Need bridges connecting east Irvine to the bike trials on the north side of sand canyon.
179		We need a safe way to cross the I405 on Sand Canyon by bike.
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182		It would be great if there were bike trails going through the great park to the train station instead of having to go around.
184		The Jeffrey Open Space would benefit from more seamless continuations starting at the 5 Freeway and heading south west toward the 405.

ID	Option	Comment
184		The Jeffrey Open Space Trail would benefit from more seamless continuations starting at the 5 Freeway and heading south west toward the 405.
189		Crossing bridge over Jeffrey at Venta Spur Trail
192		A lot of traffic caused by pedestrians passing a very wide street
192		Especially school hours, traffic is really bad and very dangerous for students riding bikes
195		Connect bike paths that are separated by busy streets
195		
197		Continue following 405
197		To cross a highway
197		To access great park. It’s impossible to access riding today.
200		A lot of foot traffic here is by college students going to grab some food, a bridge here could make vehicle traffic push much faster.
201		Same reasons as the other Jamboree locations.
201		Crossing Jamboree on foot or on bike is often times a harrowing experience. I have a coworker who lives about 10 min walk away from work, yet work and home straddle the two sides of Jamboree and chooses to drive to work because "Jamboree freaks me out". A better experience crossing Jamboree on foot or bike is much needed especially now that there are a lot of residential development on both sides.

ID	Option	Comment
201		There are residential, commercial, and industry around this busy intersection. The ginormous size of the intersection makes it very hostile to anyone outside of a motor vehicle. Grade separated crossing would greatly enhance pedestrian and bicyclist experience here.
201		There are residential, educational, and commercial in the vicinity of this intersection. A safer and more pleasant way to cross the streets is needed.
201		This provides access to the Irvine train station.
203		
203		Long wait times for traffic lights to change
203		Long wait times for traffic lights to change
203		Long wait times for traffic lights to change
203		Long wait times for traffic lights to change
207		The 5 at Jeffery is congested for bikes crossing over either way
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ID	Option	Comment
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211		I live at The Park near the Spectrum and I frequently ride my bike to Irvine Heritage Park library. The trail doesn't fully go there without having to go onto city streets and this is a major hazard for me given how fast traffic flows on various city streets (up to 50 mph). At these speeds, getting hit directly by a car is only one potential fatal hazard - any debris they kick up at these speeds could also be fatal to me. For this reason I often ride on the sidewalks for segments without dedicated off-road trails and this is not ideal either.
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ID	Option	Comment
212		I would like to be able to go from the neighborhoods near the Spectrum Center to Heritage Park Library without going on city streets.
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213		Crossing the 405 freeway ramps at Culver is always scary.
213		Crossing the 5 at Jeffery as a pedestrian feels dicey
213		Would be nice to see the Jeffrey Trail continue down Jeffrey to seamlessly connect into other trail systems (like the existing path that crosses the 405 near University)
213		Going from the Jeffrey trail across Sand Canyon and into the Great Park is hard to navigate and requires crossing a wide street adjacent to freeway exit traffic, then traveling along Marine Way, which is not as pedestrian/bike friendly as one might expect in Irvine. It feels both confusing and dangerous.
213		Would be nice to be able to directly access the Spectrum Center from the Great Park (and vice-versa) as a cyclist or pedestrian
214		Barranca & Jamboree. Many lanes to cross in all directions with heavy traffic, including many semi's. Crossing for several neighborhoods to get to retail. Grade separated crossing, 4-way would improve traffic and pedestrian safety greatly.
214		Barranca & Culver. Many lanes to cross in all directions with heavy traffic, including many semi's. Crossing for several neighborhoods. Grade separated crossing, 4-way would improve traffic and pedestrian safety greatly.
214		Ridge Valley & Technology. Difficult for Great Park residents to access Spectrum area or train station. Should be made easier.
214		Sand Canyon & Great Park/Trabuco. Many lanes to cross in all directions with heavy traffic, including many semi's. Grade separated crossing, 4-way would improve traffic and pedestrian safety greatly.

ID	Option	Comment
214		Sand Canyon & Irvine Blvd. Many lanes to cross in all directions with heavy traffic, including many semi's. Crossing for several neighborhoods. Grade separated crossing, 4-way would improve traffic and pedestrian safety greatly.
215		I’m not sure if i placed a pin in the correct location but i mean to put a pin on the culver and 405 intersection as well as culver and Michelson, and culver and university. This is a prime walking or bike path for children attending University High. It is EXTREMELY dangerous to cross against on-coming cars trying to get onto the freeway. A bridge is highly needed to keep child pedestrians and bicyclists safe from fast moving cars trying to enter the freeway or exit the freeway as well as busy intersections to get to University High.
217		Improve intersection by installing bike only lanes which are lacking, very dangerous intersection
217		Laguna Canyon: need a way for bikes to turn left going to Lake Forest, extremely dangerous
218		Connect the UCI Research Park to the San Diego Creek Trail
221		Sand Canyon and Towngate intersection needs a bridge
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ID	Option	Comment
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232		I use Jeffrey Open Space Trail for bicycling exercise, but turn around at the end because it exits at on-ramps and off-ramps. Would love a bridge to bypass all of that.
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238		Dangerous crossing at 405 northbound on-ramp. There should be a button to push to alert drivers that someone is crossing.
241		Would like to see more safety especially since it's near IVC
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ID	Option	Comment
243		That whole Rail Road area just north of Irvine Center Drive on Harvard is a mess. Can one of the paths go over or under the tracks somewhere? Such an unsafe place, with dead-end paths.
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243		I could not believe that when that Sand Canyon underpass was put in that the bike path did not travel across Sand Canyon. It is the most awkward crossing in town.
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245		crossing the freeway on Jeffrey is pretty scary with drivers entering and exiting the freeway. also it would help advertise Irvine as a bike and pedestrian-friendly city.
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252		This trail has many points of interest that would be more available to me if there was safer grade seperations
252		One of my main commutes is to the OC Great Park which currently does not have many safe and traffic-segregated crossings
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ID	Option	Comment
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257		Culver x freeway trail crossing - zigzag crossing is very difficult to navigate on a bicycle
257		Jeffery x freeway trail crossing - zigzag crossing is very difficult to navigate on a bicycle
257		Sand Canyon x Walnut Trail near I-5 would be much better if navigation through I-5 interchange was separated with better access to Marine Way and Great Park.
257		JOST to Hicks to maintain continuous off-street facility.
257		High value to have a crossing from train station to great park area/neighborhood
258		UCI students, staff, and faculty should be able to get around without motor vehicles. UCI students, many of whom do not own cars, would still like to participate in all that Irvine has to offer.
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274		Sand Canyon and Modjeska. Allows kids in Portola Springs to safely cross Sand Canyon to go to Portola High, Solis School, and Cadence Park School.
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275		For access to high school plus irvine blvd is very busy

ID	Option	Comment
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279		Because it would just make the San Diego creek trail continuous. However, the best and cheapest thing the city can do is to make our bike lanes protected. Add a protected bike lane along alton in Paseo Weetpark, Woodbridge, Oak Creek, and Spectrum, and see how many people start biking. We need protected bike lanes, not a strip of paint next to cars going 60 miles an hour.
280		There should be a bike/walking path from Irvine Spectrum to Great Park
281		UCI is kind of like a black hole for bike trails.
281		The industrial area should be connected to the rest of the city.
281		We need a safe way to cross the 405.

