Introduction: Why do we care about First/Last Mile Planning?

As part of the rapid build-out of Los Angeles County’s transit network, Metro is committed to planning and implementing first/last mile improvements. New Metro Board policy calls for all future transit projects to include First/Last Mile components that improve access, safety, and user experience in the areas surrounding stations. The recent passage of Measure M lines up substantial resources to make this happen. It is critical for Metro’s partners and stakeholders around the county to understand how these First/Last mile improvements are planned, designed, funded and implemented. Among the key policy documents describing this commitment are the First/Last Mile Strategic Plan (FLMSP) and the Active Transportation Strategic Plan (ATSP).

The ATSP identified 661 major transit station locations for First/Last Mile improvements intended to enhance regional access by connecting people to the extensive and growing transit network and to maximize the benefits from transit investments. Across the county, the transit network connects with key corridors in the Regional Active Transportation Network that function both as origins and destinations as well as transit corridors.

The Regional Active Transportation Network is intended to serve people biking and walking, much like our freeway network serves drivers or our rail network serves transit riders. It is intended to provide the most comfortable, safe, high-quality bicycling and walking experience, with minimal disruption from other users and with extensive reach across the county. It is designed to connect key regional origins and destinations across the county, filling in the gaps in the current network, taking advantage of available waterways, utility corridors, and on-street right-of-way that can be developed into high-quality, low-stress walking and biking facilities.

Metro and other jurisdictions need to work closely together on first/last mile planning and active transportation connections to create a safe, convenient and sustainable transportation network. This coordination includes both expanding transit options but also active and sustainable options such as walking, biking, skateboarding, bikeshare which can be used for the first and last mile of the transit trip.
First/Last Mile Planning improves the transit user experience by providing attractive, convenient, safe and clear routes to and from transit stations, with an emphasis on walking, biking, transit and other sustainable options.

First/Last Mile Training and Demonstration Program provides technical assistance and training to local officials, City staff, active transportation advocates and community leaders in developing First/Last Mile Action Plans.

Metro is increasingly focused on a First/Last Mile Planning approach which requires close collaboration with local agencies. This coordination involves many cities and other authorities with jurisdiction over the public realm in LA County.

Metro and local jurisdictions work together to coordinate biking and transit infrastructure investments in the station areas to extend the reach of transit, increase ridership, and shift single-occupant auto trips to more sustainable modes.

Metro’s commitment to fulfilling its Sustainability Goals via active transportation spans over a decade, with a series of strategic plans involving Bicycle Transportation, First/Last Mile, Complete Streets and most recently, Active Transportation. Strategic Partnerships have involved agencies such as SCAG (Southern California Association of Governments).

Metro’s First Last Mile Training and Demonstration Program addresses Metro’s 2016 Policy to include First/Last Mile Improvement Planning and Implementation in all future Metro projects and provide Planning and Implementation assistance for 254 existing Metro rapid bus and rail station locations.
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THE PLANNING PROCESS HAS FOUR KEY PHASES:

1. Analyze Access Barriers and Strengths
2. Map Pathway Network and Recommend Improvements
3. Refine the First/Last Mile Pathway Network Improvements
4. Developing Costs, Phasing and Funding Options

Phase 1: Analyze Access Barriers and Strengths

PHASE 1A: DATA ANALYSIS + MAPPING

• GIS Mapping Tools
• ATSP Station Analysis of Walkshed and Bikeshed
• Transportation Injury Mapping System (TIMS)

PHASE 1B: WALK AUDIT TO OBSERVE CONDITIONS

• Station Area Checklists
• Transit, Bicycle and Pedestrian Facilities
• Micro-scale, Ground Truthing
• Note Strengths as well as Access Barriers
THE PLANNING PROCESS HAS FOUR KEY PHASES:

1. Analyze Access Barriers and Strengths
2. Map Pathway Network and Recommend Improvements
3. Refine the First/Last Mile Pathway Network Improvements
4. Developing Costs, Phasing and Funding Options

Phase 2: Map Pathway Network and Recommend Improvements

PHASE 2A: REVIEW PATHWAY TOOLBOX AND CASE STUDIES

• Transit, Bicycle and Pedestrian Access Improvements
• Case Studies of First/Last Mile Improvements

PHASE 2B: MAP PATHWAY NETWORK AND IMPROVEMENTS

• Map Access Barriers+Strengths
• Map Pathway Network
• Recommend First/Last Mile Improvements
THE PLANNING PROCESS HAS FOUR KEY PHASES:

1. Analyze Access Barriers and Strengths
2. Map Pathway Network and Recommend Improvements
3. Refine the First/Last Mile Pathway Network Improvements
4. Developing Costs, Phasing and Funding Options

Phase 3: Refine First/Last Mile Pathway Network Improvements

PHASE 3A: COMMUNITY ENGAGEMENT IN REFINE PATHWAY

• Pedestrian, Cyclist, Transit User, Driver Concerns
• Show Safety Data to Support Improvements
• Include Features for Wide Range of Stakeholders

PHASE 3B: TECHNICAL INPUT TO CUSTOMIZE IMPROVEMENTS

• Review Nearby Best Practice Improvements
• Identify Unique Conditions and Local Concerns
• Adapt Proposed Improvements to Local Concerns
• Develop Before/After Performance Measures
The planning process has four key phases:

1. Analyze Access Barriers and Strengths
2. Map Pathway Network and Recommend Improvements
3. Refine the First/Last Mile Pathway Network Improvements
4. Developing Costs, Phasing and Funding Options

Phase 4: Developing Costs, Phasing and Funding Options

Phase 4A: Develop Improvement Phasing and Priorities
- Integrate Improvements with New Development Projects
- Combine Bicycle Lanes, Crosswalks and Roadway Striping
- Prioritize Projects with Supportive Property Owners
- Set Performance Measures: Safety, Mode Shift, Tax Revenue

Phase 4B: Determine Costs and Funding Options
- Metro Technical Assistance with Estimating Unit Costs
- Metro First/Last Mile Planning & Implementation Funds
- Metro Call for Projects, Prop C, Measures R & M
- Cal EPA Cap + Trade including AHSC
- Caltrans Active Transportation & Caltrans Regional Surface Transportation Program
PHASE 1A: DATA ANALYSIS AND GIS MAPPING

Active Transportation GIS Mapping Tools
Geographic Information Systems (GIS) Mapping provides an increasingly powerful tool to analyze First/Last Mile station access issues. By providing spatial analysis of data and allowing overlays of related data they help to pinpoint key issues and suggest interventions. For example, an overly of vehicle traffic speed, volume and pedestrian and bicycle involved collisions can identify potential locations for reducing speed or enhancing bicycle and pedestrian safety countermeasures. General demographic data such as jobs/housing balance, income, and population data can be used to understand an area and improve transportation options appropriately.

