Memorandum

Date: April 29, 2014

To: Professor Nancy Jimeno, UC Riverside

From: Paul Martin, PE, TE, Alta Planning + Design

Re: Riverside Neighborhood Walkability Recommendations

1 Background

The City of Riverside has been working to improve walkability for many years. In 2004, the City convened a Walkable Communities Task Force with broad representation from multiple stakeholders to evaluate Riverside’s walkable infrastructure, catalog its assets, examine needs and opportunities and develop recommendations to improve walking for residents. The study was funded by Kaiser Permanente and supported by the County Department of Health and the Mayor’s office. The “Walkable Communities Task Force Report” includes walkability planning principles and recommendations for physical improvements that support the process and recommendations that are discussed in this memorandum. The concepts laid out in the Task Force Report are also echoed in other planning documents prepared by the City of Riverside over the years, including the General Plan 2025 and the Magnolia Avenue Corridor Specific Plan. The two neighborhoods reviewed within this memorandum are located partially within the boundaries of the Magnolia Avenue Specific Plan. The Specific Plan was adopted in November 2009 and recognizes the historic value of Magnolia Avenue, an important and great street within the City of Riverside.

This memorandum is part of a project that is being conducted by the Center for Sustainable Development at the University of California at Riverside to improve the health, sustainability and quality of life of residents in the Arlington and Ramona neighborhoods in the City. The project is being funded through a Caltrans Community-Based Transportation planning grant. UC Riverside contracted with the nonprofit Local Government Commission and Alta Planning + Design to conduct walk audits and walkability clinics to address issues in the two neighborhoods. This memorandum reports on the walk audits and provides specific recommendations to make the Arlington and Ramona neighborhoods more walkable.

2 Introduction

The Arlington and Ramona neighborhoods that are part of this study have many positive attributes that support walkability. These attributes include:

• Well-connected network of streets with relatively short blocks
• Traditional pattern of development in some sections of the two neighborhoods, with a mix of uses and nearby walkable destinations including schools, parks, Arlington Library, local regional and retail uses
• Street rights-of-way that provide room, in some cases, for adding bicycle lanes
• Great streets, like Magnolia Avenue, with mature tree canopies, medians, and, in some sections, wide sidewalks accommodating both pedestrian and bicycle needs
• Residential streets with good tree canopies

However, there is always room for improvement. The recommendations that follow are based on two sets of walk audits with community members and staff from the City and other local and regional agencies, conducted in and around Ramona High School on February 24, 2014. Each walk audit was preceded by a 30-minute presentation on “Creating Walkable, Healthy Communities” (copy attached) given by Paul Zykovsky, Associate Director, Local Government Commission. Following the walk audit, participants worked in small groups to write and draw on aerial photographs of the area. Many of the recommendations that follow are based on comments provided during the workshop.

2.1 Arlington Neighborhood
The Arlington Neighborhood is generally bound by Hughes Alley, Hole Avenue, Tyler Street, California Avenue, Van Buren Boulevard, Colorado Avenue, Jackson Street, and State Route 91 (SR-91).

2.2 Ramona Neighborhood
The Ramona Neighborhood is generally bound by Jackson Street, Colorado Avenue, Van Buren Boulevard, Arlington Avenue, Madison Street, and SR-91.

2.3 Walk Audits
Walk audits were conducted on the morning and evening of February 24 along two distinct routes in the City of Riverside near Don Jones Park and adjacent to Ramona High School. Audit participants were split into two groups and walked each route during the morning audit. The afternoon audit included one overall group that walked only one of the walk audit routes. Participants were then asked to write directly on large scale aerial images and provide input about challenges and opportunities for improving conditions for walking in the two study neighborhoods.