ID	Option	Comment
281		The Jeffery trail needs to be completed to provide a main bike route that connects the North and South side of the city.
281		Bike trails in the great park would be a good way to connect to other bike trails outside the park.
282		I remember this is a rail road.
282		
285		This seems like the most important intersection for a bike bridge or tunnel now that culver drive has been widened.
285		This intersection has a lot of accidents.
287		There is school traffic this way and would connect pedestrians to the great park much easier!
288		Crossing over the 5 by the Jeffery trail near walnut.
288		Crossing over sand canyon and Irvine blvd. also a very busy intersection with lots of lanes of traffic
288		Over sand canyon at the intersection of great park Blvd and Trabuco.
289		This is a interchange a make often as it connects my neighborhood to a brewery and restaurants and I get there via bike often.
290		The traffic of Sand Canyon is preventing bikes from getting through. A dedicated bridge is needed to commute between Fwy 5.
290		We need a dedicated bike bridge to cross the railroad. This bridge will enable people to access the Alton/Fwy5 commercial/office area.
295		Connecting trails would be great

ID	Option	Comment
295		High traffic
295		Connect to north
298		I would like a bridge from Chinon to the Great Park. This would connect the eastern side of the Great Park Neighborhoods into the Great Park. Currently, the eastern Great Park neighborhood residents have to bike Fromm Chinon to Cadence and back down Bosque to access the Great Park. This is not right because our neighborhoods border the Great Park yet it is not efficiently accessible. Doesn't make sense.
299		
302		I have seen many people cross this intersection, which is really dangerous. Especially, there was a turn in front of the cross, where the pedestrian could be at driver's blind spot!
303		Would like to see a less dangerous bike path without having to contend with autos entering/exiting Interstate 5
303		There needs to be direct bike access to Venta Spur Trail from JOST. Like a bridge spanning over Jeffrey Rd.
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305		Entrance into great park is unsafe for bikers and pedestrians
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ID	Option	Comment
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324		Crossing from Great Park to Woodbury Town Center. Pedestrians have to cross toll road AND Irvine blvd which is 60 miles an hour. It's an accident waiting to happen to the closest marketplace. I see many children and elderly walking and riding bikes crossing multiple lanes of traffic
331		No crossing limits JSOT utilitiy. Such a wonderful amenity.
331		Venta Spur is limited to younger riders by trying to cross the very wide, very dangerous Sand Canyon.
331		
331		VERY difficult to get to Irvine Spectrum, other side of I-5

ID	Option	Comment
331		East Irvine is under served, the roads are all 60mph
333		As cars are getting onto the 5 fwy, they don't slow down or pay attention to pedestrians or cyclists.
334		This is a high traffic area without much bike/pedestrian support. It is near a lot of popular areas like the spectrum and Costco. It is currently pretty dangerous to cross the freeway onramps.
336		bridge across Jeffrey between Bryan and Irvine Blvd students riding bikes from Stonegate to Sierra Vista Middle school better way to cross Jeffrey than at Irvine Blvd. (a mess with all the trucks speeding to Bee Canyon)
338		My No. 2 pick. Better access to the beach
338		My No. 1 pick. I live in The Willows so I would use it the most.
338		My No. 5 pick. Better connectivity to Quail Hill
338		My No. 4 pick. Again, improved access to this part of Irvine.
338		My No. 3 pick. I don't bike/run much in this area and I would more often with the improved access.
339		I'd like to see access from the end of the Walnut Trail at Sand Canyon to the Great Park area (corner of Marine Way and Ridgeline). This may mean attaching a bike crossing over San Canyon (attached to the railroad crossing) and then crossing under the 5 and 133 using Technology.
341		Heavy traffic not conducive to pedestrian s
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ID	Option	Comment
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348		The end of Jeffrey Trail at Sand Canyon road does not have safe bike trail access to the Great Park. It should be considered on the proposed plans for better access to the Great Park with bike trails.
349		I ride my bike to Portola COmmunity Park
351		Absolutely need a bike over or underpass across Harvard. So many cyclist illegally cross street on either side of railroad tracks. Very dangerous location for children and trail users.
351		Crosswalks on Creek and Lake are very dangerous. Most cars do not stop for pedestrians or cyclists.
351		Sidewalk needed along Irvine Center Drive between Yale and Deerwood. So dangerous seeing people walking their dogs in the bike path and children riding bikes on street.
351		Access from Walnut Trail to Great Park
352		133 between Laguna Altura community 133 fwy that crosses over the the Quail Hill community. A bridge is needed quick for the safety of pedestrians crossing the 133 is very dangerous for anyone please place a bridge over the 133 fwy.
354		A walking/biking bridge crossing Jeffrey road at Rosevelt would help move traffic along, be safer for Jeffrey Trail Middle School students, and boost business at the shopping center.
357		

ID	Option	Comment
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358		Same as the Jeffrey crossing.
358		It is unsafe to not have a protected connection across Harvard. There is both train and vehicle traffic here.
358		I think a protected crossing at Jeffrey would be very useful for cyclists and pedestrians while also speeding up cat traffic.
358		The bike trail from Harvard to Sand Canyon is very popular and I run and bike it regularly. On the SC end, there needs to be an extension to the other side of the street so cyclists can go up SC without either making a u-turn or riding up the sidewalk. On the Harvard end a bridge would allow for connection to the Peters Canyon paths without dealing with car traffic or train crossings.
361		Warner and Culver, from Woodbridge to Westpark
361		jeffery rd and Irvine center drive
362		Modjeska and Irvine Blvd needs one because of all the high school students trying to compete with impatient drivers. Already had my son hit by a car there on his way to school and the driver fled!
364		Move cycle friendly on Culver
364		Move cycle friendly on Culver
364		Move cycle friendly on Culver
364		Move cycle friendly on Culver

ID	Option	Comment
364		Move cycle friendly
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366		University Trail over HARVARD & UNIVERSITY to connect to Regional Parks Bikeway: Between NW corner & SE corner: 2 bridges? Diagonal bridge?
366		connect SD Creek across Creek (@ Del Taco)
366		Bridge over Alton to support Sand Canyon sidepath
366		Connect Portola Side Path to end of Peters Canyon East Branch path (fatality site)
366		Connect Portola sidepath across Sand Canyon
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368		Sand Canyon and the 5 interstate interesection is badly in need of a bike bridge or tunnel. Also Sand Canyon and Irvine Blvd intersection.

ID	Option	Comment
370		A bridge over Culver at the 405 freeway to connect bike paths would be great.
372		bridge over Sand Canyon
373		There is no safe route to Tustin Metrolink station from Peters Canyon Trail.
373		Venta Spur Trail is only ok. It has too many street crossings. The crossing at Yale is a dumb detour to the intersection at Bryan.
373		Every home in The Great Park village came with a bicycle, but no way to get to the closest grocery store on the other side of 133.
373		Spectrum is an island, only accessible by car. It needs bike and pedestrian routes without freeway interchanges or 6 lane crosswalks.
374		
381		This area near UCI campus and in a significant residential area would be high priority for me. Michelsen and Culver area is actively dangerous for bike riders. Safer bike trails would help lessen traffic and parking congestion at campus and in University Park area shopping areas. I strongly support making commuting to UCI or running errands in Uni Park area by bike or on foot easier and safer.
381		Repeating my comments about the importance of off street paths along Jeffrey. Many Woodbridge students go to IVC, and they will have more choices for affordable transportation and potentially reduce traffic and pollution, ease congestion in parking. Jeffrey is an important Irvine traffic artery and building up safe bike access along the way will make it more feasible to commute, shop, and go to school.

