



05

CONCEPTUAL PLANNING

This chapter describes the conceptual planning process used to develop and refine the Community Connectors network. Building upon the goal, objectives, and Network Development Framework established in Chapter 4, the eight framework principles guided the identification of initial Connector alignments. The network was subsequently refined through technical analysis, coordination with local agencies and Tribal governments, feasibility assessments, and evaluation of alternative alignments.

This iterative process created a connected regional network that extends the reach of CV Link while also improving active transportation connections between communities and destinations throughout the Coachella Valley. The resulting Community Connectors network consists of almost 250 miles of bikeway and is organized into 44 projects. The network is presented at the conclusion of this chapter.

APPLYING THE NETWORK DEVELOPMENT FRAMEWORK

Early iterations of the Community Connectors network followed framework introduced in Chapter 4 which identified eight network planning principles that help accomplish CVAG's goal of “...**extending local connections to the CV Link and helping fulfill a vision of a more active, livable, equitable and sustainable Coachella Valley.**” Each principle influenced the location, alignment, and characteristics of the network, with multiple principles often working together to shape individual Connector recommendations.



A bicyclist and vehicle crossing the intersection at El Cielo Road and Mesquite Avenue in Palm Springs

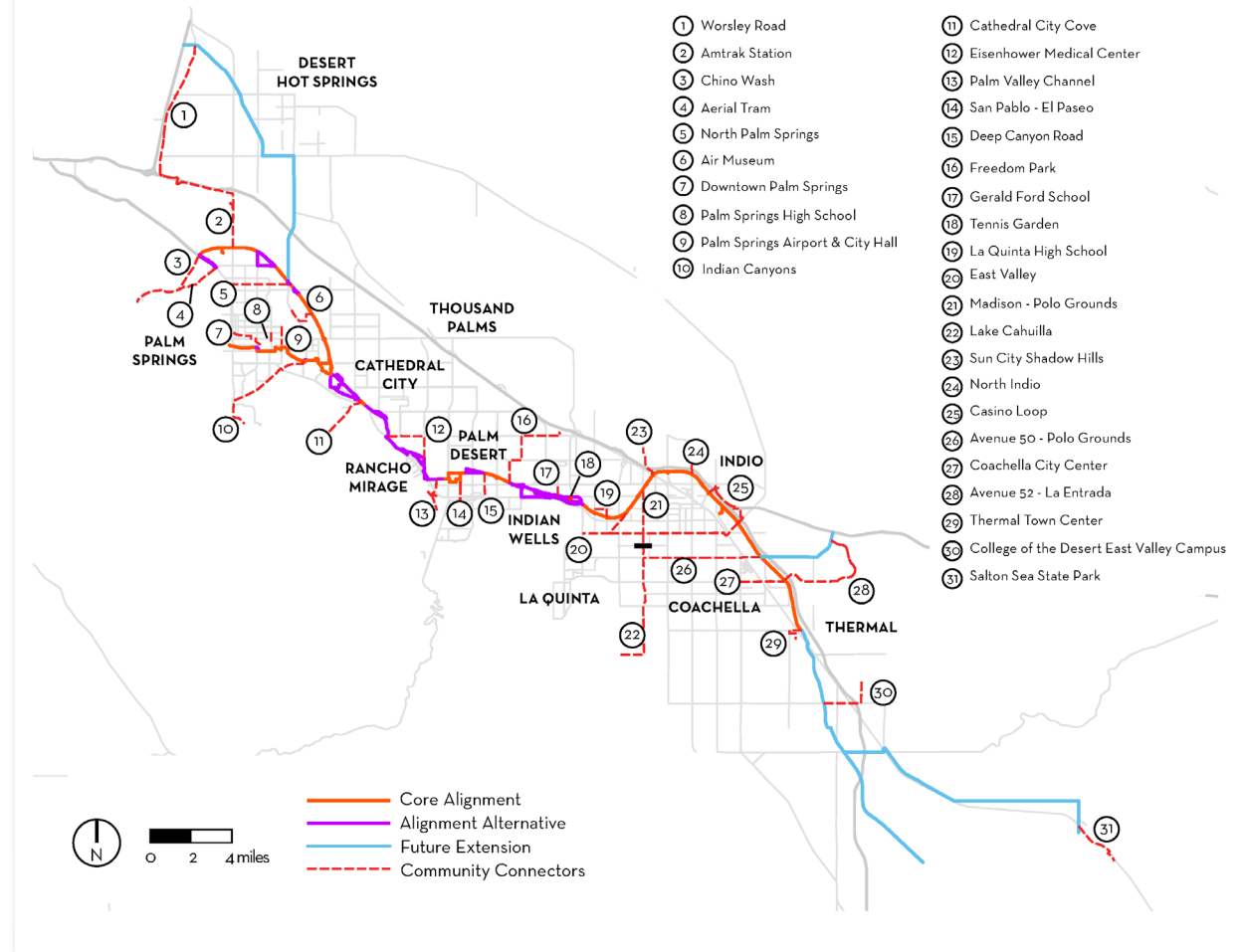


Building on Past Planning Efforts

Development of the Community Connectors network began with previous regional and local planning efforts. The concept of Community Connectors originated with the 2016 CV Link Conceptual Master Plan, which identified connections extending outward from CV Link toward community destinations. Many of the alignments and the points of interest they serve identified through that earlier planning effort were incorporated into this Plan, either directly or with refinements.