The Metro Active Transportation Strategic Plan includes the Station Area Existing Conditions GIS mapping tool. The Database contains a wide array of mapping options based on recent land use, transportation, topographic and demographic data for all of LA County. This useful planning tool is available at gis.fehrandpeers.com/metroatsp

An on-line User Guide describes how to produce various types of maps and analysis.

Station Analysis Maps of Walkshed and Bikeshed
Walkshed and Bikeshed maps have been prepared for the ATSP for over 661 major transit stations. The Existing Condition summary maps include a graphic indication of how each station’s metrics compare to the median and the range for all 661 stations. The following pages show the array of maps and analysis available as a starting point for all First/Last Mile planning. The data provides a recent "snapshot" for each station area, however it will need to be updated to provide useful performance measures over time, particularly for new transit stations and rapidly changing areas.

An example of Walkshed and Bikeshed Station Analysis for the Florence/La Brea station is provided on the following pages.

Tools for Station Analysis Maps of Walksheds And Bikesheds are available at: gis.fehrandpeers.com/metroatsp or at this link: metro.net/projects/active-transportation-strategic-plan
Tools for Station Analysis Maps of Walksheds and Bikesheds are available at: gis.fehrandpeers.com/metroatsp or at this link: metro.net/projects/active-transportation-strategic-plan

**La Brea / Florence**

**Walkshed Analysis - Existing Conditions**

**LAND USE**

- Residential
- Commercial
- Public Facilities and Institutions
- Residential
- Mixed Urban
- Open Space and Recreation
- Industrial
- Other

**WALKSHED ANALYSIS AREA**

- Walkshed with Slope
- Walkshed without Slope (for reference only)

**BICYCLE FACILITIES**

- Existing Bicycle Facilities
- Planned Bicycle Facilities

**POINTS OF INTEREST**

- Arts and Recreation
- Health and Services
- Schools
- Colleges/Universities

**JOBS/HOUSING DIVERSITY**

- Max
- Rank

**POPULATION AND EMPLOYMENT**

- Population
- Employment

**AGE**

- Under 18
- Over 64

**WALK SCORE® (1-100)**

- Reports the walkability for the station area based on distance to amenities, population density, and intersection density (where available).

**BIKE SCORE® (1-100)**

- Reports the bikability for the station area based on infrastructure, hills, destinations, and connectivity (where available).

**TRANSIT SCORE® (1-100)**

- Reports the transit usefulness for the station area based on frequency, type of route, and distance to nearest stop (where available).

**CALENVIROSCREEN SCORE**

- Calculates a score representing a combination of pollution burdens and demographic community characteristics. Higher scores represent a higher burden.

**COLLISION BY MODE**

- Collisions from 2008 - 2013

**ROUTE DIRECTNESS (0-5)**

- Measures the number of intersections within walkshed.

**JOURNEY TO WORK**

- Drive Alone
- Carpool
- Drive Alone
- Drive Alone

**INTERSECTION DENSITY**

- Measures the number of intersections within walkshed.

**COLLISIONS BY MODE // KSI**

- Total KSI

**LAKE BALANCE**

- Walk
- Bike
- Train

**Station Score**

- Average Score

**Average Score**

- Walk
- Bike
- Train

**Max**

- Min
- Rank

**Count**

- Score (1-100)
Tools for Station Analysis Maps of Walksheds and Bikesheds are available at: gis.fehrandpeers.com/metroatsp or at this link: metro.net/projects/active-transportation-strategic-plan

La Brea / Florence
Bikeshed Analysis - Existing Conditions

Bikeshed with Slope
Bikeshed without Slope (for reference only)

POPULATION AND EMPLOYMENT

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<th>Value</th>
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<tr>
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<td>390</td>
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AGE

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<thead>
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<th>Value</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>16,560</td>
<td>26.5%</td>
</tr>
<tr>
<td>Over 64</td>
<td>5,326</td>
<td>8.5%</td>
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</table>

WALK SCORE® (1-100)

89

BIKE SCORE® (1-100)

N/A

TRANSIT SCORE® (1-100)

N/A

ROUTE DIRECTNESS (0-5)

4.2

INTERSECTION DENSITY

3,376 Count

JOURNEY TO WORK

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<th>Percentage</th>
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<td>663</td>
<td>74.7%</td>
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<tr>
<td>Carpool</td>
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<td>4.3%</td>
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<tr>
<td>Bus</td>
<td>114</td>
<td>13.6%</td>
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<tr>
<td>Walk</td>
<td>72</td>
<td>8.5%</td>
</tr>
<tr>
<td>Other</td>
<td>63</td>
<td>7.5%</td>
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COLLISION BY MODE // KSI

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<tr>
<td>Pedestrian</td>
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<tr>
<td>Bike</td>
<td>72</td>
</tr>
<tr>
<td>Train</td>
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</tr>
<tr>
<td>Auto</td>
<td>35</td>
</tr>
</tbody>
</table>
PHASE 1A: USING GIS MAPPING TOOLS TO ANALYZE SAFETY ISSUES

Using the Transportation Injury Mapping System (TIMS)

One of the most important goals for First/Last Mile Planning is providing safe access to transit stations for pedestrians and cyclists, since studies show that the vast majority of transit users travel by these sustainable active transportation modes. A useful GIS mapping source for evaluating existing issues and the impact of active transportation improvements is the Transportation Injury Mapping System (TIMS). Local police departments are required to collect SWITRS (Statewide Injury Traffic Reporting System) data on collisions involving motor vehicles and pedestrians or cyclists. Included in the data is information on severity of injury, time of day, number of pedestrians or cyclists involved, age of injured, contributing factors and other useful data. Some of the predesigned TIMS Mapping formats such as the Safe Routes to School mapping can produce graphics that provide a quick summary of the number and severity of collisions within a certain radius of a school, or can produce "heat maps" of injury rates throughout a designated area. While there is a lag of a few years before statewide data is available, this mapping provides an ongoing tool to help evaluate the effectiveness of safety improvements.

As the ATSP data becomes outdated, the best source of updated safety data is the TIMS data, which is continually updated from SWITRS data. The database includes a number of helpful mapping features to develop "heat maps" or specific maps targeting user groups such as pedestrians and bicyclists. Using TIMS mapping programs would be an excellent way to track the effectiveness of traffic safety improvements.

A particularly helpful mapping format is used in the "Safe Routes to School" maps available for all California schools. The format uses color and images of pedestrians and cyclists to identify the location of collisions resulting in injury near each school. An example is provided below, which could be adapted for a station location.

TIMS Safe Routes to School Map showing pedestrian and cyclist injuries surrounding Inglewood High 2005-2013.
CRITICAL ACCESS BARRIERS

Bus waiting area
Most of the bus waiting areas within the site lack protection from natural elements such as the sun and rain.

