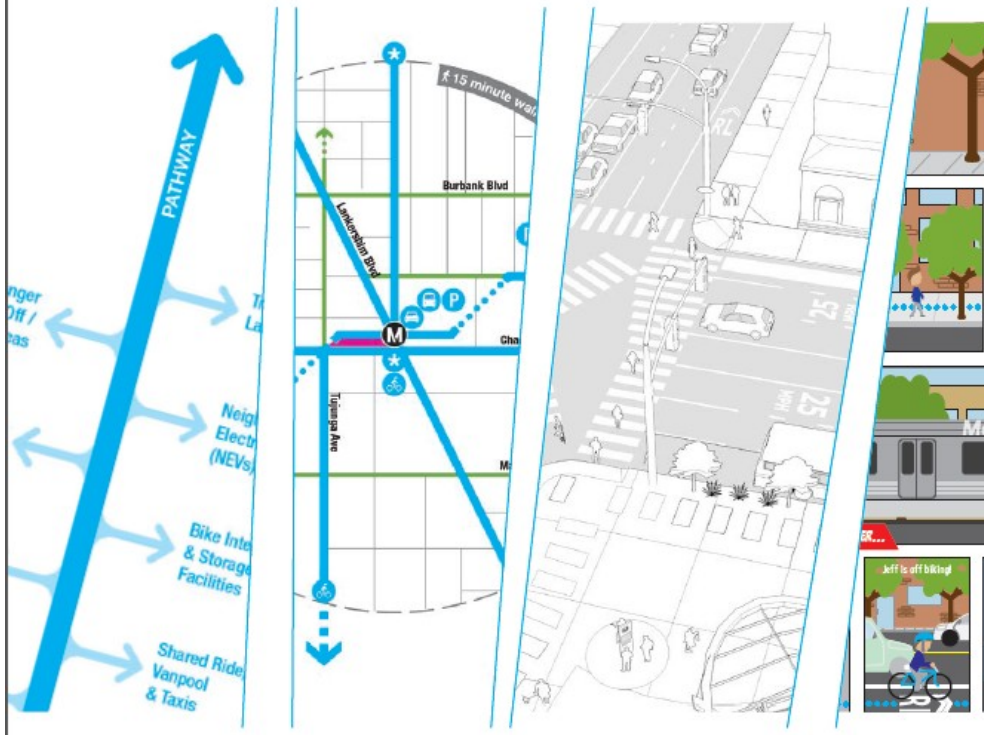
First Last Mile Strategic Plan

& PLANNING GUIDELINES

Source: https://todresources.org/resources/la-metro-firstlast-mile-strategic-plan/



Metro

Los Angeles County Metropolitan Transportation Authority - Metro | Southern California Association of Governments - SCAG MARCH

1 INTRODUCTION

How to use these Guidelines

WHY ?

The guidelines are structured around the following sections:

Introduction

First Last Mile Planning

3

The Pathway

Pathway goals, policy context and guiding principles are reviewed.

Pathway users, both today and in the future, are discussed.

Network Identification

a methodology for the layout of Pathway networks within station areas.

Pathway Toolbox

Pathway network routes. Each individual improvement includes a visual example, discussion of goals, and guidance on how to integrate the specific improvement with the overall Pathway system.

Illustrations

to demonstrate key ideas of the Pathway concept.

Strategies for Plan Application

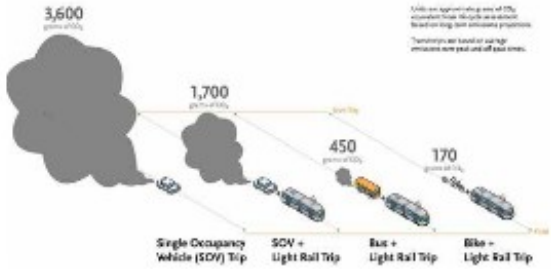
An Implementation Table and ridership targets are dispresented to guide next step efforts.

Appendix

WHAT?