2.4 Complete Streets Philosophy
Complete Streets are streets that accommodate motorists, pedestrians, bicyclists and public transportation users. They are streets that are safe, comfortable, and convenient for travel for everyone, regardless of age or ability. The Complete Streets philosophy plans, designs, and operates roadways to reflect a unified, comprehensive design that balances a wide variety of functions, including stormwater management, safe and convenient transportation choices, inviting public spaces, accommodations for pedestrian, bicycle, transit and vehicular movement consistent with the land use context, parking and loading requirements, as well as maintenance and emergency access.

Many factors influence pedestrian safety and quality at intersections and along pedestrian right-of-ways. Street width, intersection geometry, signal timing and the frequency of crossings all play important roles in achieving a pedestrian-friendly environment. Pedestrian facilities should be designed to promote safety
and comfort, encouraging people to walk by creating an inviting pedestrian realm. Providing design treatments to minimize pedestrian crossing distances and maximize pedestrian visibility while slowing vehicle speeds will result in an increase in driver reaction time and a decrease in the severity of accidents. Similar design characteristics affect the accommodation of bicyclists along a roadway, with clear delineation of space and careful design at conflict points affecting the level of stress experienced by cyclists traveling along a corridor.

A great street can reflect the land use context while incorporating a vision for the use of the street which takes into account the needs of all users.

3 Walkability Recommendations

The right proportion of unique spaces and appropriate amenities can make a street a comfortable and memorable place where people want to spend their time. This section provides example pedestrian and bicyclist treatments for consideration within the two study neighborhoods as well as a list of recommendations for discussion with the community and city staff.

3.1 Pedestrian Treatment Concepts

- **Sidewalk Continuity and Widening**: Well-designed sidewalks are fundamental to good streets and are the building blocks of a great pedestrian environment. Sidewalks should enable active public space and accessible pedestrian travel. Generally sidewalks should be present on both sides of all streets, where topography allows. All sidewalk amenities should be organized to ensure safe and accessible travel. Sidewalks that are too narrow prevent pedestrians from moving safely and comfortably and make it difficult or preclude important additional streetscape elements and pedestrian amenities. Ideally the sidewalk should have a buffer — landscape strip, street furniture (hydrants, benches, signs, etc.) or parked cars — to moving traffic. Wider sidewalks provide space for a buffer between traffic and pedestrians and offer more space for street furniture and other improvements, making the streetscape more useful and attractive.
• High Visibility Crosswalks: The addition of well-marked, highly visible crossings alerts drivers to the fact they are approaching a location where they may encounter pedestrians. Where appropriate, crosswalks can be yellow instead of white in school zones. Additionally, notation on the ground can be provided as a reminder to pedestrians to “look” for oncoming vehicular traffic where appropriate. A high visibility crosswalk is provided at the Jefferson Street/Garfield Street intersection near Ramona High School.

• Stop Lines: Provision of stop lines are utilized to show where motorists are required to stop at a traffic signal and optionally can be provided at a Stop (R1-1) sign, or other traffic control device requiring motorists to stop. Stop lines are a solid white line extending across the travel lane.

• Yield Lines: Provision of yield lines can highlight a location where motorists are required to yield to pedestrians for a Yield (R1-2) sign or a Yield Here to Pedestrians (R1-5) sign, but not at Stop (R1-1) signs or other locations where motorists are required to stop as required by the California Vehicle Code (CVC). Yield lines are a row of solid white isosceles triangles (shark teeth) pointing toward approaching vehicles.

• Advance Stop or Yield Lines: When motorists stop or yield too close to a crosswalk on uncontrolled multi-lane approaches, they place pedestrians at risk by blocking visibility between the pedestrian and other motorists. Advance stop or yield lines can be provided at a crosswalk at an uncontrolled multi-lane approach between 20 to 50 feet in advance of the crosswalk.

• Crossing Aids: Curb ramps, truncated domes, and special crossing treatments, such as warning signs or beacons, make pedestrian facilities accessible to all and add another layer of comfort for pedestrians and warning for drivers approaching crossings. A relatively new and approved device for use is the Pedestrian Hybrid Beacon (PHB), (formerly referred to as the “High-intensity Activated crossWalk (HAWK)”) which can provide a signalized crossing for pedestrians where traffic volumes typically do not warrant a full traffic signal. While not yet standardized, another
potential treatment is the Rectangular Rapid Flashing Beacon (RRFB) to aid pedestrian crossing of roadways. Cities such as Newport Beach, Santa Monica, and West Hollywood are testing RRFBs as required by federal transportation requirements.