ID	Option	Comment
381		The broader area around Irvine High School and Heritage Park needs help to improve safe biking access and to improve traffic and parking. Culver is high speed for cars with very narrow sidewalks. I would *never* allow my HS student to ride in the bike lane on Culver to get to school. Yale is a bit better with wider sidewalks and slower car traffic, but protected biking would be a game changer. Likewise addressing making biking safer on Walnut between Culver and Jeffrey would seriously improve safety and make biking a more viable choice. IUSD does not provide buses for HS transport, even though they know students assigned to a school can live 4 miles away. This puts a burden on many families and the students. Making it safer and easier to commute to school by bike would be one step to improving the situation. Heritage Park is a beautiful, valuable resource to the Irvine community. Making it easier to arrive there safely by bike would reduce traffic, pollution, and parking congestion. Nearby shopping at Culver and Walnut would see easing in traffic and parking ocngestion.
381		Extending protected bike and pedestrian trail along Jeffrey should be high priority because Jeffrey is a major artery through Irvine. Also, there is a high need to support safer, easier biking to Irvine Valley College for the good of the community. An off street trail would support a low cost mode of transportation for students, and potentially for faculty and staff. It would reduce traffic and enhance safety (esp near the highway ramps). I know several students who wish they felt safe to ride bike to IVC and to shopping along Jeffrey. I think might also improve biking for some students going to Irvine HS.
381		I support off an street trail between Jeffrey Space Trail and Sand Canyon (hopefully with protected access continuing to the East side of Sand Canyon). This would enhance east-west movement, and make the Great Park area more accessible.
382		
382		make the city more safe
382		link northwood to jeffery trail
383		children pick up and drop off
383		

ID	Option	Comment
383		
384		I am using the venta spur trail to pick up and drop off my 2 children to Sierra vista middle school every weekday.
384		I am using the venta spur trail to pick up and drop off my 2 children to Sierra vista middle school every weekday.
385		
385		
386		Many children cross Irvine Blvd at Modjeska on a daily basis to get to Portola Springs High School
388		I commute on this trail nearly everyday.
388		very busy trail with very dangerous crosswalk
388		It can ombine Northwood to Jeffery trail!
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ID	Option	Comment
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392		pick up and drop up kids everyday
392		very dangerous cross
392		Connect northwood to jeffery trail
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ID	Option	Comment
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394		Very important!
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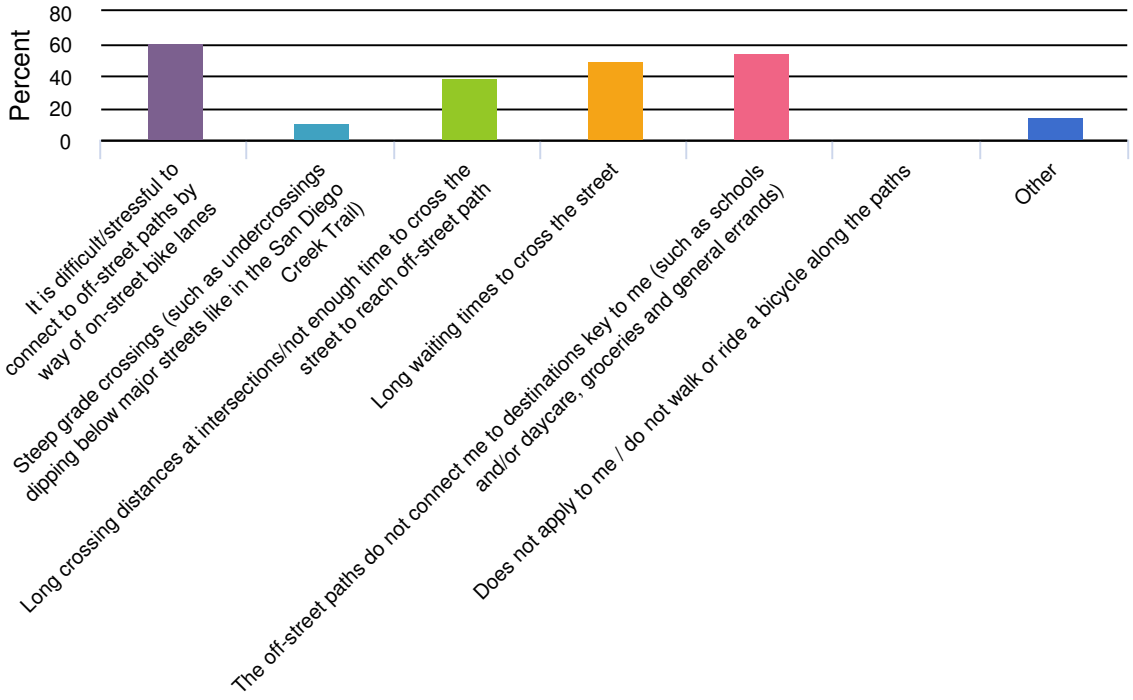
4. As a pedestrian/cyclist, what are some barriers you experience while using Irvine's off-street paths? Select all that may apply.



Value	Percent	Responses
It is difficult/stressful to connect to off-street paths by way of on-street bike lanes	60.4%	119
Steep grade crossings (such as undercrossings dipping below major streets like in the San Diego Creek Trail)	10.7%	21
Long crossing distances at intersections/not enough time to cross the street to reach off-street path	39.1%	77
Long waiting times to cross the street	49.7%	98
The off-street paths do not connect me to destinations key to me (such as schools and/or daycare, groceries and general errands)	54.8%	108
Does not apply to me / do not walk or ride a bicycle along the paths	1.0%	2
Other	14.2%	28

5. Is there anything else you would like to let us know about bicycle and pedestrian bridges affect your use of on Irvine off-street paths?