2 FIRST LAST MILE PLANNING

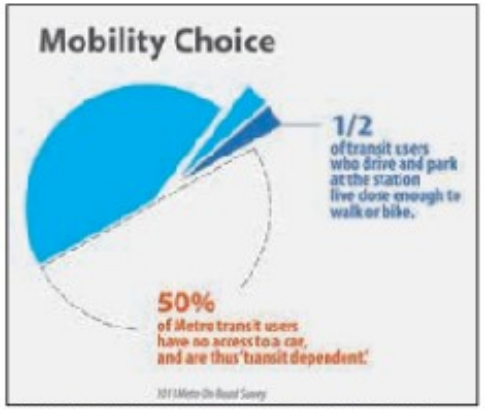
Greenhouse Gas Emissions Per Person Per Trip



Mobility & Employment

Transfer Activity

Mobility Choice



station catchment areas.

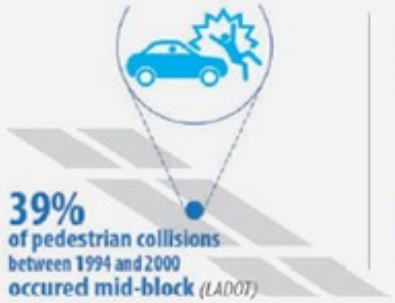
User Safety along Access Routes

Bicyclist Safety

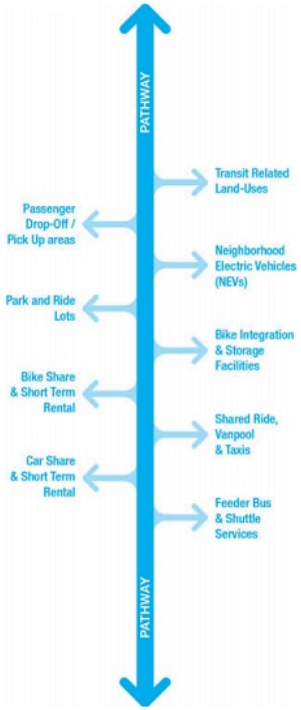
Pedestrian Safety

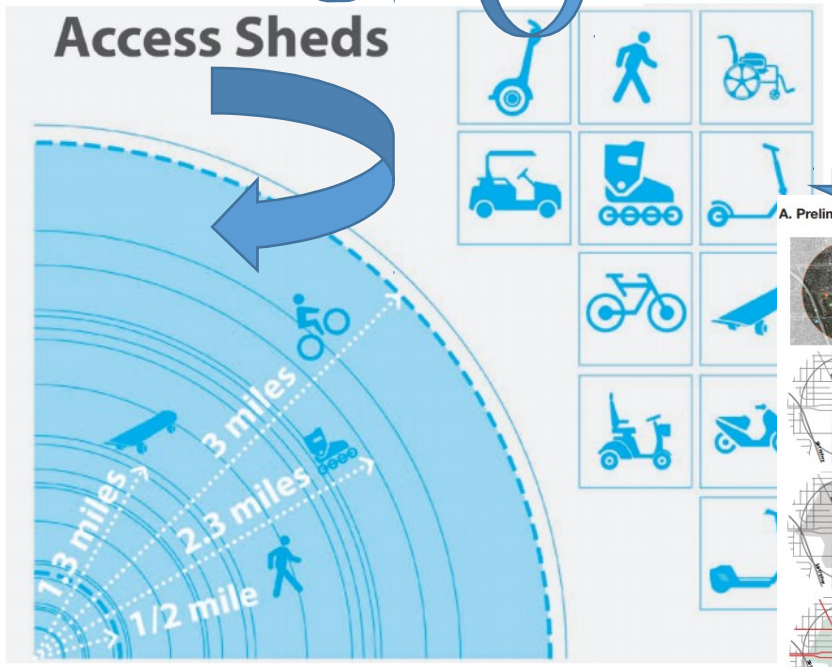
Pedestrian fatality rates for children under age 4 and seniors over age 70 in L.A. are double the national standard.