Freeway underpass
The freeway is a major barrier that disconnects the station from the residents to the west. Two underpasses in the study area can feel unsafe at night, and an overpass can be unpleasant to walk across.

School crossings
Some crosswalks near schools have low visibility, long crossing distances, short crossing times, and long waiting times.

Wayfinding and informational signage
Transit-supportive signage is limited to the immediate station area. Outside the station plaza, however, there is no directional signage informing pedestrians, bicyclists and transit users of station proximity or location.

OTHER EXISTING CONDITIONS

Enhanced bicycle lane
Bicycle lanes provide a safe route for bicyclists traveling along the primary east-west corridor. Approaching and after intersections, the lanes are painted with green paint and conflict zone markings to help make the “mixing zone” safer for bicyclists and motorists.

Street furniture
In general, the station area lacks well-maintained street furniture such as seating, waste receptacles, and landscape planters.

Curb Bulbouts and Extensions
Temporary curb extensions on one commercial street improve safety and enhance the overall pedestrian experience.

Narrow Sidewalks
Most sidewalks in the station area are in good condition with sufficient width. However, in a few residential locations, narrow widths create a potential access barrier.

Bicycle Parking
Bicycle racks and lockers are located on the station plaza in view of the station portal. Safe, secure and convenient bicycle parking encourages transit riders to choose bicycling as a means to get to/from transit stations.
WALK AUDIT INSTRUCTIONS

WHAT ARE THE GOALS OF THE AUDIT?

Evaluate the on-the-ground conditions around a transit station with an emphasis on conditions for people walking or “rolling” to the transit station. Complement the quantitative mapping being done for each station area, with experiential and qualitative insights.

Compile easy-to-reference, clear findings about each station area that will lay the foundation for recommended improvements. Thoroughly document each station area to help build an inventory of strengths, barriers and observed behaviors.

WHAT SHOULD I BE LOOKING FOR & NOTING?

Look through the Station Area Checklists. Topics: safety, aesthetics, accessibility, transfers, & behavior. Remember to put yourself in other peoples’ shoes, such as people who have different abilities & are a different age than you.

Safety: How does it feel for pedestrians and bicyclists? How does the area feel at night? Transfers: Is transferring to another mode or another bus easy, efficient, and pleasant?

Aesthetics: How attractive is the station area & overall does it feel good? Behavior: How are people behaving in the station area?

Accessibility: How is wheelchair & bicycle access? Is it easy to walk? Is drop-off easy for cars?

We will notate strengths, barriers and observed behaviors on maps provided. Please review maps.

HOW DOES THE AUDIT WORK?

- Follow your assigned walking route to/from the transit station. Walk slowly & look around you.
- As you walk, the Team Leader will use the map provided to record the strengths, barriers and observed behaviors using the symbols on the map and keyed to location of your observations.
- Make notes about your observations of the Checklist issues. Keep your notes & the map clean & easy to read as you will be using the notes during the Charrette.
- At the end of your walk and return to the training site, fill out the Checklists as a team.
- Remember to “grade” the station area by comparing it to other locations in the area.
- Upload your photos & as instructed on the Photographers Instructions.

REMEMBER: BE SMART, BE SAFE!

If you feel in danger, call 911 immediately.

- If you have questions in the field, contact Alison Kendall, Project Organizer.
  Telephone: 310.586.1557, email: alison@kendallplanning.com, or your designated representative.
- Perform your audit in teams. Stay alert & wear the safety vest provided.
- Observe all laws, for example cross the street safely & at designated locations.
- If you are approached by Metro staff, explain that you are performing a First/Last Mile audit as part of the First/Last Mile Plan Training Workshop. Metro staff has been alerted.
- If requested by Metro Security or Operations staff, the Metro Project Manager is Jacob Lieb.
  Telephone 323.632.2296, email liebj@metro.net.
Either one—some items are good to capture with movie clips—especially where motion is critical (i.e., bikes, pedestrians, cars).

Follow instructions above, and keep movie clips to less than 10 seconds. The Walk Audit Leaders will coordinate the collection of content.

PHASE 1 | Analyze Access Barriers and Strengths

WALK AUDIT: HOW TO TAKE PHOTOS & VIDEOS

1. Capture video/photos in landscape orientation (horizontal)
2. Frame your subject (person or object) with context (site/location)
3. Make note of the approximate location on your map

SEND PHOTOS & VIDEOS TO ALISON@KENDALLPLANNING.COM

WHY SHOULD I TAKE PHOTOGRAPHS OR MOVIES?

Because a picture can speak a thousand words!

We want to document conditions that either help or hinder people’s ability to access Metro. We also want to tell the story of the project area—and all the people and places that can be discovered and explored through Metro. This is best done through images and movies.

WHAT SHOULD I PHOTOGRAPH?

Photograph anything you see that could be seen as a barrier to accessing Metro.
Also capture places and people in the station area worth celebrating and discovering. This study is about how to better access Metro—and also a process of discovering what can be found in communities near the stations/stops.

We also want to see you—take a selfie, interview yourself, be the reporter—share your voice.
Please sure to respect the anonymity and privacy of people who might enter your shot. Make sure you do not have identifying features (like faces) in your shots.

SHOULD I TAKE PHOTOS OR MOVIES?

Either one—some items are good to capture with movie clips—especially where motion is critical (i.e., bikes, pedestrians, cars).

Follow instructions above, and keep movie clips to less than 10 seconds.
Checklists—Assign one person to observe the conditions identified on each of the five checklists. One person can be assigned to more than one checklist.

There are 5 checklists:

- Safety— for issues related to safety and comfort
- Aesthetics— for issues related to the sense of place and experience
- Accessibility— for issues related to sidewalk, crosswalk
- Transfer— Transfer - for issues related to transfers between transit pathway, drop-off, parking and bicycle facilities modes
- Behaviors— documenting people's behavior and response to the environment around the station area

Consider multiple constituencies (gender, age, abilities, etc.) in your observations

Team Instructions

- Make sure to add the Route # and the team member’s name, email address to all the team leader instructions, photographer instructions, walk audit maps and checklists.
- Assign one person to take the assigned photos and to document the photographs, including the location, on the photo index sheet - you only need one or two examples of each barrier to show the character of the route.
- Use the aerial photos to document strengths, barriers and observed behaviors according to the instructions on the maps

When you return to the training site

- Please return the clipboards and safety vest at the check-in desk
- Keep your checklists, marked up aerial photos, and notes with you for use during the charrette
- Meet as a team to complete the 5 checklists and tally up the total score on each checklist based on the conditions that your team observed on the Walk Audit. Note special characteristics and add include any additional comments that your team has about the route on the last page
- Assign one person to provide a summary of your team’s findings at the report back session