ResponseID	Response
32	asg
40	Thank you!!
41	I prefer bridges to underpasses because the underpasses are a lot darker, and could harbor hidden hazards.
42	If people feel safe to ride from/through denser areas like IBC, they will buy bikes/ebikes and get to experience the entire network. If not, they won't, and that's a shame! Build the path and bridge into the IBC.
43	Bridges remove a barrier to off-street paths by eliminating a safety concern crossing streets with inattentive drivers. Additional safety measures (bollards, curbs, jersey barriers) for on-street paths will make connecting to off-street paths safer and encourage their use.
46	Electric bikes and scooters need better regulations
50	I wasn't sure how to do the pinpoint on the map. We need a pedestrian bridge across Irvine Blvd at Palo Lado so kids can safely get to Sierra Vista Middle School. Kids have been hit by cars at that crosswalk. Thank you.
52	Special consideration should be given to crossing points used by large groups of students. For example, hundreds of students attending Sierra Vista cross Irvine Blvd. on a daily basis.
53	WE NEED BIKE RACKS in shopping centers!!! Or some way to safely leave bikes while we shop, watch movies, go out to eat!
58	Heritage Park (where a lot of kids activities & library) can be stressful. More protected & designated lanes or off-street paths would be great. Prioritize places where kids go for after school activities or to hang out or shopping/eat.
59	The city has done a great job developing the Jeffrey Open Space Trail east of the 5 freeway. Please consider the same quality of JOST Trail for Woodbridge and Oak Creek in connecting to the freeway trail and the University Park bridges. You will see a ghost bike on Jeffrey and 405 North where the crossing is dangerous.
60	Would love to see the Jeffrey Trail extension and bridge over the 5 freeway!!!!
65	No

ResponseID	Response
69	The Jeffrey Trail, Walnut Trail, and Marine Way at Sand Canyon are a nightmare to navigate safely. I ride them literally everyday.
70	Possible Pedestrian Bridge. Irvine Station > Ada > over 5 > Spectrum center Great Park/Five point amphitheater access over/under Railway next to Irvine station to connect to Loop road.
78	I think wider bike lanes (or even better, physically separated bike lines with a barrier instead of a painted line) would go a long way to improving bicycle usage. Riding along roads like Alton are very scenic to ride along, but going 10mph next to 50mph traffic is not exactly an encouraging experience.
81	I would like to see barrier separated bike lines for when I do need to bike on-street, as well as better connectivity between existing off-street paths. There is also a lack of safe bike infrastructure along walnut avenue that is used frequently by myself and others
82	We need more pedestrian bridges and separate bike lanes in every major intersection. When the speed limit of major streets are over 50mph, cars are driving too fast to react to pedestrians crossing.
88	Would love to see a bridge near portola high school crossing over Irvine Blvd. Too many kids riding in the streets with heavy traffic and needing to cross, cars not paying attention and cutting in front of the kids, speed limit is 60 and during school hours a lot of cars are not obeying that.
90	The sections of off-street trail that do exist are lovely. I absolutely love the San Diego Creek Trail being my commute from Jeffrey/5 to UCI. I just want more of it. I'm particularly glad to see that there is planned connection to give Jeffrey off-street from the 5 to Barranca (though I do wish I already had it!) The sidewalk is unpleasantly small to ride, but I've seen Irvine drivers, and I know bike crash statistics. Riding in the road is TERRIFYING! I love the Jeffrey Open Space Trail, especially the pedestrian bridges along the entire length. However, once I cross the road when I get to Albertsons, I'm forced onto the sidewalk to get through a dang parking lot. I'd love to leave my bike at home to grab 5 things from the store, but that last 100 yards shouldn't punish me.
93	We need to separate bicycles and pedestrian traffic. Too many e bikes riders at high speed on trails and paths. Let's not wait for action after e bikes kill someone. Thanks.
96	A lot more people would bike and walk if they could have less interactions with cars, especially at dangerous intersections. Off-street paths are really nice but when the crossings are at grade, people can let their guard down and not realize the danger that a car, which is not normally looking for pedestrians, can cause. Further separating these paths from cars would go a long way towards making people feel safer and more eager to use other modes of transportation.

ResponseID	Response
102	Need more separation from cars to safely cross
104	I appreciate having the option to bike on the sidewalk on busy streets like Jamboree and definitely use that if there aren't pedestrians and there are many fast cars. Roads feel pretty well swept although I typically see a few screws (flat tires make commuting harder..) on Main or Jamboree each week.
108	More and better bike infrastructure is essential in irvine. Excessively wide roads with high speeds create more need for safer bike infrastructure on major roads in conjunction with off-street paths.
109	Why is there no continuation of the mountain to the sea bike lane under the railroad tracks by Irvine Center drive, one has to take a non official less safe detour across the tracks
110	Please prioritize separating existing paths from having to cross/interact with busy roads and intersections. Overpasses and underpasses are great, and can help the bike network become more practical moving around the city. Freeways and major roads serve as impediments to moving across the city by bike otherwise.
112	More bridges/tunnels are better as long as they're built right. The one over barranca is a good example. In general they speed things up for cars, while also making it safer for pedestrians
114	I would like to see a bike path connection to the UCI campus from existing bike paths like the San Diego Creek trail
123	The existing Jeffrey Open Space Trail is a perfect use of bridges and tunnels. I love biking that whole space because I can do so without the fear of crossing multiple lane streets.
127	Irvine has done a great job with new planning like the JOST. Now extending the JOST southward over the 5 fwy would be incredible!
129	Please consider a pedestrian bridge to connect the Venta Spur Trail to the Jeffrey Trail in North Irvine. They are currently not aligned. Crossing Jeffrey at the nearest intersection feels like a safety hazard given the volume of traffic and speed! Thank you for your serious consideration of this request.
137	There is a section of the San-Diego creek trail (between Walnut and Edinger) that is always fenced off and requires a detour. It would be much more convenient and safer to not have to cross the railroad tracks if this section of bike path were completed. Thank you.
138	Unprotected bike lanes (bike lanes designated with a stripe of paint) are scary. Cars kill, so I would not use an unprotected bike lane. Sidewalks and bike trails only.

ResponseID	Response
141	I have the following two suggestions 1. A road from GPN to Spectrum 2. A bridge from GPN to Woodbury town center
144	When I lived where it made since to use the San Diego Creek Trail, it was awesome. In about five miles of path riding, I only had to cross the street twice. Now I use the Cypress Village Trail for about half of my commute, and the half that is on roads (or unfortunately - sidewalks) can be sketchy.
145	Providing a connected network of off-street trails is the top priority, with convenient access to major destinations (stores/schools/work). Short distances from homes/businesses to the trail is acceptable, but bikers/pedestrians should be able to use off-street trails as a transit network.
147	Somewhat unrelated, but better bike storage infrastructure at destinations (bike lockers, racks)
151	Test - delete survey
154	In order for me to reach key destinations, I would have to connect to an on-street bike lane from the off-street path. I would feel more comfortable if on-street bike lanes were protected/buffered rather than just striped, especially at major intersections such as those along Jamboree, Culver, Jeffrey, etc. I would love to see the neon-green zones that give bikers extra lead time at intersections to cross and to be visible.
159	We are very fortunate to have as many off street paths that we do. They are a bit lacking in connecting to major schools and shopping though. Lack of bike parking is also an issue at most of the shopping centers. Thank you for the survey and I hope to see these improvements implemented soon! I would love to see Irvine on the same scale as the Netherlands.
167	As a pedestrian on the Shady Canyon trail I find the bikers to be too fast and I often have to jump out of the way especially when they are coming downhill. They do not signal their presence. It is dangerous when the two paths merge like on the two bridges which are at the bottom of a hill. It's only a matter of time before someone is seriously injured and they will sue the City.
168	There are two dangerous places on the Shady Canyon trail where the pedestrian and bike path converge on a bridge to cross a ravine, near a steep downhill. Bicycles coming downhill are going very fast as they cross the bridges, presenting a danger to walkers. These kinds of convergences should be avoided in new construction.
175	Being and to connect the walnut trail to oak canyon would be huge. Easier access to Irvine dog park etc. It's separated by a single fence.