The network developed through this Plan expands considerably upon the original concept. The connections identified in the 2016 Conceptual Master Plan primarily functioned as tributaries or feeders extending a relatively short distance from CV Link. While maintaining this important function, the network developed through this Plan is intended to be more robust and provide connectivity for a myriad of travel activities and trip purposes independent of, but nonetheless facilitating access to, CV Link. As a result, the Community Connectors form a denser, more interconnected network that extends farther into surrounding communities and provides more grid-like regional coverage.

Figure 33: Connectivity and Circulation Map



Community Connectors from the CV Link Conceptual Master Plan (2016)

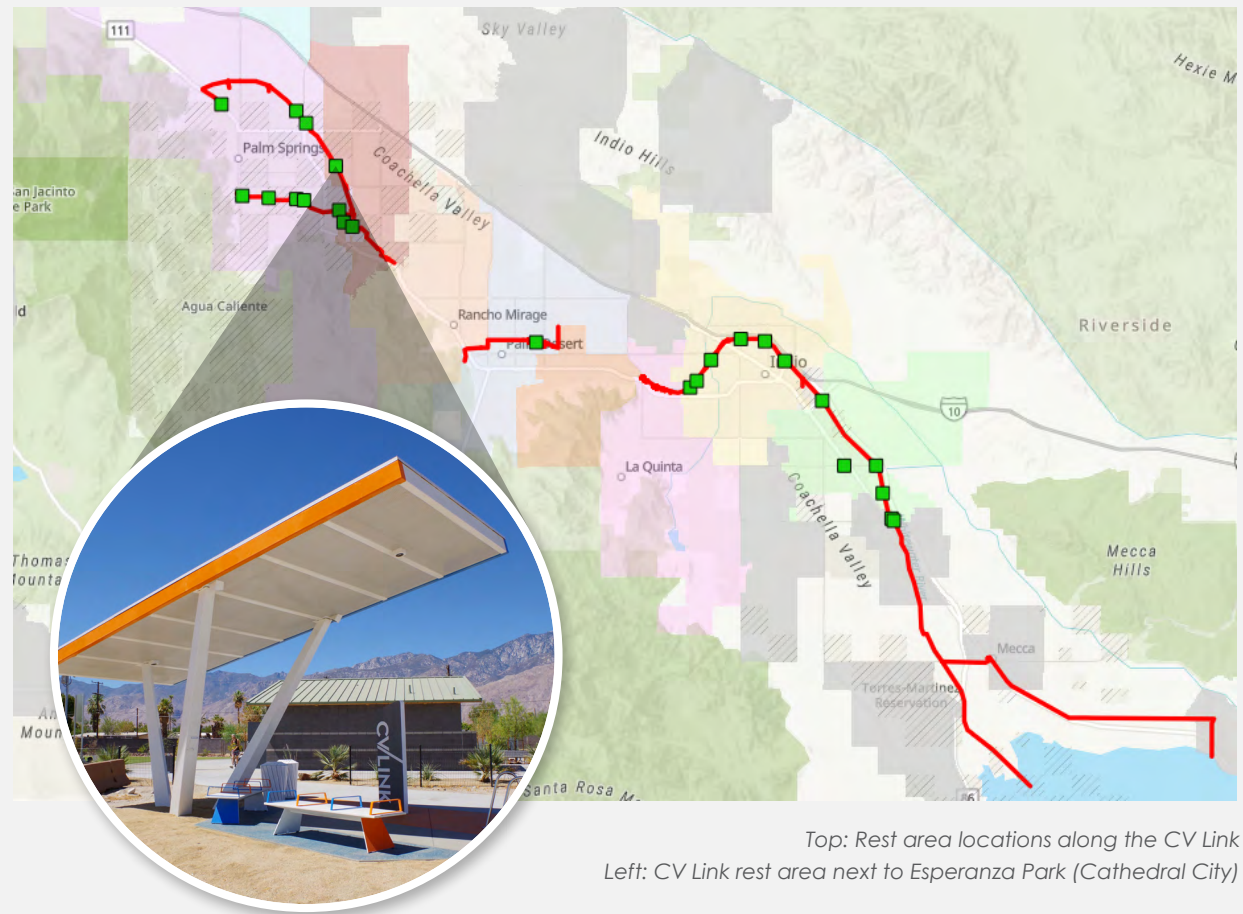
CV Link access points and rest areas also influenced network development. More than 20 rest areas are located near CV Link access points and are envisioned by CVAG as potential “activation” spaces along the corridor. Designed to attract and serve users, these rest areas feature inviting architecture and amenities such as shade structures, benches, hydration stations, network maps, etc. Many are also located next to public parks, increasing their visibility and accessibility to surrounding communities.