- Curb Extensions: The installation of curb extensions should be considered in areas of high pedestrian volumes to reduce crossing distance, increase pedestrian visibility and slow turning traffic. Curb extensions are often added on streets with on-street parking and take advantage of the space at the intersection where cars can’t park by extending the sidewalk. They help to reduce crossing distance, increase visibility, slow traffic by narrowing the street and can also provide space for landscape planting or street furnishings (such as art, benches and other amenities) to enhance the pedestrian experience. Installation of curb extensions needs to take into account the location of stormwater inlets, large vehicle turning needs, and transit vehicle accommodation.

- Landscape Medians and Median Refuges: Landscape medians provide space for tree and shrub plantings; visually break down the amount of asphalt or concrete and create space for pedestrian refuges. Median refuges simplify the crossing by allowing the pedestrian to focus on traffic approaching from only one direction. They also provide space for pedestrians who may not be able to cross the entire roadway before the end of the walk phase of the signal. A median refuge might be employed where there are long crossings for pedestrians and the crossing distance can appear intimidating.

- Roadway and Pedestrian Scale Lighting: Street lighting is an organizing element that defines the nighttime visual environment and supports nighttime activities. The quality of street and pedestrian lighting is critical for both traffic and pedestrian safety and security. Sufficient lighting to illuminate crossing pedestrians should be provided. A well designed program of street lighting can help to define a positive nighttime visual environment as well as add to the urban character.

- Increased Landscaping: Trees and landscaping make important contributions to the urban environment by reducing air pollution and heat islands, increase the aesthetics of the streetscape,
provide relief to users from the hardscape and add to a community’s identity. They also make the street seem narrower and help slow traffic. Use of drought tolerant species can also reduce water use. Attention should be paid to selecting the proper tree species and to planting trees to support deep root growth and prevent uplifting of sidewalks.

• Pedestrian Oriented Amenities: Amenities for pedestrians add functionality and vitality to the public realm. They can include benches and seating, bicycle racks, bollards, kiosks, newsracks, public art, streetscape and wayfinding signage and trash receptacles. Site furnishings announce that pedestrians are welcome and that the street is a comfortable place to be as well as provide a functional service and visual interest. Additional amenities may include outdoor dining areas, paseos to link rear parking with the sidewalk in front of businesses, and parklets to provide additional commercial or public space in lieu of a parking space.

![Figure 6: Landscaping & Pedestrian-Scale Lighting – Santa Clarita](image)

![Figure 7: Mural on Building Façade – Riverside](image)

![Figure 8: Outdoor Dining in Riverside](image)

![Figure 9: Parklet at Berlin Café in Long Beach](image)

• Community Spaces: A well designed street system will enhance the city’s livability for residents, workers and visitors, by providing pleasant places to walk or sit, opportunities for neighborly interaction, freedom from excessive noise and pollution and a green, attractive cityscape. Additionally, a street system that encourages people to walk to neighborhood commercial districts
rather than drive to larger or more distant shopping centers for their daily needs supports small commercial areas and local businesses while lending a sense of community through chance interactions in well-designed spaces.

- Driveway Visibility: Driveway visibility issues can be mitigated with effective signage and/or pavement markings to warn both motorists and pedestrians of each other’s potential presence at the crossing. Signs can include those instructing motorists to stop for pedestrians entering the crosswalk, coupled with a standard Stop sign. However, signs and markings are not an adequate substitution for a clear geometric sight line. Methods of improving sight lines include:
  - Altering/moving the point of sight
  - Trimming and reducing obscuring vegetation/landscaping
  - Removing the physical obstruction
  - Shifting drives/driveways
  - Closing or reconfiguring the ingress/egress, especially if a rear alley is present
  - Control movements at the driveway (e.g., prohibiting left-turn egress maneuvers)
  - Topographic modifications where appropriate

In addition to physical solutions, the City can consider adopting ordinances to require property owners to maintain landscaping to minimize visual obstruction at driveways.