ResponseID	Response
177	The Jeffery trail to theWalnut creek trail needs a better connection. It is very busy and dangerous trying to connect due to the Sand Canyon/ I-5 intersection.
179	Finish the Jeffrey Open Space Trail to connect to Barranca.
181	My safety as I walk and bicycle around Irvine. Off street walking/biking paths increase my ability to exercise safely. Too often I find myself "sharing" on street bike lanes with autos that straddle the bike lane lines. I would like to see the city install rumble strips along the bike lanes to warn drivers that they have left the legal auto lane. This works well all over Europe saving lives.
184	Freeway trail connection across Jeffrey could be improved. Multiple crosswalks and backtracking to connect across the road.
186	I don't think the map point selection on the survey worked. Browser issue? I selected the points on culver, at university and esp culver going over 405 where there was a ghost bike so I assume a fatality. The signs saying watch for cyclists are frequently knocked over by cars getting on the on 405 ramp on culver (near Michelson). Help! Also culver crossing university is very dangerous with the double right turn lanes - the light turns green and drivers just don't look for pedestrians or cyclists. Please!!!! A slower speed limit on Culver. Thanks for all the great bike lanes in Irvine -more bridges please. I'm a 66 year old Irvine resident.
195	Education of people walking and cycling to understand which side to walk, run or cycle both on the street and off street paths.
200	Lift the ban on e-bikes, instead impose speed limits on the roads. Force registration and insurance on ebikes and mopeds and tax them for road maintenance fund.
201	I use my bike daily for commuting to work, for recreation, and for grocery shopping and other errands if I can. I log about 100-200 miles per month on my bike. I find that for recreation, the bike paths in Irvine are adequate. For any other purposes, I find it a bit hard. Even though bike paths can bring me quite close to some destinations like a grocery store, the last stretch is often times very unpleasant. I either have to cross a 10+ lane road, bike through a parking lot as big as a football field, or bike on a narrow side walk just to avoid the former two scenarios. When I reach my destination, I often see a sea of parking for cars, and a sad three-bike rack at the corner. On top of that, bike paths just don't connect me to my destination at all sometimes. Bikes are just not prioritized when compared to cars. I do hope that there will be a shift in this mindset and Irvine can realize its potential to be a great cycling city. For starters, I think relatively inexpensive changes can
207	Keep up the improvements. Noticing lots more people on the trails with E bikes so the needs are there for more trails and safer lanes

ResponseID	Response
211	We need more off-street bike paths as traffic flows too fast for me to feel safe traveling on the on-street bike lanes. I also wish more of the San Diego Creek trail was open to biking.
212	There should be a way to get to the Heritage Park Library from the Spectrum neighborhoods without going on city streets. The 50 mph speed limit makes it dangerous to go on the on-street bike lanes.
213	There feels like a disconnect where the Jeffrey trail runs south along the 5, then just stops when it hits Sand Canyon. It would be really nice to have the infrastructure connect cleanly into the Great Park
214	Believe Irvine should prioritize crossings where there is heavy traffic and high degree of vehicles with limited forward visibility(e.g. semi's & SUV's), for pedestrian safety. This is especially important for areas where multiple neighborhoods have residents travelling between for recreation & shopping.
217	Extremely difficult to make left turns on most intersections. Need bike only lanes. Also, missing BOL's where there are existing RTL's for cars.
225	Trabuco into the Great Park needs some serious consideration for pedestrians and bicyclists.
232	I feel so fortunate to have off street trails to bicycle, but I wish there were more that could connect easily.
238	The worst are around the freeway on-ramps. People are generally increasing speed and aren't looking for cyclists and runners as much
241	Can there be more bike parking options?
243	It is those roads in-between major arteries that are the most annoying. I finally cross Jeffry only to have to stop at Yale Loop. Valley Oak? Always red. Always. Finally cross San Canyon after waiting forever only to have to stop at Valley Oak. Also, four-way stop signs on a bike are really annoying like the one at Harvard Park. To have to stop, signal with one's arm, unclick, not fall over, and then see if it is time/turn to cross? It is too much. More traffic circles would be appreciated as they are much more safer, and bikes don't have to unsafely stop. Also, it is really difficult to come to a full stop when going down a very steep road like Portola. Bikes can't stop on a dime.
247	Sand canyon bridge over 405 and 133 bridge over 405 are dangerous. Low walls. Almost get hit on sand canyon going to quail hill

ResponseID	Response
252	While off-street paths and bridges are great for making bike commuting safer and faster, I feel that a greater connection to residential and commercial areas would help usage as well as improving the conditions of on-street bicycle gutters by building infrastructure such as curbs to separate motor and bicycle traffic.
258	Please eliminate right-on-red where cars cross bike lanes. I don't know a single student without a car who hasn't at least almost been hit by reckless drivers.
266	Improvements should include ebikes. Please make irvine friendly to ebikes. Remove signs prohibited ebikes on trails. If regulations are required, consider speed limits for all bicycle traffic
268	Have separated physical barriers for bike lanes vs pedestrian walk east. The bikers don't respect speed and now with evokes it's worse. Let them crash and burn in their own lanes.
273	I live in Woodbridge. 1. Need bike path to access Great Park from Sand Canyon / 5 Fwy. We eat at Dennys and Knowlwoods and very dangerous to get into Great Park from there. My daughter almost hit by car 2. Bike path going East have to take street bridge on Jeffrey to connect to Sand Canyon bridge. Thank you!
279	This is a great step in the right direction. However, Irvine needs protected bike lanes. It is much more cost efficient and practical for every day use. If you put a protected bike lane down alton/Irvine center/sand canyon it would increase the amount of bikers dramatically. Protected bike lanes are the key.
281	Sometimes homeless people loitering around the path.
282	I live in Eastwood Village and here is what I experienced: (1) A lots of cars parked along the streets making narrower useable areas of the streets. I need to worry the sudden opened doors before planning passing them. (2) The community streets are Irvine public street with speed limit of 25 mph (per our HOA), which the pedestrians feel like 35 mph or more.
288	The more bridges the better. As the city gets more congested over time it gets more difficult to cross out main thoroughfares.
289	Excited for the expansion of off street paths on Jeffrey and wish there were more options on Culver.

ResponseID	Response
298	We need a direct bike and pedestrian bridge from the eastern Great Park neighborhoods that lead into the Great Park. Come to our neighborhood and I can show you exactly what I mean. For example, I probably my live the closest to Wild Rivers (distance wise) but I can't bike their directly. Instead, I have to go up Chinon, down Cadence, down Bosque, and down Great Park Blvd before I reach Wild Rivers located on Chinon. Wow.
303	Auto traffic creates anxiety especially across freeways on and off ramps. This should be taken into consideration in planning bike paths.
304	A significant number of school children/students, families and individuals cross Irvine Blvd from Portola Springs to Portola High School and/or FivePoint neighborhoods at Modjeska and Irvine Blvd and Merit and Irvine Blvd. Given that Irvine Blvd is a high traffic/high speed road, it's only a matter of time that a tragic accident will occur as a child/student/family/jogger/dog walker, etc is injured or killed whilst making their way across Irvine Blvd from Portola Springs. Please add a bridge at either Modjeska and Irvine Blvd. or Merit and Irvine Blvd. (preferably at Modjeska) in order to prevent a horrific accident from occurring. Our beloved City of Irvine should not wait for tragedy to happen at these intersections, before doing the right thing. A bridge at these key locations will ensure the safety of Irvine residents of all ages as they walk and ride about this beautiful and safe city.
305	Unsafe for Woodbury to bike to Portola HS.
323	Too hard to use the maps in the survey. The Freeway Path where you cross Jeffrey and Culver by the onramps is so dangerous. Need a bike safe crossing at University and Culver.
324	The Great Park area feels isolated in terms of connectivity to the greater community. We were misled regarding what amenities would be included in our local neighborhood (eg retail shopping). Anything done to connect to nearby groceries/shopping will alleviate elderly and children traveling across busy roads.
328	I would recommend connecting Cadence/Pusan to Marine way, so we can access the Amtrak station/Ampitheater/Office on Barranca without going all the way to Alton and then coming up on Barranca.
331	There just aren't enough of them to supplement the otherwise strong network.
336	City of Irvine should post Bridge Rules at the Beginning/End of each walking/riding bridge. Too many cyclists going to fast for the walking public who may have strollers, 2 abreast, etc. Cyclists do not announce themselves when they are passing pedestrians on the bridge.