Existing plans and projects provided another important foundation for network development. Projects previously identified by local agencies, ranging from early planning concepts to projects in more advanced stages, were incorporated into or complemented by the Community Connectors network. A few examples include:

- ▶ Class I bike path parallel to Grapefruit Boulevard in Coachella
- ▶ Class IV separated bikeway on Ramon Road bridge over Whitewater River in Cathedral City
- ▶ Class I bike path parallel to Avenue 50 in Indio
- ▶ Class I bike paths parallel to Pierce Street, 66th Avenue, and Harrison Street in Oasis

The Community Connectors network also recognizes CVAG's Arts & Music Line, under construction in Indio, Coachella, and La Quinta, by linking the Connectors to it and designing the network around it – in essence integrating it into the broader Community Connectors network.

Recommended facility classifications generally reflect adopted and planned local bicycle networks. Where opportunities existed to provide greater separation from motor vehicle traffic or improve user comfort, alternative classifications, particularly Class I bike paths and Class IV separated bikeways, were considered in coordination with the responsible agencies. This approach allowed the Community Connectors to build upon existing plans while considering opportunities to strengthen the regional network.



Top: Rest area locations along the CV Link
Left: CV Link rest area next to Esperanza Park (Cathedral City)



Network Connectivity

Network connectivity influenced both the overall structure of the Community Connectors network and the selection of individual alignments. Rather than functioning solely as individual routes to CV Link, the Connectors were developed as a cohesive regional network intended to close significant gaps, provide reasonably direct connections between communities and destinations, and create a more interconnected and grid-like active transportation system.

Major physical and infrastructure barriers presented some of the greatest challenges to achieving this connectivity. The Whitewater River and Interstate 10 divide communities and concentrate travel across all modes at a limited number of crossings, creating choke points in the transportation network. These crossings often serve multiple transportation functions, carry high traffic volumes, and provide stressful conditions for bicyclists. In addition, bridges and freeway crossings also present significant physical constraints, as opportunities to retrofit or widen can be limited and costly.



Golf Center Parkway, crossing Interstate 10 and Whitewater River (CV Link in foreground)

One prime example is the section of the Whitewater River which separates Palm Springs and Cathedral City. Along this almost four-mile stretch, there are only three streets crossing the river: Vista Chino, Ramon Road, and Dinah Shore Drive. Each crossing carries substantial vehicular traffic and presents difficulties finding space for bicyclists. The Cathedral City planned improvement to the Ramon Road bridge, which includes a separated bicycle facility, provides an important opportunity to strengthen both access to CV Link and east-west active transportation connectivity across the river.

Similar challenges occur in Indio, where the Whitewater River and Interstate 10 run in close proximity to one another. Monroe Street, Jackson Street, Avenue 44, and Golf Center Parkway provide critical connections across both barriers. All but Avenue 44 have freeway interchanges, adding traffic and operational complexity. Long-range plans to widen Jackson Street and Monroe Street include opportunities to accommodate forecasted traffic volumes and Class IV separated bikeways, while the Avenue 44 crossing was widened in 2026. These existing and planned conditions were considered in identifying Community Connector routes across the two barriers.

In total, the Community Connectors network includes 20 crossings of the Whitewater River, representing nearly all public street crossings between Palm Springs and Coachella. It also includes recommendations at nine of the 14 Interstate 10 crossings between Palm Springs and Coachella. These crossings are essential to creating a network that functions not only within, but across individual communities.



Geographic Equity

Geographic equity was an important consideration in developing a regional network that serves all communities throughout the Coachella Valley. In the context of the Community Connectors Plan, this meant providing network coverage across all jurisdictions and Tribal nations while also considering communities that face greater transportation and access challenges because of their geographic location.

Desert Hot Springs, for example, is geographically separated from CV Link, while Thousand Palms, Desert Palms, and northern Indio are located north of Interstate 10 with comparatively limited transportation connections across the freeway. Community Connector alignments extend toward and through these areas to strengthen connections to CV Link and surrounding communities and help overcome barriers posed by their location.



Little Morongo Road, Desert Hot Springs

The network also provides connections within or adjacent to most census-designated unincorporated communities throughout the Coachella Valley. This includes communities in the eastern Coachella Valley, such as Thermal, Oasis, and Mecca, extending the reach of the network beyond the Valley's incorporated cities.