Pedestrian fatalities represented **36.8%** of all traffic fatalities between 1994 & 2000 in L.A. *(LADOT)*



FIRST LAST MILE STRATEGIC PLAN





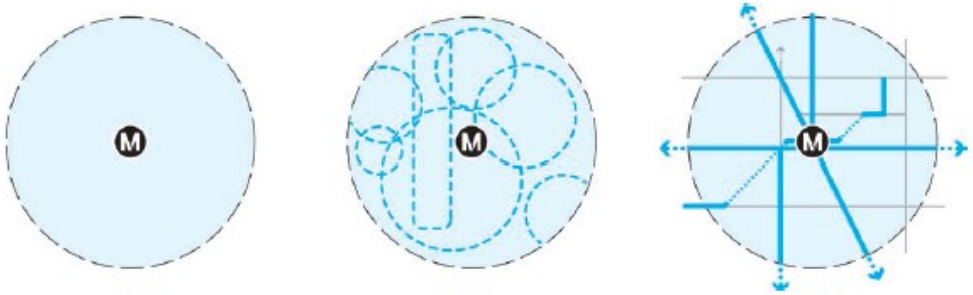
Pathway – Guiding Principles

These guidelines outline an approach for planning Pathway networks at Metro Rail and BRT stations and present a toolbox of strategies that can be considered when implementing Pathway networks.

The following values define the Pathway and provide a basis for design:

This chapter outlines a methodology for planning Pathway networks at transit stations. The three steps include:

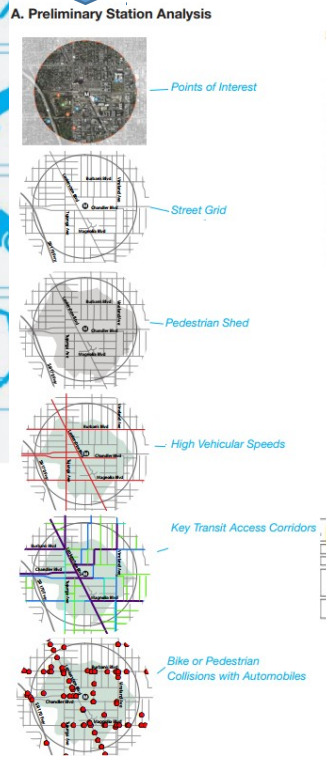
HOW ?