<table>
<thead>
<tr>
<th>TEAM MEMBER</th>
<th>ROLES</th>
<th>EMAIL</th>
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<tbody>
<tr>
<td></td>
<td>Leader, Map Strengths/Barrier</td>
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<td></td>
<td>Photographer</td>
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<td>Transfers Issues</td>
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<td>Behavior Issues</td>
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</table>
### Photo Assignments: Sample List of Barrier Conditions

- Poor Street Lighting
- Blighted Conditions - Blank Walls, Vacant Lots & Businesses, Trash, Bulky Items, Unkempt Landscaping
- Poorly Maintained, Uplifted, Uneven, Damaged, Missing, or Narrow Sidewalks
- Poorly Marked Crosswalks, Lack of High Visibility Crosswalks, Lack of Safe Crossings
- Bad Driver Behavior - Blocking Sidewalks And Crosswalks, Speeding, Turning in Front of Pedestrians
- Missing, Poorly Placed Disabled Curb Ramps
- Lack Of Pedestrian and/or Transit Amenities - Seating, Lighting, Trash Receptacles,
- Lack Of Direct Connections Between Transit Modes - Bus to Rail, Shuttle to Bus, etc
- Lack Of Street Trees, Shade
- Lack Of Signage and Wayfinding to Transit Stops and/or Important Destinations
- Lack of Signalized Intersections at Critical Locations
- Lack of Bike Lanes or Poorly Marked Bike Lanes

<table>
<thead>
<tr>
<th>#</th>
<th>Strength/Barrier Condition</th>
<th>Precise location - address/block/side of street</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>23</td>
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</tr>
</tbody>
</table>

Email all photos and this summary sheet with subject line "FLM SGV Workshop Route # ___ Photos" to alison@kendallplanning.com
Instructions: Use the following form to document the Barriers, Strengths and Observed Behaviors that your team observes on your Walk Audit. Numbers must correspond to the numbering on the Walk Audit Map. Use the back side of this sheet if you require more space.

<table>
<thead>
<tr>
<th>BARRIERS</th>
<th></th>
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<tbody>
<tr>
<td>B-1</td>
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<tr>
<td>B-2</td>
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<td>B-36</td>
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<td>B-37</td>
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</tbody>
</table>
**Instructions:** Use the following form to document the Barriers, Strengths and Observed Behaviors that your team observes on your Walk Audit. Numbers must correspond to the numbering on the Walk Audit Map. Use the back side of this sheet if you require more space.

### STRENGTHS

<table>
<thead>
<tr>
<th>S-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-2</td>
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<tr>
<td>S-3</td>
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<td>S-20</td>
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<td>S-21</td>
</tr>
</tbody>
</table>

### OBSERVED BEHAVIORS

<table>
<thead>
<tr>
<th>O-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2</td>
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<td>O-3</td>
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<td>O-4</td>
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<td>O-9</td>
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<tr>
<td>O-10</td>
</tr>
<tr>
<td>O-11</td>
</tr>
<tr>
<td>O-12</td>
</tr>
</tbody>
</table>
1. SAFETY

1.1 Adequate lighting.
Regularly spaced and frequent lighting that is directed towards the sidewalk and any bikeways. Provides sufficient illumination.

1.2 Eyes-on-the-street.
People are out walking, which makes it feel safe. Ground-floor windows and entries are not covered or obscured. People are nearly who would see or hear me if I needed assistance.

1.3 Well maintained public realm.
Sidewalks are smooth and without cracks, vegetation is trimmed, etc.

1.4 Safety buffer for bikes.
Bikes are adequately separated from vehicle travel lanes. Consider type and quality of buffer—sufficient width, painted material, bollards, etc.

1.5 Safety buffer for pedestrians.
Pedestrians are adequately separated from vehicle travel lanes via ample sidewalk width, landscaping, and/or street furniture, such as benches or trash receptacles.

1.6 People-friendly traffic speeds & manners.
Drivers yield to pedestrians and traffic is slowed via narrow roadways, markings, no turn on red lights, etc.

1.7 Clear safety signage.
Safety signage is clear, legible, and well-maintained. Signs promote traffic safety and help people navigate to their destinations.

1.8 Overall, the station area feels safe.
Overall, there is a feeling of safety as you walk through the station area. Consider the experience of all users—especially women, children, and the elderly. Consider both day and nighttime safety.

TOTAL SCORE: (Sum of Answers) ÷ (# of Questions Answered) = (Safety Score)

PLEASE FILL OUT STATION NAME/ROUTE #
DATE & TIME:
TEAM MEMBER NAME:

FSTRT/LLST MILE TRAINING WORKSHOP: PHASE 1 | 21
2. AESTHETICS

2.1 Sense of place.
Inclusion of unique street characteristic, landmarks, or streetscape design that sets this space apart from other areas. A special sense-of-place.

2.2 Pleasant landscaping.
Consistent landscaping that provides ample shade. Trees are well maintained, tree wells are planted with street trees, and street trees are attractive.

2.3 Strategically placed pedestrian amenities.
There are a variety and sufficient pedestrian amenities (e.g. seating, trash cans, water fountains) that are well maintained and inviting.

2.4 Attractive kiosks & vendor areas.
If kiosks and vendors are present on pedestrian paths, they are visually pleasing and are located in areas that do not interfere with foot traffic.

2.5 Pedestrian unfriendly elements are limited.
Elements such as the following are limited: unpleasant smells, blank walls, vacant lots, fences, loud and unpleasant noises, unfriendly street conditions, trash on the street.

2.6 Overall, the station area feels pleasant and is attractive.
Overall, there is a pleasant ambiance as you walk, bike, or use alternative transit throughout the station area. Consider the experience of all users -- especially women, children, and the elderly. Consider both day and nighttime aesthetics.

2.7 Waiting Areas Provide Shelter and Shade
Do bus shelters, rail station waiting areas and pick-up areas include sufficient protection from rain, wind, sun and noise to make waiting comfortable?

2.8 Cleanliness and Maintenance
Is the area free of litter, dirt, and unpleasant smells and are the benches, sidewalks and public areas clean and well maintained?