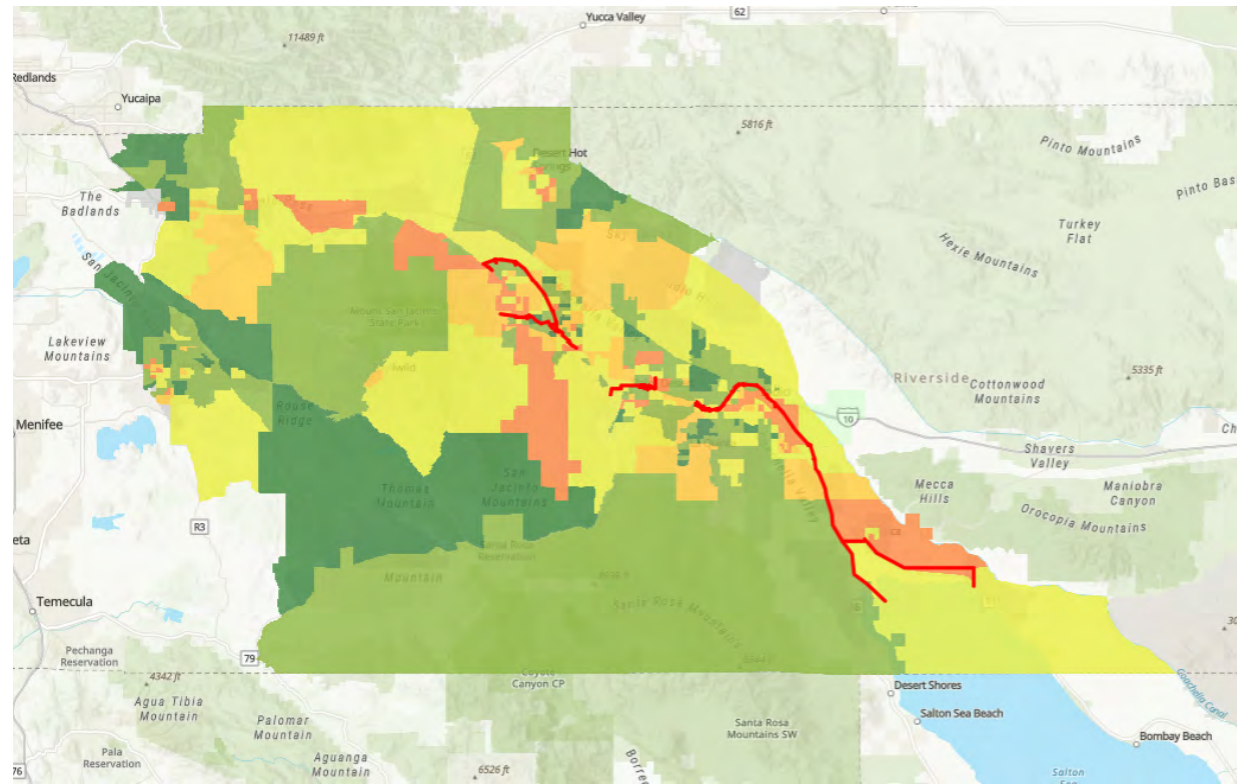
It is also important to recognize that development of the Community Connectors Plan occurred concurrently with two other CVAG-led efforts: the CV Link Extension to Mecca and North Shore and the CV Link to Desert Hot Springs alternatives analysis. Together, these complementary efforts are intended to expand the reach of the regional active transportation network and improve access for communities throughout the Coachella Valley, providing more opportunities for residents to reach daily needs and regional destinations without relying on a car.



Social Equity

Equity-need areas identified through the Equity Index described in Chapter 2 were considered in relation to potential Community Connector alignments. This helped identify opportunities to extend active transportation connections into communities experiencing greater environmental, socioeconomic, health, or transportation disadvantages. Especially dense network coverage was provided in Palm Springs, Indio and Coachella, where the measure identified sizable parts of those cities as disadvantaged.

Planned and targeted affordable housing and infill opportunity sites were also considered during alignment development. Where feasible, Community Connector alignments were positioned to improve connections between these sites, CV Link, employment, community resources, and other everyday destinations.



Equity Index rankings in Coachella Valley - red shades indicate greater equity need

Considering these factors as part of network development helps direct active transportation improvements toward communities where enhanced access can support broader mobility, housing, equity, and sustainability objectives. These considerations also support the Plan's connection to the REAP 2.0 program objectives related to infill development, housing opportunity, fair housing, and reduced vehicle travel.



Supporting Everyday Active Transportation

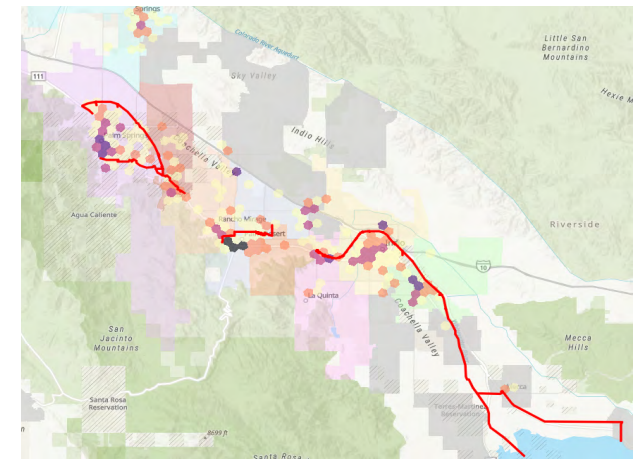
The Community Connectors were developed to serve a broader range of trips beyond access to CV Link alone. A key consideration in developing the network was whether individual corridors could support useful active transportation trips by connecting neighborhoods and communities with destinations associated with everyday needs.