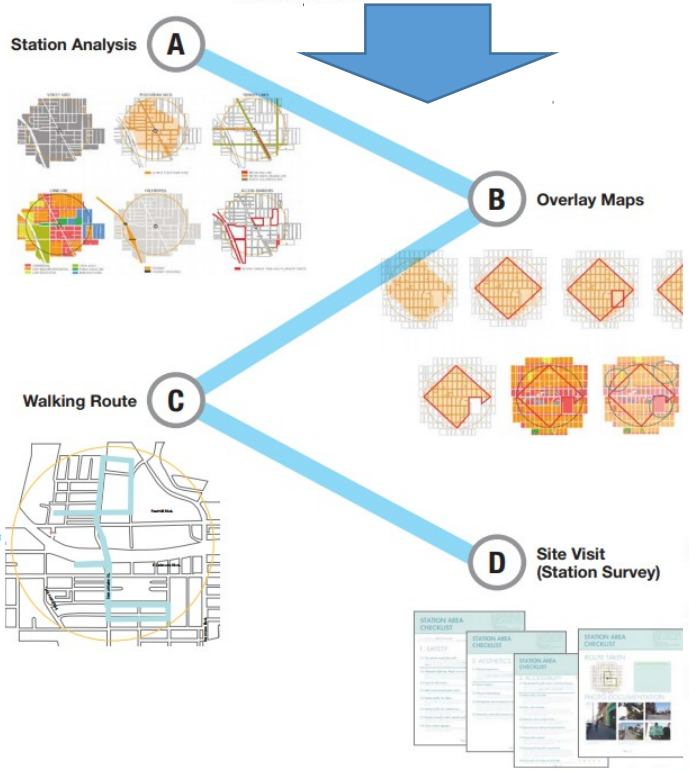


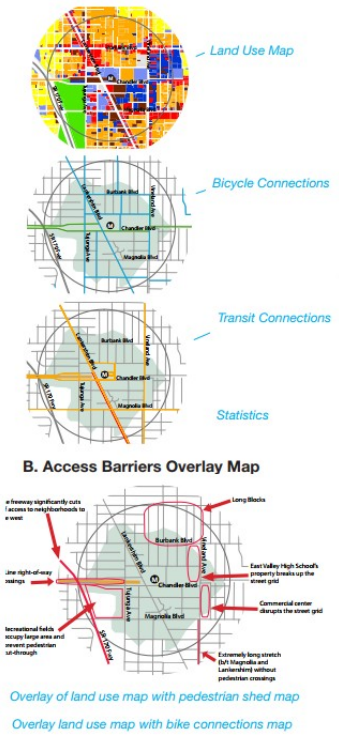
1 Site Area Definition

2 Analyze Existing Conditions

3 Layout Pathway Network

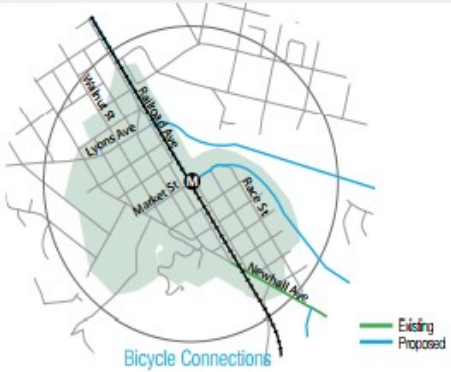




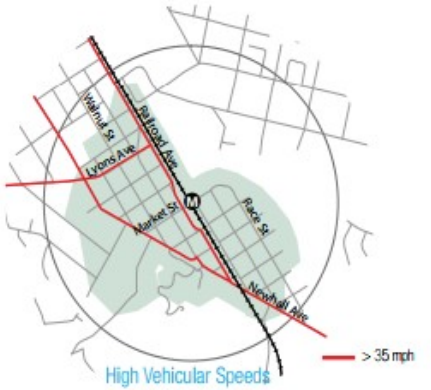


SITE 1: Newhall Metrolink Station

Transit Connections

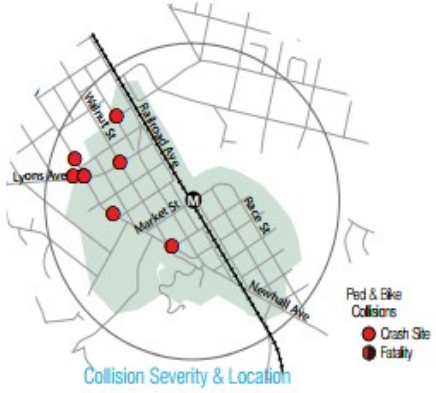


Bicycle Connections

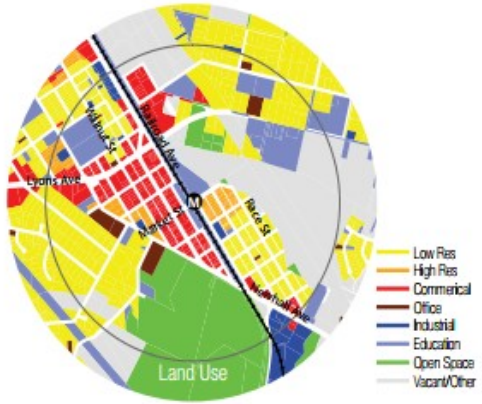


High Vehicular Speeds

Key Transit Access Corridors



Collision Severity & Location



Land Use

Walk Score: 78 / Overlay Zones: N/A / Density: 4,331 total population / Employment: 3.65 jobs per acre / Journey to Work: 23.2% take transit/bike/walk to work