TOTAL SCORE: \[
\frac{(\text{Sum of Answers})}{\text{(Sum of Answers)}} \div \frac{(# \text{ of Questions Answered})}{(\text{Aesthetics Score})}
\]

(Please fill out)
### 3. ACCESSIBILITY

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sidewalks are large enough for pedestrians to walk, pass, and jog comfortably in opposing directions. There are very few disruptions to the sidewalk quality (e.g. smooth paving and the signage and poles are set back). Vehicles are not blocking the pedestrian right-of-way.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Signalized intersections are provided that allow ample time to cross the street, frequent crossings, and are a walkable distance (or provide a median for people to rest 1/2 way), for people of all abilities. Crosswalks are supplied with functioning push buttons and are painted for safety.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.3 Special accessible features are in place.</th>
<th>![Disagree/Lacking]  ![Somewhat/Adequate]  ![Strongly Agree/Ample]  ![1]  ![2]  ![3]  ![4]  ![5]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Features that specially enhance the surrounding environment have been added to make the area more accessible, such as curb extensions (“bulb-outs”), all-way “scramble” crossings that allow pedestrians to cross an intersection in all directions at the same time, and audible “walk” signals.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>There are sufficient functioning bicycle facilities, such as bike lanes, routes, pathways, markings, bike parking, separated push buttons, bike stations, bike boxes, and bike channels along stairs.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Signage is located in clear view for pedestrians, bicyclists, and transit riders. Signage provides clear directional and locational information.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Adequate number of parking spaces (park-and-ride, if applicable) and/or room for drop-off on street are provided.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.7 Curbs &amp; curb ramps are provided.</th>
<th>![Disagree/Lacking]  ![Somewhat/Adequate]  ![Strongly Agree/Ample]  ![1]  ![2]  ![3]  ![4]  ![5]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curbs and curb ramps are present at all crossings, have a gentle slope, and include tactile warning surfaces.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3.8 Overall, the station area is easy to access &amp; intuitive.</th>
<th>![Disagree/Lacking]  ![Somewhat/Adequate]  ![Strongly Agree/Ample]  ![1]  ![2]  ![3]  ![4]  ![5]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, there are a series of pathways that are frequent and well marked. Consider the experience of all users—especially women, children, and the elderly. Consider both day and nighttime accessibility.</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL SCORE:**

\[
\frac{\text{Sum of Answers}}{\text{# of Questions Answered}} = \text{Accessibility Score}
\]

**Please fill out**

**Metro**
4.1 Clear transit transfer signage.
Transit information is posted for all modes. Wayfinding directional signage directs passengers to transfer points and connection locations.

4.2 Real-time information.
Real-time (e.g. next bus/train) signage is available and easy to see.

4.3 Universal signage.
Signs use graphics as well as text to make it easier for non-English speakers. Audio information is provided for people who are vision-impaired.

4.4 Clear transit loading areas.
Clear paths are provided for pedestrians and wheelchairs to get on and off the bus. Trash cans, benches, or other items do not block door access areas.

4.5 Shaded seating & waiting areas.
Shaded seating areas are provided at bus stop and other major waiting locations.

4.6 Reduced distances for transfers.
Bus stops are consolidated to shorten distances between transfers and decrease street crossings. Transfer points are clustered. Stops and stations are well-positioned to minimize transfer walking distances. Elevators are located near primary station entrances.

4.7 Overall, seamless transfers between transit modes.
Transferring to alternate modes of transit is streamlined through the presence of well-marked, nearby, and obvious pathways. Pathways are direct and intuitive while transferring. Connections to transit are visible within clear line of site from station or stop. People do not seem confused about transit transfers. Consider the experience of all users—especially women, children, and the elderly. Consider both day and nighttime.

TOTAL SCORE: ______________________ ÷ ______________________ = ______________________
(Please fill out) (Sum of Answers) (# of Questions Answered) (Transfers Score)
5. BEHAVIORS

During My Walk I Saw People Who Were: *

5.1 Avoiding sidewalks.
Some people were not walking on sidewalks because sidewalks felt uncomfortable, incomplete, or there were other areas that were more attractive.

5.2 Avoiding certain areas.
Some people were avoiding certain areas that seemed unmaintained or otherwise undesirable (for example, certain blocks, seating areas, bus stops, crossings, sidewalks, etc).

5.3 Choosing riskier behaviors.
Some people were choosing potentially risky behaviors, such as crossing at unmarked locations, speeding in their vehicles, on their phone while walking or driving, or other unsafe driving behaviors.

5.4 Using informal bicycle parking.
Bikes were locked to informal areas, such as parking meters, trees, or poles, other than formal bike racks.

5.5 Biking on sidewalks.
Some people were biking on sidewalks because streets felt uncomfortable for bicycling, or sidewalks provided easier or more direct routes.

5.6 Hiding from the sun.
Some people were seeking shade next to buildings or behind poles because there wasn’t enough shade provided with trees, awnings, or canopies.

5.7 Enjoying themselves.
Some people were engaging in conversation, utilizing seating areas, interacting with public art, or otherwise seemed highly content within their surrounding environment.

5.8 Traveling on informal or unmarked pathways.
Some people were using pathways or access points that were not formally designated for pedestrian or bicyclist travel, for example through empty lots, over fences, or on private property.

* Make sure to annotate these behaviors on your map and elaborate. Where did you see each occurring? What took place?
KEY RECOMMENDATIONS

Enhanced Bus Waiting Areas
Enhancing the bus waiting areas along the Pathway Arterials and Collectors can improve the safety and comfort of a bus rider’s journey. Potential enhancements could include benches, shelters, lighting, signage, a Wi-Fi hotspot, mobile device chargers, etc.

Freeway Underpass & Overpass Enhancements
Residents might be more likely to travel to the station if the underpasses and overpass were safer, cleaner, better illuminated and visually engaging.

Enhanced Pedestrian Crossings
Enhancing existing crossings can help protect station users by increasing their visibility to motorists. Crossing times can be made to last longer and to occur more often. In addition to enhancing existing crosswalks, adding well-marked crosswalks at unsignalized intersections and at midblock locations can improve convenience and safety.

Medallion Signage
Medallion signage is an affordable type of wayfinding, or directional tool, that can be installed on utility poles and streetlights. The addition of medallion signage can help to increase awareness of station proximity, especially along Arterials and Collectors that connect to the schools, parks and commercial areas.

Park-and-Ride and Drop-off Zone
Park & Ride lots provide easy vehicular parking and encourage transit ridership for motorists using their vehicles for first last mile trips. The addition of a dedicated kiss & ride zone immediately adjacent to the station would help to improve accessibility, safety and convenience at the station.
PHASE 2B: CHARRETTE - MAP ACCESS BARRIERS & STRENGTHS

USE THESE INSTRUCTIONS TO DEVELOP YOUR CHARRETTE.