The Community Resources Index developed through the existing conditions analysis helped to identify areas with high potential for active transportation activity. The index reflects concentrations of schools, parks, civic facilities, grocery stores, restaurants, and health services and was used to inform where Community Connector alignments should pass through or provide access. Areas that scored particularly high included downtown Palm Springs, downtown Coachella, central Indio, northern La Quinta and Palm Desert's El Paseo area. Community Connectors were developed to serve these areas in part because concentrations of everyday destinations increase the potential for walking and bicycling to serve practical transportation needs.



El Paseo in Palm Desert has a high concentration of non-work trip attracting destinations

This broader function distinguishes the Community Connectors from a network composed solely of feeder routes to CV Link and directly supports the Plan's goal of creating a regional active transportation network that improves access to destinations and expands opportunities to travel without a car. By connecting neighborhoods and communities with destinations associated with daily life, the network creates opportunities for shorter vehicle trips to be substituted by walking, bicycling, or other active transportation modes. This potential to reduce VMT also advances the objectives of the REAP 2.0 program, while connections to CV Link and other regional facilities extend the utility of the network for longer-distance travel.



Community Resources Index - a higher density of community destinations is indicated by the darker hexagons



Serving Demand

Population, employment, inter- and intra- city trip patterns, and regional points of interest were all considered reflections of trip demand potential in the region and influenced network development. These factors helped identify areas with concentrations of potential users and destinations and informed both the distribution of the network and the selection of individual Connector alignments.

Indio, Coachella Valley's most populous city, demonstrates very strong travel demand between its two neighboring cities, Coachella and La Quinta. Palm Desert, Palm Springs, and Indio have the highest employment densities in the region. Palm Springs also has many significant attractions drawing visitors from throughout the region. These cities therefore are recommended to have the densest coverage in the Community Connectors network due to the trip demand that either begins or ends in those cities.

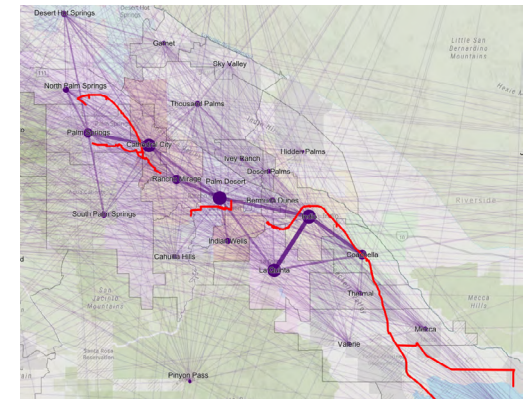
Points of interest identified in coordination with local agencies also influenced individual alignments. Major destinations served by the network include downtown Palm Springs, College of the Desert, Indian Wells Tennis Gardens, El Paseo, and Old Town La Quinta, among many others. These locations represent significant activity centers and helped anchor Community Connector routes within the more urbanized portions of the Valley.

Destinations on the urban periphery of Coachella Valley also helped define the extent of the network. These include downtown Desert Hot Springs, Living Desert Zoo & Gardens, Lake Cahulla Park, Empire Polo Grounds, and Cove Oasis trail access, among others. Extending Community Connectors toward these destinations increases the reach of the network and provides connections to recreational, employment, commercial, civic, and other regional activity centers.

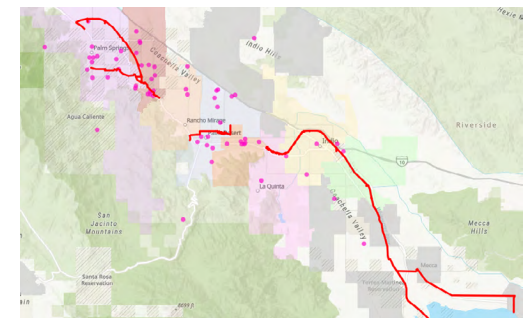
Together, population, employment, travel patterns, and destination data provided a demand-based perspective that complemented the consideration of community resources, geographic coverage, and equity in developing the network.



Avenida Bermudas with Old Town La Quinta in foreground (a point of interest closer to CV Link) and Cove Oasis trail area in the distance (a point of interest on the periphery)



Commute trip flows within Coachella Valley



Points of interest identified across Coachella Valley



Providing Safety and Comfort

Safety and comfort influenced both the selection of Community Connector alignments and the bikeway classifications recommended along individual corridors. Community Connectors intended to provide low-stress bicycling conditions suitable for users of a broad range of ages and abilities, generally corresponding to Bicycle LTS 1 or 2. Where feasible, facilities capable of achieving LTS 1 were preferred.

Class I bike paths and Class IV separated bikeways typically provide greater separation from motor vehicle traffic and greater comfort for a broad range of users. Class II bike lanes may also provide low-stress conditions on lower-speed (30 mph or less) two-lane streets; however, most regional throughfares in Coachella Valley have four or more travel lanes and higher posted speed limits. On these roadways, greater separation from motor vehicles is generally necessary to provide a comfortable bicycling environment.