SITE 1: Newhall Metrolink Station

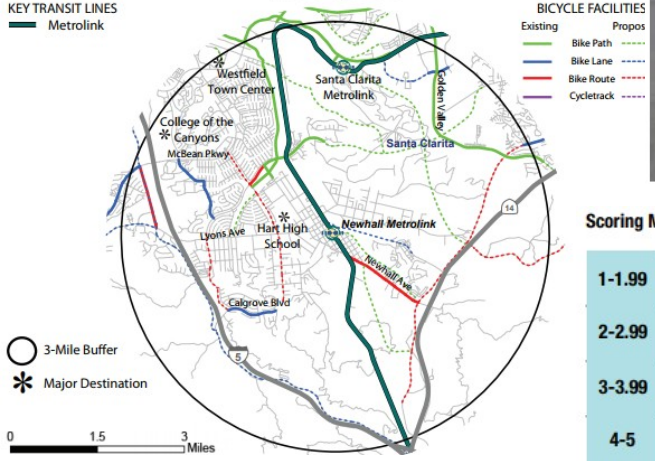
Points of Interest

INSTITUTIONS
1 Newhall DMV
2 Newhall Library
3 Senior Center
4 LA County Community Center
5 Santa Clarita Community Center

SCHOOLS
6 Newhall Elementary
7 Town & Country Farm School
8 The Master's College

PARKS
9 William S. Hart Park
10 Creekview Park

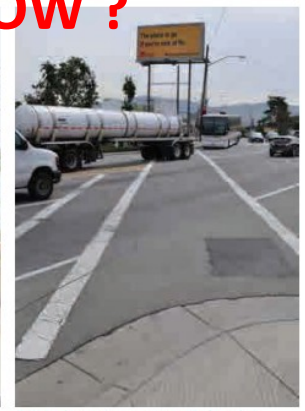
LA Metro First-Last Mile Strategic Plan Newhall Metrolink Station
Transit and Bicycle Network



SITE 1: Newhall Metrolink Station

HOW ?


2.3 Vehicular-oriented residential neighborhood with limited pedestrian amenities


3.1 Pedestrian crossing at Railroad & Newhall Ave is not friendly

Scoring Matrix

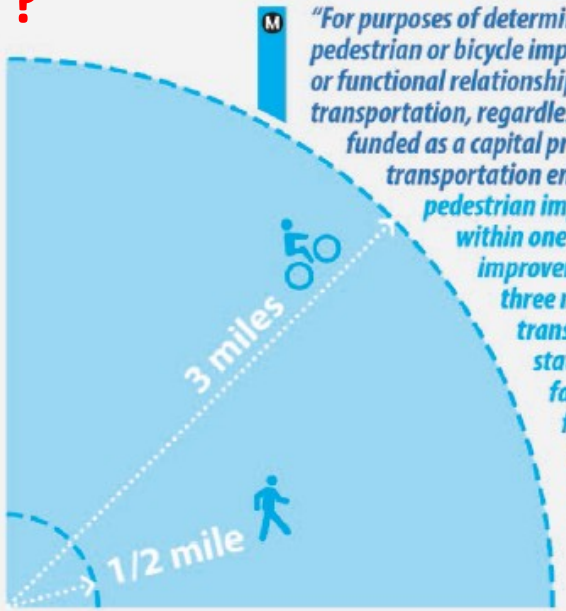
1-1.99	Poor
2-2.99	Fair
3-3.99	Good
4-5	Excellent

Checklist (see Appendix)

WHEN ?