Map Access Barriers & Strengths (40 mins)

Using your Walk Audit Observations and discussing them with your Team:

a) **Barriers:** Number each Barrier you identified during your Walk Audit. Write this number in Red at the appropriate location on the Access Barriers Map: **B-12**

b) Apply Red Barrier markings from Walk Audit to the Location, Street or Area affected by the barrier.

c) Use Red “Barrier” Icons next to the number to describe the type of barrier **OR**

d) Describe the Barrier on Walk Audit notes or Post-Its with same Barrier Number

e) **Strengths:** Number in Green on the map based on your Walk Audit: **S-2**

f) Add Green “Strength” Icons to map based on type of strength and area affected.

f) Add to map Blue Numbers for “Observations” from Walk Audit **O-2**.

g) Describe the observation in blue near location “O-2 Bicyclist on sidewalk”
Map Recommended Improvements (40 mins)

Discuss with your Team, using the Toolkit of Recommended Improvements we discussed, which improvements would best address the barriers you observed. If there is no team consensus, include the options you discuss.

a) Number your Recommendations to match the Barriers you mapped earlier, so R-1 is shown at the location of B-1. More than one improvement can be chosen.

b) Apply a Green “Recommended Improvement” Icon to show what type of improvement you are recommending. Multiple improvements are possible.

c) Use Green Dots, Lines or Areas to show where specific location, street-wide or area-wide improvements should be applied. Add green recommendation number.

d) After addressing all barriers with appropriate recommendations, consider if there are broader, street-wide or area-wide improvements needed. Map these using green icons and green lines or area “bubbles”.

f) Add Post-Its or Notes on the Map to explain your recommendations in more detail. Be sure to add Recommendation Number and location: “R2: Add protected bike lane on Central to slow vehicle speed and extend bike network.”

g) Make sure everyone in your group has contributed ideas, and that you have recorded every recommendation on your Pathway and Recommendations Map.
**Phase 2b: Charrette - Map Pathway Network**

Use these instructions to develop your charrette.

### Map Pathways and Consider Users (10 mins)

Note the major destinations shown on the map and observed during Walk Audit. How will people get to and from the Metro Station to these destinations?

**a)** Map these Pathways in blue marker for pedestrians and yellow marker for cyclists. Note if crosswalks, bicycle lanes and other key facilities are provided. If not, show where they should be added.

**b)** What specific needs do school students, the elderly, the disabled, cyclists, skateboarders, employees, shopper and residents have? Continue the Recommendation numbering system for Pathway/User related Recommendations. Use Green “Recommendation” Icons to describe them.

**c)** Add Notes on the Map or Post-its keyed to the Map to explain your ideas for Pathway or User related Recommendations.

**d)** Make sure the Barrier and the Recommended Improvement is clearly described and mapped for use in explaining your Group’s work.

**e)** Select a Reporter from your team to present two important recommended improvements. Describe the barriers, pathways and users they address.

---

**Before you finish:**

- Email all Walk Audit Photos to alison@kendallplanning.com
- Complete both Access Barriers and Recommendations Maps
PHASE 2B: CHARRETTE - MAP ACCESS BARRIERS & STRENGTHS

INSTRUCTIONS: Using the Aerial Base Map of the station area, map access barriers in red and access strengths in green. Use Post-it notes to add explanations of specific conditions you noted on your Walk Audit/Field Observation. The example below shows an ACCESS BARRIERS AND STRENGTHS MAP similar to the one you should prepare with your Team.
PHASE 2B: CHARRETTE–MAP ACCESS BARRIERS & STRENGTHS

Metro's ATSP has developed a Visual Glossary (excerpt below). Red indicates Access Barriers and Green indicates Access Strengths. The Visual Glossary is used to prepare an Access Barrier and Strengths Map for the area around the Station Area identified in the Walk Audit.

VISUAL GLOSSARY

The Active Transportation Strategic Plan (ATSP) Case Studies document uses a unique visual language that is consistent in each of the 20 case studies. Although the visuals are meant to be easily understood, referring to this visual glossary can be helpful when analyzing the case studies. These can also be copied and used to conduct your first last mile analysis.

EXISTING CONDITIONS VISUALS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Term</th>
<th>Further Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>Metro Transit Station or Stop</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Non-Metro Transit Station or Stop</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Public Open Space</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>School</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Public Institution</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Other Destination</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Destination Area</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Existing Bus Stop</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Existing Bikeway</td>
<td>N/A</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Gaps in the Bicycle Network</td>
<td>Street segment where an existing bikeway could extend to and strengthen connections to the larger bicycle network</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Street Conditions Barrier</td>
<td>Element along a street segment that is a barrier to and from the station such as speeding traffic</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Specific Barrier</td>
<td>Element at a specific location that is a barrier to and from the station such as a discontinuous sidewalk</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Area Barrier</td>
<td>Element within a parcel or area that is a barrier to and from the station</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Connectivity Gap</td>
<td>Barrier that is completely inaccessible due to a physical element in the public realm such as a freeway</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Corridor Asset</td>
<td>Element along a street segment that enhances accessibility to and from the station such as lighting or landscaping</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Specific Asset</td>
<td>Element at a specific location that enhances accessibility to and from the station such as an enhanced crossing</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Area Asset</td>
<td>Element within a parcel or area that enhances accessibility to and from the station such as a park-and-ride lot</td>
</tr>
</tbody>
</table>
**PHASE 2B: CHARRETTE - MAP PATHWAY NETWORK AND IMPROVEMENTS**

INSTRUCTIONS: Map the safest and the most direct pathways to the Station from major destinations such as public buildings, schools, parks and retail areas. Consider the preferred pathways for a variety of users, including those walking, cycling, using wheelchairs, taking buses or being dropped off. Use the symbols below to show bikeways, pedestrian routes and other travel routes including cut-throughs.
PHASE 2B: MAP PATHWAY NETWORK AND IMPROVEMENTS

Metro's ATSP has developed a Visual Glossary (excerpt below). Use this to map the safest and the most direct pathways to the Station from major destinations such as public buildings, schools, parks and retail areas. Consider the preferred pathways for a variety of users, including those walking, cycling, using wheelchairs, taking buses or being dropped off. Use the symbols below to show bikeways, pedestrian routes and other travel routes including cut-throughs.

PATHWAY NETWORK VISUALS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Term</th>
<th>Further Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Symbol" /></td>
<td>Existing Bikeway</td>
<td>N/A</td>
</tr>
<tr>
<td><img src="image2.png" alt="Symbol" /></td>
<td>Extension to Regional Active Transportation Network</td>
<td>Extension from an existing bikeway that connects to the Regional Active Transportation Network identified in the Active Transportation Strategic Plan</td>
</tr>
<tr>
<td><img src="image3.png" alt="Symbol" /></td>
<td>Pathway Arterial</td>
<td>Route that extends from the transit station or stop and supports maximized throughput and efficiency for active transportation users</td>
</tr>
<tr>
<td><img src="image4.png" alt="Symbol" /></td>
<td>Pathway Collector 1</td>
<td>Routes that feed into Arterials and support crossing movements and general station area permeability; Collector 1s have a greater capacity to accommodate people walking and bicycling compared to Collector 2s</td>
</tr>
<tr>
<td><img src="image5.png" alt="Symbol" /></td>
<td>Pathway Collector 2</td>
<td></td>
</tr>
<tr>
<td><img src="image6.png" alt="Symbol" /></td>
<td>Cut-Through</td>
<td>Supporting paths, often used as shortcuts that feed into Arterials and Collectors</td>
</tr>
<tr>
<td><img src="image7.png" alt="Symbol" /></td>
<td>Proposed Bikeway</td>
<td>Bikeways are proposed in municipal and regional plans</td>
</tr>
<tr>
<td><img src="image8.png" alt="Symbol" /></td>
<td>Extension to Regional Active Transportation Network</td>
<td>Extension to a proposed bikeway that connects with the ATSP Regional Network</td>
</tr>
</tbody>
</table>

This map illustrates a potential Pathway network at the North Hollywood Metro Station, developed utilizing the process outlined in this chapter. The fifteen minute walk equates to a one-half mile radius around the station portal.