High-visibility pedestrian crossing and bike lane at the Palm Springs Convention Center

Collision history and pedestrian conditions also informed consideration of alignments and facility types. Where roadway conditions or collision patterns indicated greater exposure to motor vehicle traffic, opportunities for facilities providing additional separation were considered.

Safety and comfort were balanced with the need to maintain network connectivity and identify feasible improvements. In some locations, the most direct alignment could not readily accommodate a high-comfort facility, while a less direct alternative offered greater opportunity for separation from motor vehicle traffic. Conversely, avoiding a constrained corridor could result in a substantial network gap or require a circuitous route. These tradeoffs informed refinement of the network and, where necessary, evaluation of alternative alignments.



Feasibility

Feasibility became an increasingly important consideration as initial network alignments were refined into recommended Community Connector projects. Following identification of potential alignments, facility types that could reasonably be accommodated along each corridor were evaluated. Local planned bicycle networks were referenced and provided an important starting point, while alternative alignments and facility types were considered where opportunities existed to improve connectivity, safety, and user comfort.

Initial planning-level assessments considered available right-of-way and curb-to-curb roadway width, together with potential modifications that could be necessary to accommodate recommended facilities. Possible modifications included travel lane narrowing or removal, full or partial parking removal, median or center left-turn lane narrowing or removal, and roadway or sidewalk widening.



Downtown Palm Springs

Concepts which appeared feasible based on these initial assessments were further evaluated to identify potential engineering and implementation constraints. Where constraints were identified, potential solutions for these challenges were evaluated and if none were satisfactory, changes were made either to the alignment or classification, based on the network opportunities in the surrounding area. Some alignments or classifications were altered based on further feasibility assessments and meetings with local agencies. For instance, several alignments were modified in Indio after meetings with City engineering staff and consideration of additional information the City provided.

Roadway widening was generally not preferred for implementing on-street bikeway unless widening was already anticipated as a part of a jurisdiction's planned mobility network. Exceptions were considered at critical network choke points, such as bridges, where alternative crossings are limited and repurposing existing roadway space can be particularly challenging. Sidewalk widening was often considered as an option in locations where opportunities existed to implement Class I bike paths.

AGENCY AND TRIBAL COLLABORATION

Coordination with local agencies and Tribal governments occurred throughout development and refinement of the Community Connectors network. This coordination provided local knowledge needed to apply the Network Development Framework to individual corridors and helped identify planned improvements, community priorities, physical constraints, and implementation considerations that were not always evident from regional datasets alone. Multiple rounds of coordination included transportation planning and engineering representatives from cities, Riverside County, and Tribal governments.

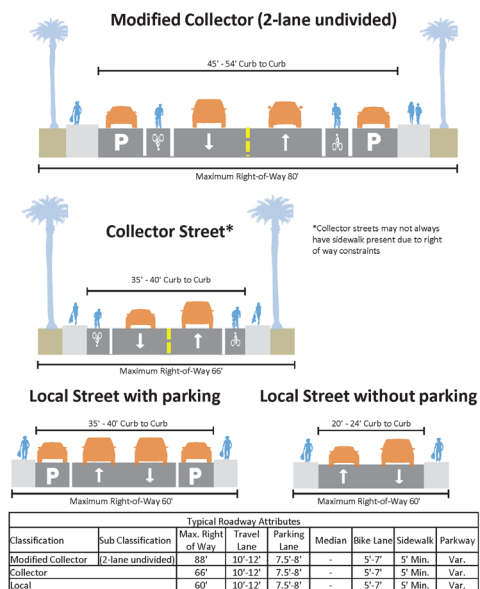
Initial Network Coordination

The initial round of meetings consisted of one-on-one sessions with each jurisdiction and Tribal nation. Discussions focused on the agency's current infrastructure standards and practices, planned improvements, potential Connector alignments, and preferences for facility types. Agencies were also asked about the feasibility of potential improvements, including their willingness to consider certain facility designs and interventions, as well as corridor-specific changes (from the general plans) being considered in response to recent changes in state law. Tribal representatives provided input on potential pathways that could serve as Community Connectors and identified areas where access or other considerations could affect potential alignments.

These discussions provided important local context regarding travel patterns, ongoing agency initiatives and practices, desires for future infrastructure development, safety concerns, design standards, and potential implementation constraints. This information helped refine Community Connector alignments and recommended bikeway classifications to reflect local conditions, preferences, and feasibility.

Early iterations of the Community Connectors network were also shared with each agency for review, including proposed street alignments, bikeway classifications, and modifications assumed to be necessary to accommodate each facility, such as lane restriping, travel lane or parking removal, road widening, etc. Agency feedback on these topics informed further refinement of the network.

Figure 4-2: Roadway Cross Sections



Selection of preferred travel lane widths from Palm Springs General Plan Circulation Element

Early Action Connector Project Coordination

A subsequent round of coordination took place after identification of the Early Action Connector projects. Individual meetings were held to focus on each Early Action Connector project and included representatives from the jurisdictions through which the project would pass.