ResponseID	Response
338	Safety is my No. 1 concern, so the further I can stay away from cars, the better.
346	Looking forward to the Jeffery trail expansion.
348	The Jeffrey Trail does not easily connect when you reach Sand Canyon and want to reach the Great Park. The 5 freeway is often very unsafe with a lot of cross traffic. It would be nice to have a bridge here to get to the Great Park.
349	I think Irvine has a good network of bike bridges around my neighborhood.
351	Increase parking lot at Deerfield Community Center. Irvine Bicycle Club and other groups overtake the parking lot so often and do not allow access to residents who have classes in the building. it is the smallest parking lot for any City building in Irvine. Install more flashing lights at crosswalks near schools.
352	We need a bridge that crosses over from Laguna Altura over the 133 freeway onto Quail Hill community so that kids can cross the streets so their families and pedestrians can be safe because the 133 freeway is not safe for anybody it's a big liability and it's scary to cross the freeway there's been so many accidents and people do not stop when the red light is there and they don't have bay that don't turn right signal when the light is red. For the safety of everyone a bridge needs to be built over the 133 freeway from those two communities Laguna Altura community and Quail Hill community. Thank you
354	I know it's been said enough, but there is too much car traffic in Irvine. I would like to see more incentives for safe walking and cycling, and disincentives for too many cars per household. I drive my kids to school because biking is simply not safe enough as an everyday option. Parking is also a huge problem.
358	When I cycle, the biggest issues are where the paths cross major streets like Jeffrey or Culver. My daughter would ride with me more if there were more protected crossings. For example, protected freeway crossings (such as over the 5 on Jeffrey as is planned for the JOST) would help her to be more comfortable.
362	Electric bikes need to be banned from these bridges and pathways, they are dangerous. Kids shouldn't be riding them, they don't know the rules and speed recklessly.
363	It would be wonderful and safer to have more grade separations across Irvine Blvd - for instance at the Modjeska intersection. Also, there are no lights or grade separations to cross Bosque to access the northern end of Great Park.

ResponseID	Response
365	Off-street paths are an essential component to a healthy and safe style of living in the city.
366	Sidepaths are dangerous where I5 crosses Sand Canyon, freeway onramps and exits and when free right turns teach motorists to roll right turns across side paths; 2 way Class I shared use paths warrant some extra marking treatment (green?) to alert motorists of potential 2 way bicycle crossing locations.
367	People using ebikes on sidewalks are dangerous to walkers
368	I cycle to work every day. The biggest obstacle for me is the danger getting to and from Marine Way to Walnut Trail. It is very dangerous and time consuming in both directions. The underpass under the railroad on San Diego Creek trail also needs to be addressed. It's closed most of the time for no logical reason. There also needs to be some way to cross the street at Irvine Blvd and Sand Canyon
371	Electric bikes need to off limits to pedestrian walkways!! Adults & kids go as fast as they want and careless to pedestrians! We are seniors and have enjoyed Jeffery trail since 2005. Now it is a very scary "freeway".
373	None of the off street paths connect to shopping centers. And the parking lots are like moats around those destinations, hostile to bikes and pedestrians.
381	The Jeffrey Open Space Trail is amazing and heavily used, it would be even more useful if off street biking should be extended further south along Jeffrey. It will enhance recreational biking and walking and provide safe, non-motorized transportation choices to get to IVC, Jeffrey Trail Middle School, athletics, shopping, etc. Any choices that improve bike access and safety for middle school and high school students and community college students should be high priority. I also favor connecting existing trails, and support improving safe bike access to the Great Park area, and connecting those residential communities to other trails.
383	The new bridges will close the off-street venta spur trail gap.
384	There is not any crossing support on the venta spur trail to cross eastwood, yale and westwood, which put me and my children really dangerous situation
388	It is really hard to use the busy venta Spur trail in northwood, because the trail is separated to small pieces by the crossroads such as eastwood, yale, westwood, etc...

ResponseID	Response
389	It takes really long to get to Jeffery trail from northwood while crossing the Jeffery Rd. It will be a bless for all the people in northwood, if there is a bridge crossing the jeffery rd, reaching the Jefferry trail!
392	Venta spur trail is separated to pieces. It would be great to connect the trail.
394	I use Venta Spur Trail to commute and drop of my kids to Sierra vista middle school. The trail is really busy and useful. It is really sad that the trail is separated to many small pieces.

CITY OF IRVINE

BRIDGE PRIORITIZATION STUDY

Why this Study?

The pedestrian and bicycle networks form the foundation for multi-modal transportation. The Irvine Strategic Active Transportation Plan identified potential locations for pedestrian and bicycle grade separation additions that once complete can eliminate less desirable grade crossing with motor vehicles.

SCAN TO LEARN MORE

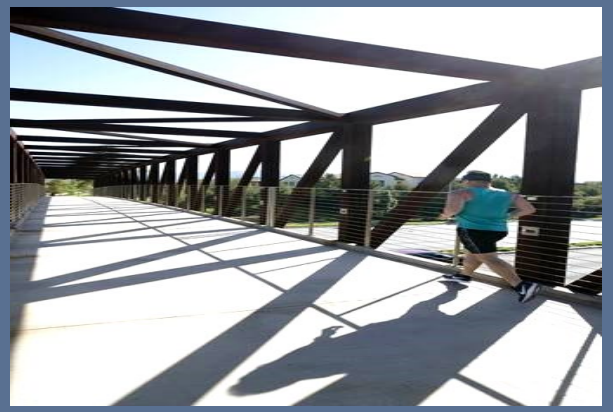
The purpose of the Bridge Prioritization Study is to refine the candidates for grade-separated bicycle and pedestrian crossings and develop a criteria to rank each location. Criteria for ranking will include many factors, such as constructability; cost-effectiveness; and connectivity to transit, community activity, parks, and recreational facilities.

Community engagement and input is an essential part of this study in order to align the ranking criteria with our community's needs and desires.

Stay Involved and Share Your Feedback

Stay up-to-date on the latest developments, project timelines, and upcoming community events at ***cityofirvine.org/transportation/irvine-shares-way***.

For more information, contact Amir Ainechi, Associate Transportation Analyst, at 949-724-7370 or *aainechi@cityofirvine.org*.