The map is depicted in the style of a transit map, to suggest that for the user, the Pathway would be understood as an extension of the transit experience.

Certain access components, such as bike share, car share, parking, and location of wayfinding stations are presented to illustrate the concept that a range of access and mobility solutions could be strategically bundled around Pathway networks.
**PHASE 2B: CHARRETTE - MAP PATHWAY NETWORK AND IMPROVEMENTS**

INSTRUCTIONS: There is an ever expanding Toolbox of First/Last Mile Improvements designed to improve transit station access by walking, bicycling, skateboarding, wheelchair, stroller and other active transportation modes. The Active Transportation Strategic Plan contains a lengthy Toolbox of Pathway Improvements similar in format to those in the Key Recommendations in Phase 2A. The list below is a short overview of some of the most frequently used improvements as well as some emerging pedestrian and bicycle facility types. Add your own suggestions to address Access Barriers you observed, use the Improvement Number and key them to your Pathway Network Map.

<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
<th>ACCESS BARRIER</th>
<th>USER GROUP</th>
<th>IMPROVEMENT TYPE</th>
<th>ISSUES ADDRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec. #1</td>
<td>Low Visibility Crosswalk</td>
<td>Pedestrians</td>
<td>Continental Or “Zebra” Crosswalk With Stop Line</td>
<td>Vehicles More Likely To Yield To Pedestrians In Crosswalk</td>
</tr>
<tr>
<td>Rec. #2</td>
<td>Multilane, Wide Streets</td>
<td>Pedestrians</td>
<td>Median Refuge</td>
<td>Simplify Crossing And Allow Two Stage Street Crossing</td>
</tr>
<tr>
<td>Rec. #3</td>
<td>Wide Streets</td>
<td>Pedestrians</td>
<td>Curb Bulb Outs</td>
<td></td>
</tr>
<tr>
<td>Rec. #4</td>
<td>High Speed Traffic</td>
<td>Pedestrians, Cyclists, All</td>
<td>Narrow Traffic Lanes And/Or Add Street Trees</td>
<td>Reduce Speed, Provide Bike Lanes Or Wider Sidewalk</td>
</tr>
<tr>
<td>Rec. #5</td>
<td>Congested Intersection</td>
<td>Vehicles, Cyclists</td>
<td>Traffic Circles Or Roundabouts</td>
<td>Reduce Speed, Reduce Need For Full Stop At Intersection</td>
</tr>
<tr>
<td>Rec. #6</td>
<td>High Speed Traffic</td>
<td>All</td>
<td>Lower And Enforce Posted Speed Limit</td>
<td>Reduce Serious Injuries To Pedestrians, Cyclists, Others</td>
</tr>
<tr>
<td>Rec. #7</td>
<td>Crossing Signal Too Short</td>
<td>Old, Young, Disabled</td>
<td>Longer Crossing Signal Or Advanced Ped. Signal</td>
<td>Provide Longer Crossing Time And Reduce Injury Exposure</td>
</tr>
<tr>
<td>Rec. #8</td>
<td>Heavy Pedestrian And Vehicle Flows</td>
<td>All Especially Pedestrians</td>
<td>“Scramble” Diagonal Pedestrian Crossing</td>
<td>Freezes Vehicles During Pedestrian Crossings</td>
</tr>
<tr>
<td>Rec. #9</td>
<td>Lack Of Curb Cuts</td>
<td>Wheelchairs, Skateboarders, Strollers</td>
<td>Two Curb Cuts Per Corner Or Diagonal Curb Cuts</td>
<td>Ada Compliance, Easier Access For User Groups</td>
</tr>
<tr>
<td>Rec. #10</td>
<td>Fast Traffic With Heavy Bike Volume</td>
<td>Cyclists And Vehicles</td>
<td>Buffered Bike Lane</td>
<td>Separate Bicyclists From Moving Traffic Or Parked Cars</td>
</tr>
<tr>
<td>Rec. #11</td>
<td>Door Zone Hazard To Cyclists</td>
<td>...</td>
<td>Door Zone Buffer From Parked Cars</td>
<td>Separate Bicyclists From Car Doors Opening Into Bikelane</td>
</tr>
<tr>
<td>Rec. #12</td>
<td>Parked Or Moving Cars In Bike Lane</td>
<td>Bicyclists</td>
<td>Separated Bike Lanes With Median Or Bollards</td>
<td>Prevent Cars From Parking Or Crossing Into Bike Lane</td>
</tr>
</tbody>
</table>
EFFECTIVE STRATEGIES FOR RESPONDING TO PUBLIC INPUT

• Never present the needs of one group (pedestrians, cyclists, disabled) as being opposed to another group (drivers, Uber users, etc).

• Identify the main concerns of each group and recognize people belong to several groups (cyclists are often drivers too).

• Don’t try to solve problems during public input sessions, recording concerns is most important-solutions may need more time to resolve.

• Make sure all concerns are noted or heard. Encourage quieter people to put ideas on post its or comment forms.

• Encourage people to listen to others and learn from them so they recognize the diverse interests which need to be balanced.

TIPS FOR A SUCCESSFUL PUBLIC ENGAGEMENT PROCESS

• Solicit Community input early and often to build public support for approval.

• Use interactive meetings like a Walk Audit, Open House or Charette to invite discussion.

• Provide information online, solicit survey input, and report on progress.

• Adapt materials and events to include low income, non-English speakers, transit dependent, all ages.

• Consider forming a Pedestrian/Bicycle Advisory Committee.

• Include diverse group of transit users, walking and bicycling advocates, and other community leaders.

• Highlight benefits such as cleaner air, quieter and safer streets which appeal to all.

• Minimize reliance on Public Hearings for input, which discourage participation and can be intimidating.

PHASE 3A: COMMUNITY ENGAGEMENT IN REFINE PATHWAY

PHASE 3 | Refine the First/Last Mile Pathway Network Improvements
PHASE 3B: TECHNICAL INPUT TO CUSTOMIZE IMPROVEMENTS

EFFECTIVE STRATEGIES FOR INCORPORATING TECHNICAL INPUT

- Convene a small Technical Advisory Committee including affected departments

- Provide clear graphics and presentations to explain the proposed design

- Present safety and cost information for similar projects to address concerns

- Visit or research similar projects and ask about “lessons learned”

- Use NACTO, Case Studies, and Best Practices in other cities to guide your design

- Consider using “pop ups” or “pilot projects” if unsure if new improvements will work.