FTA Policy

**Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law*

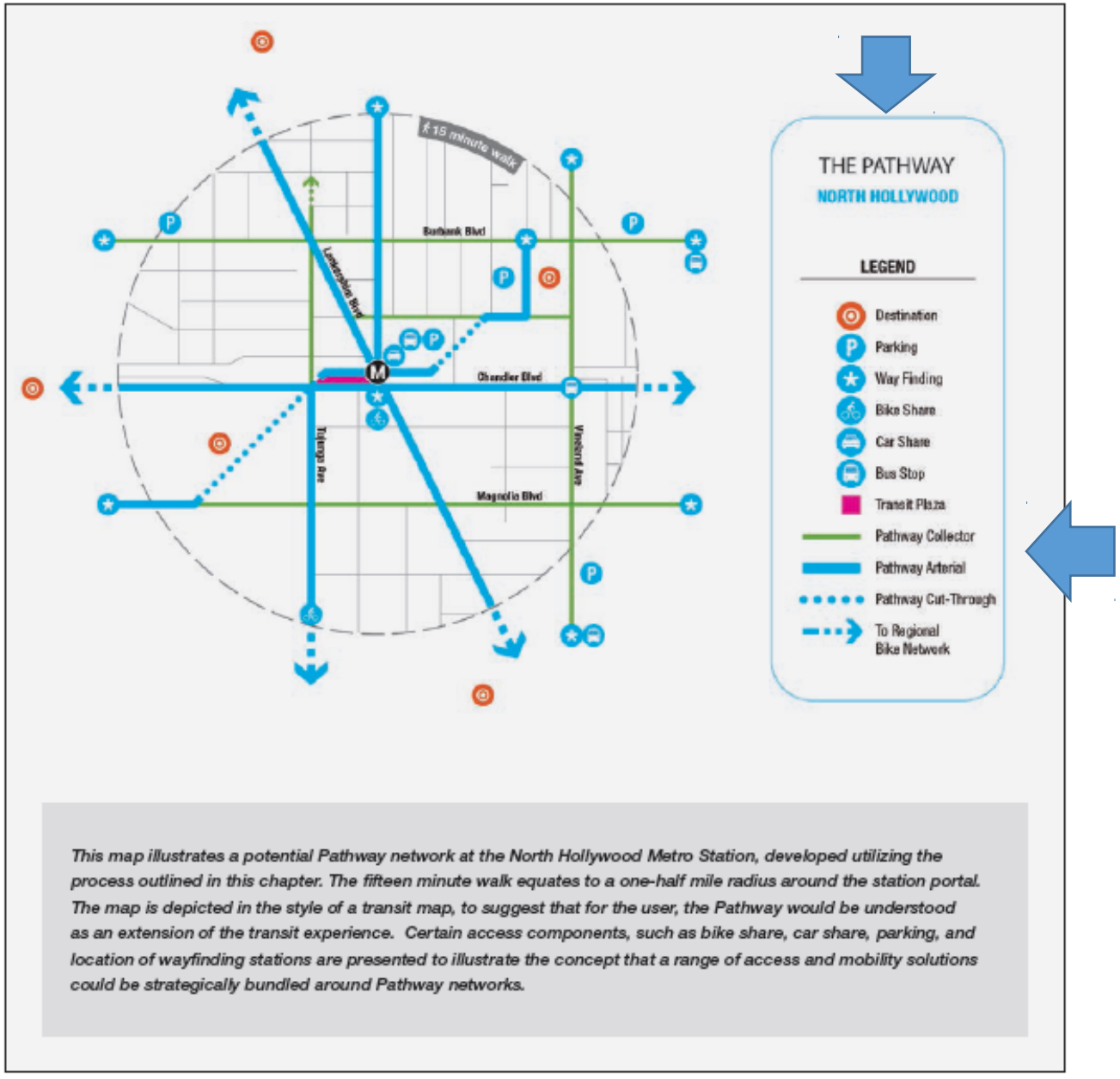


"For purposes of determining whether a pedestrian or bicycle improvement has a physical or functional relationship to public transportation, regardless of whether it is funded as a capital project or public transportation enhancement, all pedestrian improvements located within one-half mile and all bicycle improvements located within three miles of a public transportation stop or station shall have a de facto physical and functional relationship to public transportation."

FTA - August 15, 2011

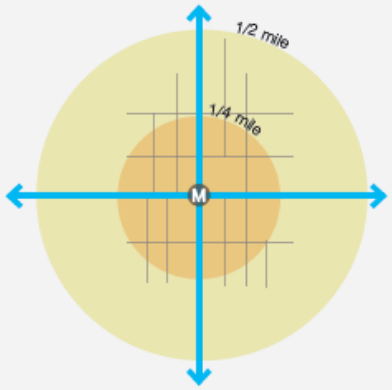
New FTA Bicycle and Pedestrian Catchement Areas for Los Angeles County MTA Existing and Proposed BRT and Rail Facilities

A Prototype Pathway Network Map...