Irvine Bridge Prioritization

Public Outreach Meeting
July 27, 2022

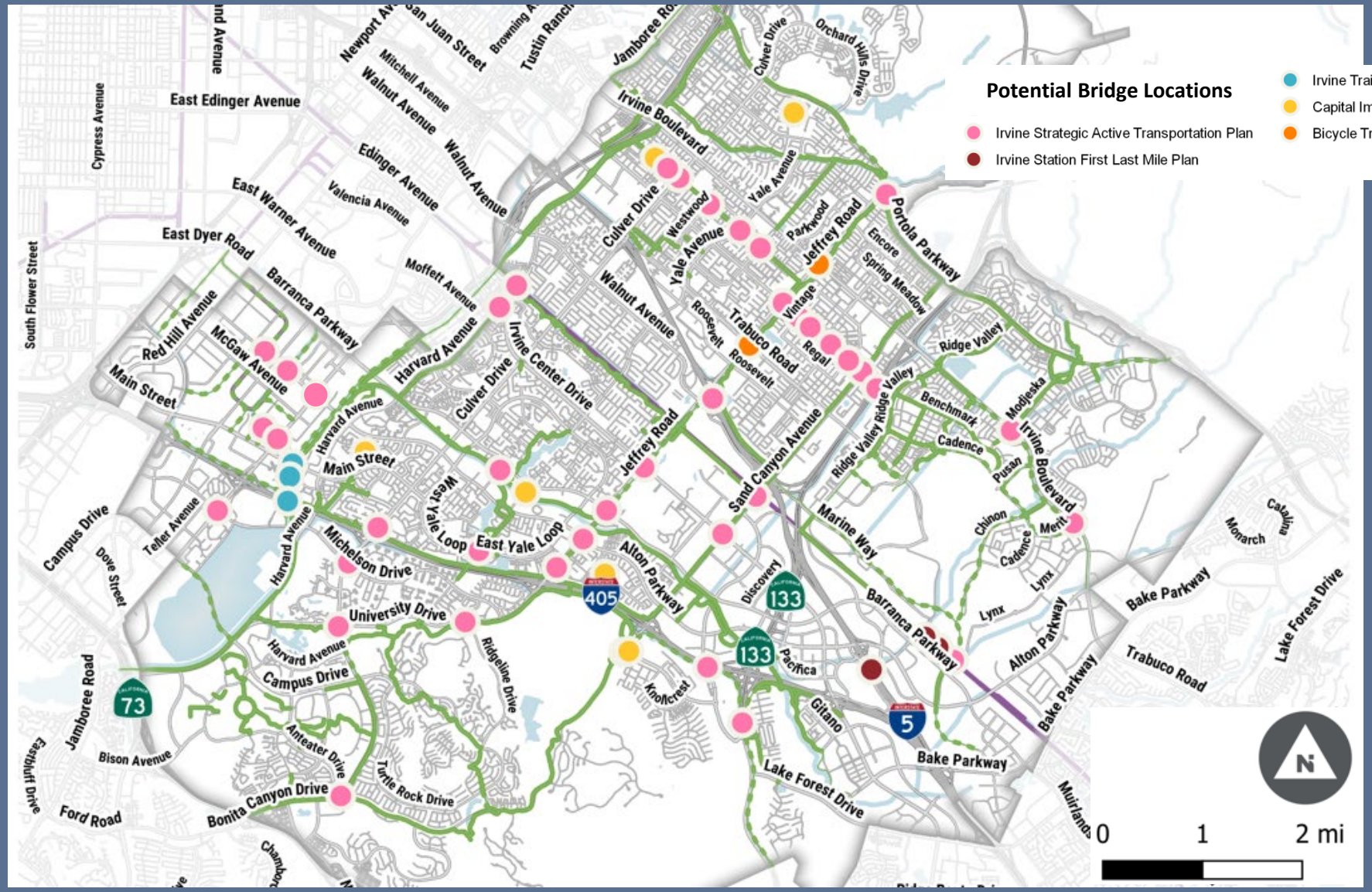
Agenda

1. Project Background & Plan Review
2. Potential Bridge Locations
3. Study Goals
4. Preliminary Ranking Criteria
5. Public Survey
6. Discussion
7. Next Steps & Schedule

Project Background / Plan Review

- Irvine Bicycle Transportation Plan (2011)
- Irvine Strategic Active Transportation Plan (ISATP) (2020)
- Irvine Station First/Last Mile Plan (2021)
- Irvine Business Complex Trail Feasibility Study and Implementation Plan (2021)
- Relevant Capital Improvement Projects

Potential Bridge Locations



Study Goals

Identify Bridge Locations

- ISATP Map
- Other plan review documents

Seek Community's Input

- Preliminary ranking criteria
- Experiences crossing streets when using off-street trails

Finalize Ranking Criteria

- Utilized data from ISATP
- Incorporate Community's input

Rank Potential Bridge Locations

Perform Connectivity "Gap" Review

- Identify any gaps in infrastructure
- Identify improvements

Prepare Cost Estimates

- Planning level cost estimates for top ranked locations

Present Study to Transportation Commission

Preliminary Ranking Criteria

- Current crossing support (i.e. all way stop, signal uncontrolled)
- Closes off-street trail gap
- Level of bicycle and pedestrian use
- Constructability and construction costs
- Environmental considerations
- Potential disruption to nearby neighborhoods/homes