- Streetscape elements: Elements including street tree and shrub plantings, seating and unified, accessible paving should be provided throughout downtown and commercial areas to enhance the character and quality of the public realm and the sense of place. Where possible, wider areas in the planting zone can be used as areas of enhanced landscaping to form small pocket parks along the pedestrian right-of-way. Median refuges can both serve to add landscaping, and can allow pedestrians to cross the street in two separate stages.

Figure 10: Pedestrian crossing with in-pavement flashing lights at 3rd Street and Anderson Ave. in Riverside.
3.2 Bicycle Treatment Concepts

For a street to be ‘complete’ it also needs review for potential accommodation of cyclists based on land use context and other relevant characteristics. Like pedestrians, bicyclists are vulnerable users of the public realm who can benefit from reduced traffic speed and dedicated facilities. Studies have shown improved safety for pedestrians where bicycle facilities are provided on roadways.

- **Bikeways**: Bicycle lane treatments such as shared lane markings (sharrows), conflict zone striping, and on-street striped bike lanes can assist in both accommodating those on bikes as well as giving those in cars clear direction on paths of travel. Dedicated bicycle facilities include one-way and two-way cycle tracks where a physical separation is provided between on-street parking or travel lanes on the roadway for more comfortable bicycle travel.

- **Roadway Lane Reduction**: Where traffic volumes can be accommodated by reduced number of travel lanes, a “road diet” can help reduce travel speeds, increase visibility of bicyclists and pedestrians, shorten crossing distances for pedestrians, and can provide valuable space for on-street bike lanes. Evaluation of roadway lane reductions requires operational review by agency staff to consider the land use context, the best use of the public realm, sight distance requirements, and overall goals for the roadway.

- **Parking Modifications**: Removal of on-street parking can also provide an opportunity to designate and stripe an on-street bike lane, or to fill a gap in the bicycle facility network. City staff can consider changes to on-street parking based on availability of nearby parking supply and needs from adjacent land uses.

- **Amenities**: Bicycle amenities such as signage, wayfinding, and bicycle parking should also be considered for context and potential need.

- **Parking**: Bicycle parking can be improved through installation of bike racks on sidewalks and at commercial properties. Bicycle parking can provide standard U-shaped bicycle racks or decorative racks that might be customized to the area or reflective of the business type. In some cases, on-street parking spaces can be converted to bicycle parking (bike corrals) to reduce sidewalk congestion and promote bicycle activity.

- **Bicycle Skills Training and Safety Education**: Infrastructure improvements can encourage compliance with bicycling-related ordinances and laws, such as restrictions on sidewalk and wrong-way riding, but sometimes engineering alone is not enough. Various bicycle education activities have been used throughout the country to teach all levels of riders how to ride confidently and safely on streets with traffic. In-school training of students has been found to be particularly effective. Infrastructure investments are more effective when paired with successful education programs.
3.3 Site-Specific Observations

Based on the walk audits, community input, and site review, the following site-specific comments have been developed for further consideration. Since the walk audits were limited in geographic scope, UC Riverside may want to propose additional site-specific recommendations in other parts of the study area.

1. Review locations near schools where sidewalks have been affected by tree roots and other landscaping causing a vertical deflection or cracking for repair. The following locations were noted for improvement:
   - Colorado Avenue west of Adams Street;
   - Via San Jose south of California Street;

2. Work with property owners to address sidewalk gaps at the following locations:
   - Jefferson Street north of Magnolia Avenue;
   - Crowell Avenue south of Magnolia Avenue;
   - Canterbury Road south of Garfield Street;
   - Van Buren Boulevard between Jackson Street and California Avenue;
3. Review pavement quality on roadways to better serve bicycling activity. Locations where cracked, and failing pavement was noted include the following locations:
   - California Avenue at Jefferson Street
   - St. George Place between California Avenue and Sycamore Avenue;

4. Intersection treatments such as curb extensions, pedestrian curb ramps, and truncated domes are recommended for implementation at intersections throughout the study neighborhoods, with prioritization at the intersections nearest schools, and heavily used transit stops.