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.

Expanding the Sphere of Influence



M Metro Station
Pathway Collector
Pathway Arterial

EXTENDED STATION ZONE (AREA 1)

5-Minute Walk/2-Minute Bike

- Pathways are more visible
- Enhanced safety features
- Larger, more prominent Pathway signage
- Directional markers with time-to-station signage
- Frequent crossings
- Train time arrival/departure digital displays

TRANSIT-FRIENDLY ZONE (AREA 2)

10-Minute Walk/5-Minute Bike

- Less overt, more passive wayfinding and Pathway markers
- Address the most pressing safety and access improvements, such as:
  - New crossings
  - Curb ramps
  - Maintenance
  - Lighting and landscaping

5 PATHWAY TOOLBOX

HOW

SAFE

How to Use this Guide

Category Labels each Component with one of the six categories: Crossing Enhancements and Connections; Signage and Wayfinding, Safety and Comfort, Allocation of the Streetspace, and Integrated Transit Access Solutions.

Component Name of Component.

Goal Describes what the Component should aim to do and who it should serve.

Guidelines and Resources Defines the Component. Guidelines presented focus on those aspects of design and planning that are particularly transit-supportive, rather than describing the full universe of good design standards or common best practices. References are included for other design and planning guidance. See the end of this chapter for a full list of references.

Transit Integration Identifies elements that can be used to identify or brand the Component as part of the Metro System, recognizable to the transit rider.

Pathway Network Compatibility Identifies relevance of Tool by pathway type (Collector, Arterial, or Cut-Through), and by sphere of influence (Area 1, the Extended Station Zone or Area 2, the Transit Friendly Zone.).

Issues Addressed Shows how the Component responds to the six critical Station Access Barriers, that identify which problem(s) it helps solve.

CROSSINGS AND CONNECTIONS

Cut-Throughs and Shortcuts

Goals

- Provide more direct routes to and from the station

Guidelines and Resources

- Design shortcuts with special paving, lighting, furnishings, and shade so that they are inviting to pedestrians of varying ages and abilities
- Design shortcuts to accommodate bicyclists and other active transportation users with a sufficiently wide pathway and smooth surface
- Use directional signage to the stations at entrances to shortcuts
- If located in the middle of the block, design shortcut paths that lead to a mid-block crossing for easier access across streets
- Make sure that pathways are well-maintained, well-lit, and located in "people-friendly" places, i.e. places that are well-traveled, highly-visible, and pedestrian-oriented
- Maintain existing cut-throughs and add safety enhancements

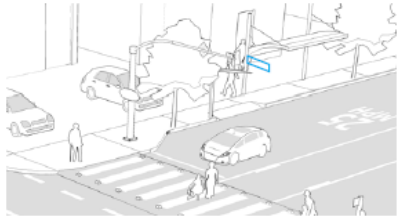
Transit Integration

- Use Metro signage at entrances and decision points
- Regularly place branded Metro medallion signage for the length of the pathway, every 60-100 ft approx

Station Access Barriers Addressed:		Component Appropriate For Use On:	
☑	Long Blocks	☐	Arterial 1
☐	Freeways	☐	Collector 1
☑	Maintenance	☐	Arterial 2
☑	Safety and Security	☐	Collector 2
☐	Legibility	☑	Cut-Through
☐	ROW Allocation and Design		

SIGNAGE AND WAYFINDING

Time-to-Station Signage



Goals

- Increase awareness of active transportation, transit, and transit-proximity
- Encourage people to use active transportation modes
- Provide helpful navigation and information on distance and time to get to the station via alternative transportation

Guidelines and Resources

- Include pedestrian and bicycle times with directional arrows
- Consider the travel times for other active transportation users