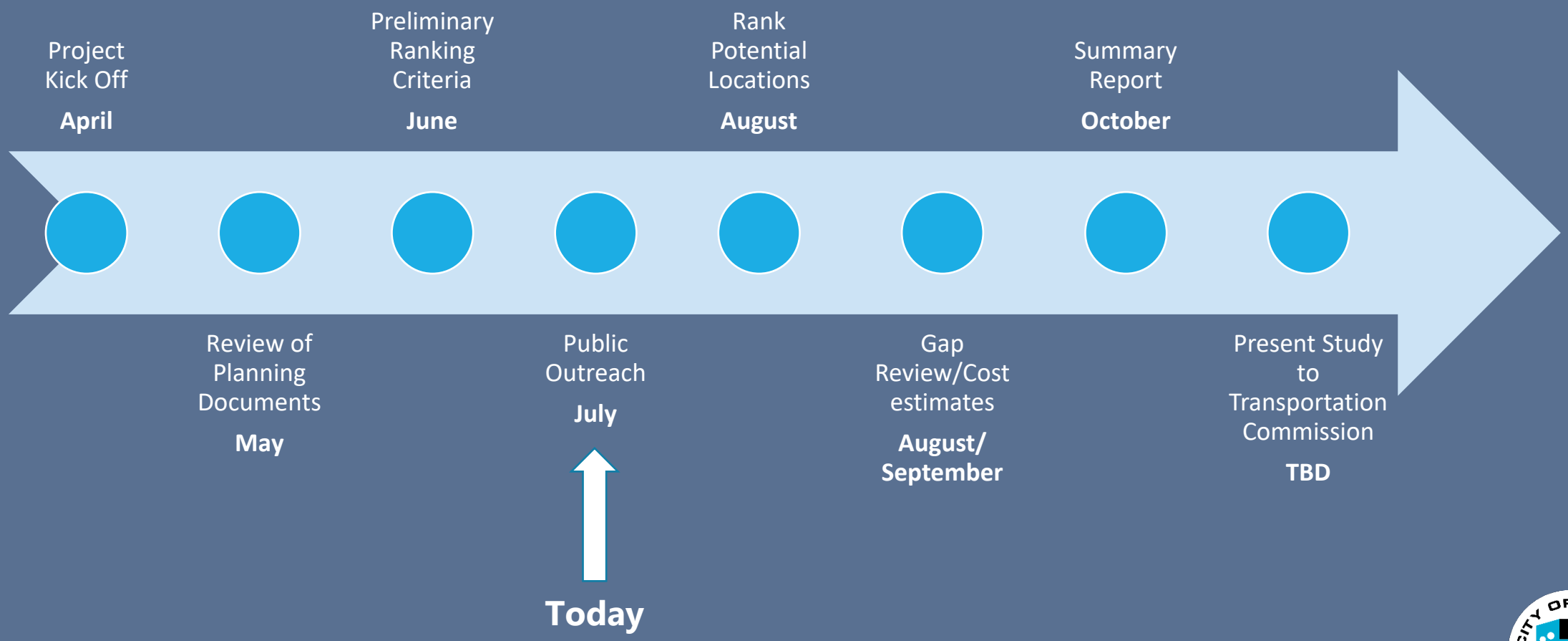
Public Survey

- Relation to the City?
- Typical travel? (i.e. recreation, commuting, school, errands)
- Where would you like to see more connections made between off-street multi-use paths?
- What barriers have you experienced while using the off-street multi-use paths?

Discussion

- Feedback on our study goal and objective?
- Questions on work completed?
- What do you think of the preliminary ranking criteria? Which is most important to you? Which is least important to you?
- Are there any locations where you've experienced a need for a bridge?
- Any locations with long wait times or long distances to cross the street?

Next Steps & Schedule



Irvine Bridge Prioritization Study

Thank you!

City of Irvine,

Amir Ainechi – *aainechi@cityofirvine.org* – (949) 724-7320

Public Outreach I July 27, 2022

dcarsten 06:12 PM

I'd consider myself a pretty competent cyclist, but on-street bike gutters don't feel safe to me! There are many sidewalks that could be bike lane width, but the sidewalk is cut short by landscaping or the bike gutter. What would be possible to retrofit into wider sidewalks?

Justin McPeak 06:12 PM

Are we going to consider the impact to traffic for grade crossing vs pedestrian bridges/underpasses?

Anonymous Attendee 06:15 PM

What is the definition of "off-street multi-use path"? Is a sidewalk an off-street multi-use path?

Lesley Miller 06:21 PM

I frequently ride the Sand Canyon Side Path from the Walnut Trail up to the Freeway Trail to connect to the Jeffrey Open Space Trail. To do this, I have to cross the entrance to and exit from the 5 Freeway. I find these crossings to be very dangerous because drivers are quick to turn right on red without looking for pedestrians or cyclists. I wouldn't expect a bridge to be built there but would like to investigate ways to make that a better signaled and safer crossing.

dcarsten 06:22 PM

Could the city put qr code posters up at potential grade crossings? To increase visibility

Anonymous Attendee 06:22 PM

If the only facility served by a bridge or undercrossing is a sidewalk, not a path or bikeway, would it be ranked lower than others?

Roger Philips 06:24 PM

Crossing I405 on Sand Canyon is very dangerous. Easy fix on sidewalks. Yes, there is a bridge maybe half a mile away, but that’s inconvenient to me.

dcarsten 06:25 PM

Sand Canyon -> UCI via the sand canyon wash trail is a fun ride until you hit Sand Canyon. I agree with the other question about crossing 5. People turn right without looking

Lawrence Chow 06:25 PM

Is there a status update on the Venta Spur bridge in terms of competion. I walk it the trail daily and see progress but would like to know when in winter 22 do you anticipate completion?

dcarsten 06:25 PM

I'm looking forward to the Jeffrey bridge over 5 being built

Anonymous Attendee 06:25 PM

Are you weighting locations where we have had a number of auto accidents involving pedestrians or cyclists?

Lesley Miller 06:26 PM

Regarding the ridability of Irvine's on street bike trails, I often doubt that the bicycle reachable cross walk signal buttons are working. The buttons available for pedestrians up on the corner light up and beep, while the buttons for cyclists seem "dead". I would feel more comfortable riding on the street if I felt that I was able to cross on a signal.

Lawrence Chow 06:27 PM

Can you explain “grade separation location” and what it entails (in regards to Sand Canyon/Venta Spur/Woodbury East) - i feel that intersection could benefit from a bridge due to lots of kids riding to school and cars going to work

dcarsten 06:32 PM

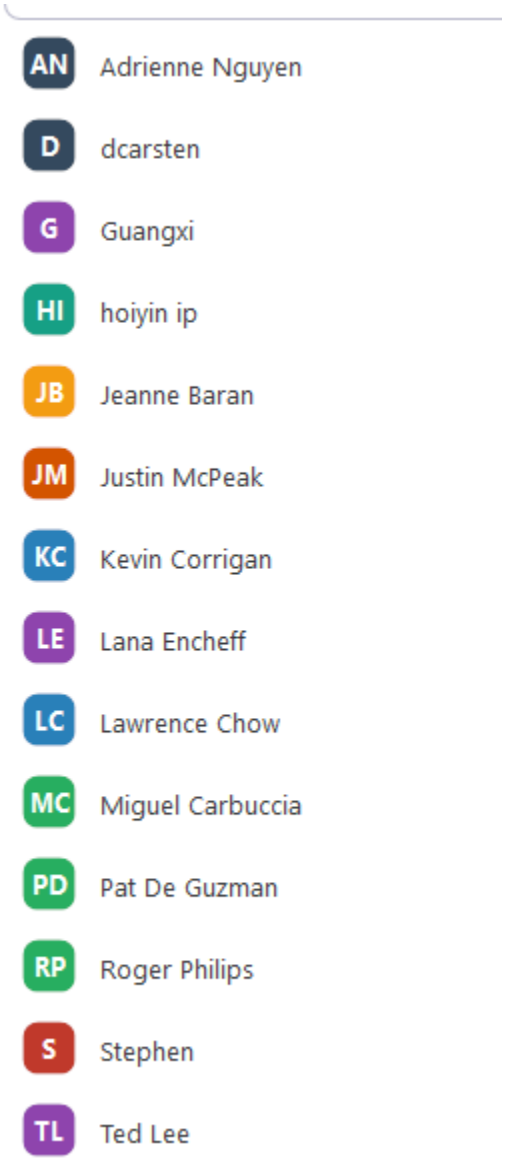
A lot of these crossings are the same distance for a bridge to cross. Has there been any research into prefab bridge designs? A lot of locations will need bridge crossings for pedestrian safety

Anonymous Attendee 06:41 PM

As a response to that person, it is because democratic politics—and local democratic politics in particular—move and happen only because 1% of people are actually engaged, especially in a place like Irvine. People do have different priorities here.

hoiyin ip 06:41 PM

thanks


AN Adrienne Nguyen
D dcarsten
G Guangxi
HI hoiyin ip
JB Jeanne Baran
JM Justin McPeak
KC Kevin Corrigan
LE Lana Encheff
LC Lawrence Chow
MC Miguel Carbuccia
PD Pat De Guzman
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