The discussions provided an opportunity to review and build consensus on the recommended alignments and classifications in greater detail, as well as identify implementation considerations within each Connector project. Some feasibility challenges that were grappled with in this process included utilities, bridges and freeway interchanges, blow sand and flooding issues, maintenance responsibilities within sidewalk and parkway areas, transitions between facility types, and potential effects on vehicular operations along significant regional transportation arteries.

Recommended improvements were reviewed along the length of each corridor, with particular attention to locations presenting physical or operational constraints. Potential solutions to many of the issues identified were considered during this round of agency coordination. Where fatal flaws indicated that a feasible design solution was not available, changes to the Connector alignment or facility classification were recommended.



ASSESSMENT OF ALTERNATIVES

Application of the Network Development Framework did not always yield a clearly preferred alignment. In some locations, multiple routes could provide a needed network connection but presented different advantages, constraints, and implementation considerations. These locations required a more focused comparison of alternatives and the tradeoffs among the framework principles.

A common tradeoff involved network directness and facility feasibility. A direct alignment might provide stronger connectivity to destinations but have constrained right-of-way, high traffic volumes, difficult intersections, or other conditions that made a comfortable bicycle facility more challenging to implement. An alternative route might be comparatively less direct but provide substantially better opportunities for a low-stress facility with fewer implementation constraints. In other locations, two alternatives provided similar benefits and feasibility but would have been redundant if both were included in the regional network.

Alternative alignments were assessed at 11 locations. Evaluation criteria representing the eight Network Development Framework principles provided a consistent basis for comparing the alternatives and understanding the tradeoffs among connectivity, geographic and social equity, active transportation utility, demand, safety and comfort, feasibility, and consistency with previous planning efforts. The results informed selection and refinement of the recommended Community Connector alignments. The alternatives assessment conducted for the 11 identified locations is documented in **Appendix C**.

Market Street in Indio



RECOMMENDED COMMUNITY CONNECTOR NETWORK

Figure 5.1 displays the approximately 250-mile Community Connectors network organized into 44 projects. As shown, the network extends throughout the Coachella Valley, serving all nine cities and the unincorporated communities within Riverside County and providing numerous direct connections to CV Link. The network also connects communities and destinations beyond the immediate reach of CV Link, allowing the Community Connectors to function as a broader regional active transportation system.

The 44 projects provide a practical structure for advancing the network toward implementation. Each project consists of related corridor segments that can be further developed through subsequent planning, engineering, environmental review, funding, and implementation activities. **Appendix D** identifies the segments, project extents, and proposed bikeway classifications associated with each Community Connector project.

Figure 5.2 shows the Community Connector network by bikeway classification. The network includes Class I bike paths, buffered and unbuffered Class II bike lanes, Class III bike routes, and one-way and two-way Class IV separated bikeways, as well as locations where recommended facilities differ by direction of travel. **Table 5.1** summarizes the mileage associated with recommended Community Connector network by bikeway classification and identifies mileage where the recommended facility is already constructed to the proposed classification.

Table 5.1 Recommended Community Connector Network by Miles of Classification

Bikeway Classification	Planned Mileage	Mileage Built to Classification
Class I - Bike Path	54.2	4.9
Class II - Bike Lanes (buffered)	95.4	41.3
Class II - Bike Lanes (not buffered)	31.5	14.6
Class III - Bike Route	22.9	8.8
Class IV - Separated Bikeway (one-way)	36.5	2.9
Class IV - Separated Bikeway (two-way)	0.6	-
Class I / Class II buffered (directional facility)	0.5	-
Class II / Class III (directional facility)	0.3	0.3
Class II buffered/ Class IV (directional facility)	2.1	-
TOTAL MILEAGE	244.0	72.8

Together, the recommended projects establish a long-term framework for expanding active transportation connectivity throughout the Coachella Valley. The network builds upon CV Link and existing and planned local facilities; closes important regional gaps; provides broad geographic coverage; improves connections to communities, housing, employment, and everyday destinations; responds to areas of potential demand; and creates opportunities for safer and more comfortable active transportation trips.

The next chapter introduces assessment criteria and scoring used to identify 15 Early Action Projects among the 44 total Community Connector projects.