- Collect before and after photos, counts and collision data

Best Practices are evolving rapidly for pedestrian, bicycle and transit improvements. In addition to Metro First Last Mile and Complete Streets Training, SCAG, Caltrans, the FHWA, the National Association of City Transportation Officials and many other associations provide training and guidelines on new street design standards. See the Resources list on the last page of the Workshop or contact us at firstlastmile@metro.net for more training or technical assistance ideas.

Allow ample opportunity for City technical experts from planning, transportation, public works, police and fire departments to review proposed improvement designs and identify specific concerns. Consult other cities with similar improvements in your area. Let us know if you need additional technical assistance. Be sure to review the First/Last Mile Strategic Plan and Active Transportation Strategic Plan which include a large “Toolbox” of possible improvements.
## PHASE 4 | Developing Costs, Phasing and Funding Options

<table>
<thead>
<tr>
<th>FUNDING TYPE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Call for Projects</td>
<td>Metro</td>
</tr>
<tr>
<td>Proposition C</td>
<td>Metro</td>
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<tr>
<td>Measure R and Measure M</td>
<td>Metro</td>
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<tr>
<td>Cap &amp; Trade (including AHSC)</td>
<td>CA EPA</td>
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<tr>
<td>Active Transportation Program (ATP)</td>
<td>Caltrans/SCAG</td>
</tr>
<tr>
<td>Regional Surface Transportation Program</td>
<td>Caltrans</td>
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<tr>
<td>Sustainability Transportation Planning Grants</td>
<td>Caltrans</td>
</tr>
<tr>
<td>Congestion Mitigation and Air Quality Program</td>
<td>FHWA</td>
</tr>
<tr>
<td>Surface Transportation Program Local</td>
<td>FTA</td>
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<tr>
<td>TIGER Discretionary Grants</td>
<td>US DOT</td>
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<tr>
<td>Rural and Urbanized Area Formula Grants</td>
<td>FTA</td>
</tr>
<tr>
<td>Sustainability Planning Grants</td>
<td>SCAG</td>
</tr>
</tbody>
</table>

### PHASE 4A: DEVELOP IMPROVEMENT PHASING AND PRIORITIES

Phase 4A begins with the initial tasks of Developing Improvement Phasing and Priorities. Phasing improvements to a single street or project area or grouping them with related Citywide tasks can often dramatically reduce costs of pedestrian and bicycle facilities. Priorities can include areas with safety issues, heavier use, vulnerable users, or supportive property owners. Identifying performance measures such as reducing traffic injuries and increasing active transportation use can help focus priorities.

### PHASE 4B: DETERMINE COSTS AND FUNDING OPTIONS

This phase includes Determining Estimated Costs and Funding Options. While costs to implement First/Last Mile improvements vary widely with phasing and jurisdiction, the Active Transportation Strategic Plan provides some helpful data on typical costs per mile or intersection for common improvements for use in seeking Metro, State, Federal and other funding. New Metro and State funding sources are emerging in recognition of the health, fiscal and environmental benefits of active transportation.
First Last Mile Analysis-Transit Stations/Stops in LA County

Metro Funding for First/Last Mile Planning and Implementation

Through the implementation of Measure M, and recent board policy on first/last mile, there will be substantial resources available for planning and implementation. These include:

- Metro to lead plan and directly fund plan development for 254 locations countywide
- Metro to include design and implementation for all new station areas
- Measure M Countywide Active Transportation Program (2% of measure proceeds)
- Measure M Subregional Programs (pending program guidelines)
- First/Last Mile Matching Grant program (supports local applications for State/Federal funding, program parameters under development)
**FIRST/LAST MILE PLANNING**
First/Last Mile Strategic Plan–Adopted March 2014, by the LA Metro Board of Directors
metro.net/projects/countywide-planning

**Next Trainings**
For more information about future workshops, visit
metro.net/projects/sustainability-training-workshops
or contact Jacob Lieb, METRO at liebj@metro.net

**COMPLETE STREETS POLICY**
LA Metro: Complete Streets Policy–Adopted 2014

Complete Streets Training Workshops
metro.net/projects/sustainability-training-workshops

**ACTIVE TRANSPORTATION PLANNING**
LA Metro: Active Transportation Strategic Plan–Adopted May 2016
metro.net/projects/active-transportation-strategic-plan

Active Transportation Strategic Plan Online Data Portal
gis.fehrandpeers.com/metroatsp

Scene image of a map with a legend titled "active transportation strategic plan."

**PEDESTRIAN AND BICYCLIST SAFETY**
PedSafe (and BikeSafe): Planning and Designing for Pedestrian (and Bicyclist) Safety, Federal Highway Administration and Pedestrian and Bicycle Information Center
peter.eun@fhwa.dot.gov

League of American Bicyclists/ Bicycle Safety Videos
bikeleague.org; pedbikesafe.org

NACTO Bikeway Design Guidelines nacto.org

California Active Transportation Safety Information Pages (CATSIP) and UC Berkeley - SafeTREC tim.s.berkeley.edu

Institute of Transportation Engineers (ITE) ite.org

PROWAG – Proposed rights-of-way Access Guidelines
access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way

AASHTO American Association of State Highway and Transportation Officials
transportation.org

**TRANSIT ORIENTED DESIGN & COMPLETE STREETS DESIGN**
MetroLink Mobility Hub Guidelines

Urban Street Design Guide, NACTO (National Association of City Transportation Officials), 2013 nacto.org

Smart Growth America: Complete Streets Fundamentals
smartgrowthamerica.org/tag/complete-streets-fundamentals

Better streets SAN FRANCISCO sfbetterstreets.org

Atlanta’s Livable Centers Initiative
atlantaregional.com/land-use/livable-centers-initiative

Shared-Use Mobility Center sharedusemobilitycenter.org


FHWA Achieving Multimodal Networks
fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks

**FUNDING FOR FIRST/LAST MILE PROJECTS**
Metro First/Last Mile Funding for Planning and Implementation: Call for Projects

First/Last Mile Improvements in Joint Development Projects and as CEQA Mitigation Measure

Cap and Trade Funding Mitigation Measure

State and Federal Grants: ATP, HSIP, TIGER

**PROMOTING SUSTAINABLE TRANSPORTATION/CHANGING TRAVEL BEHAVIOR**
Alternative Transportation Mitigation Metrics

Best Practices: San Francisco MTA

**NEXT STEPS | Resources For Planning and Implementation**