5. Review the intersection sight distance at the Van Buren Boulevard/Duncan Avenue intersection to determine if engineering solutions can be provided to better accommodate sight distance needs.

6. During the walk audit, the pavement quality was noted to be deficient on the Magnolia Avenue Class I multi-use trail (near the Jefferson Street/Magnolia Avenue intersection). Maintenance of a continuous and well-kept sidewalk/path is needed to strengthen and support walking activity on sidewalks along the busy Magnolia Avenue.

7. Typically, the City of Riverside reserves high visibility crosswalks for uncontrolled intersections. However, high visibility crosswalks are suggested for locations near schools such as the Jefferson Street/Magnolia Avenue intersection, the Madison Street/Magnolia Avenue intersection, the Adams Street/Colorado Avenue intersection, and near heavily used transit stops. While these are controlled intersections, high visibility crosswalk markings would help to emphasize them for both pedestrians and motorists. City staff might consider additional supplemental locations for installation of high visibility crosswalks.

8. Consider curb extensions, a high visibility crosswalk, advance yield lines, additional signage, and installation of a Pedestrian Hybrid Signal (or RRFB) at the unsignalized Farnham Place/Magnolia Avenue intersection where commercial uses draw higher pedestrian traffic crossing Magnolia Avenue.

9. Sidewalk riding is allowed in some areas on Magnolia Avenue. Increased pavement markings and textured pavement may be considered to better define the area for bicyclists and better inform pedestrians that they may encounter a bicyclist on the sidewalk.

10. Consider closing the three driveways serving commercial businesses on Magnolia Avenue east of Van Buren Boulevard and west of Olivia’s Restaurant. Since parking and vehicular access is provided in the rear of these businesses along Miller Street, vehicular access on Magnolia is not necessary. With the changes to driveway access, the sidewalks in front of commercial areas can be improved to better encourage and support walking and outdoor seating.

11. Consider traffic operations analysis on California Avenue to reduce the number of travel lanes to provide an on-street bike lane, improved buffer space between motorists and pedestrians, and to reduce motorists travel speeds.

12. Prohibit vehicles parking on the driveway apron, located between the roadway curb edge and the sidewalk as observed on Magnolia Avenue east of Monroe Street.

13. Prohibit on-street parking on Magnolia Avenue west of Jefferson Street where bike lanes could otherwise be striped to better serve bicycling activity. Loss of parking may impact adjacent land
uses; however, parking may be adequately addressed using nearby side streets. Consideration of parking changes can be reviewed by City staff in relation to similar issues throughout the City.

14. Abate graffiti on sidewalks, signs, and other traffic control devices near schools. Graffiti was noted on sidewalks on Jefferson Street near Ramona High School.

15. Review landscaping maintenance needs to ensure signs are visible along all roadways, especially along Magnolia Avenue.

16. Where legacy palm trees exist along roadways such as Magnolia Avenue and limit visibility for motorists turning onto side streets, provide curb extensions and setback crosswalks as much as possible to improve comfort for pedestrians crossing side streets near palm trees.

17. While community members requested a crosswalk at the north crossing of the Harrison Street/Garfield Street intersection, there is a nearby traffic signal at the Harrison Street/County Farm Road intersection. The City should consider signage and additional treatments to direct pedestrians to the nearby signalized crossing.

18. Consider curb extensions and additional crosswalks at the California Avenue/Bolton Avenue intersection.

19. Regularly clean trash and graffiti from freeway underpasses and consider improved lighting to reduce hostile environment for pedestrian activity.