Project ID	Project Name
1	North Palm Canyon Dr
2	Indian Canyon Dr
3	Avda Caballeros / Sunrise Way
4	Palm Dr / Pierson Bl
5	Gene Autry Trl
6	Date Palm Dr
7	Tahquitz Canyon Way / El Cielo Rd
8	Ramon Rd / Landau Bl
9	Avenue 50 / Cesar Chavez St / Van Buren St
10	Avenue 54
11	Airport Bl / Polk St
12	Avenue 44
13	Jackson St / Avenue 42
14	Ave 50 / Monroe St
15	Highway 111
16	Hovley Ln
17	Washington St / Avenue 52
18	Jefferson St
19	Cook St
20	Jefferson St / Avenue 40
21	Da Vall Dr
22	Portola Ave (north of Magnesia Falls Dr)
23	Cathedral Canyon Dr
24	Frank Sinatra Dr
25	Miles Ave / Requa Ave
26	Fred Waring Dr
27	Ramon Rd / Bob Hope Dr
28	Dinah Shore Dr
29	Dune Palms Rd
30	Portola Ave / Shadow Mountain Dr
31	Murray Canyon Dr
32	Pines to Palms Hwy
33	Country Club Dr (west of Oasis Club Dr)
34	Gerald Ford Dr
35	Vista Chino
36	Monterey Ave
37	Washington St / Country Club Dr / Warner Trl
38	Little Morongo Rd / Indian Canyon Dr / 20th Ave
39	Golf Center Pkwy
40	66th Ave / Harrison St / Pierce St
41	Avenue 52
42	Grapefruit Bl
43	Golf Club Dr
44	South Palm Canyon Dr

Figure 5.1 Community Connector Network by Project ID and Project Name

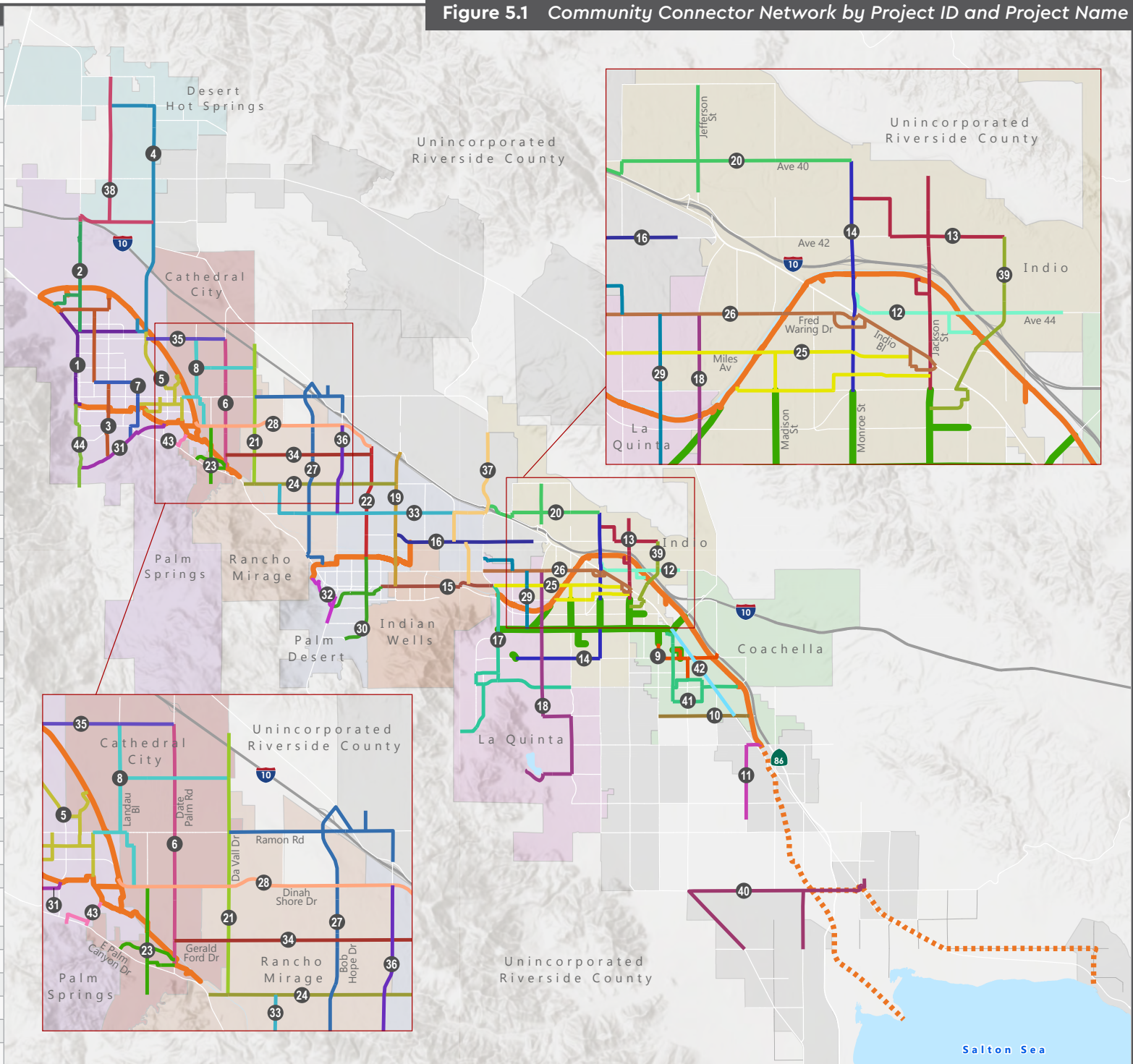


Figure 5.2 Community Connector Network by Bikeway Classification