Transit Integration

- Place notation on or adjacent to Pathway medallion signage

Station Access Barriers Addressed		Component Appropriate For Use On:	
☐	Long Blocks	☐	Arterial 1
☐	Freeways	☐	Collector 1
☐	Maintenance	☑	Arterial 2
☐	Safety and Security	☑	Collector 2
☑	Legibility	☐	Cut-Through
☐	ROW Allocation and Design		

Real-Time Signage Adjacent to Station

Goals

- Facilitate a bus to rail transfer and allow active transportation users to pick the best transit option in real-time
- Warn user of expected delays
- Encourage use for first-time transit users

Guidelines and Resources

- Introduce dynamic signage that shows expected arrival times for buses, trains, etc.
- Place signs at or immediately adjacent to bus stops and subway portals (above ground)
- Maintain and update real-time signage as technological capabilities improve

Transit Integration

- Place real-time signage on or adjacent to Pathway medallion signage or other Pathway components, using consistent Pathway logo and design

Station Access Barriers Addressed		Component Appropriate For Use On:	
☐	Long Blocks	☑	Arterial 1
☐	Freeways	☑	Collector 1
☐	Maintenance	☐	Arterial 2
☐	Safety and Security	☐	Collector 2
☑	Legibility	☐	Cut-Through
☐	ROW Allocation and Design		

ALLOCATION OF STREETSPACE

Bus Enhancements

Goals

» Provide dedicated space and more direct access for buses, which facilitates travel by bus and makes transfers easier for bus riders.

Guidelines and Resources

» Use bus-only lanes and design lights for buses, along long transit corridors
» Consider the application of contra-flow bus lanes where streets are one-way, but short, efficient connections could be made for buses
» Consider the use of dedicated bus lanes and bus stops bulbs that make it easier for bus operators to pick up passengers and re-enter traffic
» Consider the application of far-side bus stops - stops that are past the intersection rather than before it, which are safer in terms of pedestrian crossing and easier in terms of bus traffic flow
» See Enhanced Bus Waiting Area Tool

Transit Integration

» Integrate these improvements into the Metro brand, in terms of signage, wayfinding, and any special treatments to the ground plane

Station Access Barriers Addressed

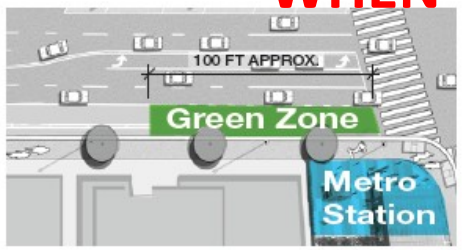
- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

The Green Zone

WHEN



Goals

» Prioritize green vehicles and active transportation uses at or very near the station area

Guidelines and Resources

» Dedicate a Green Zone within the parking lane, parking area, or outside travel lane adjacent to station areas, which is marked with paint and identity/safety signage and which allows area for green transportation such as pick up/drop off for shared rides, parking for electric vehicles, bus stops, car share parking, etc.
» Configure the Green Zone as space allows in each particular condition; sometimes the Zone may best serve as a bus waiting area or a kiss-and-ride location, while in others, car share or electric vehicle parking might be most appropriate

Transit Integration

» Use eye-catching paint and graphics on the street pavement and on signage to help brand the Green Zone as part of the Metro system

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

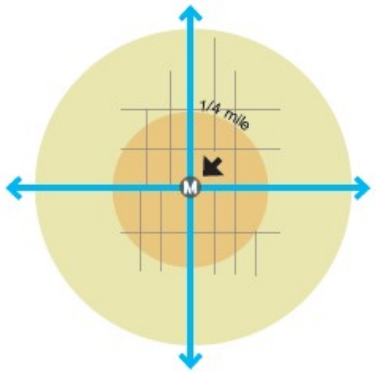
- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

PUTTING IT TOGETHER - ILLUSTRATION

Extended Station Zone

INTUITIVE

Typical application in regional centers, with the region's largest concentration of housing and jobs. Refer to CSPP Place-types D. - http://media.metro.net/projects_studies/sustainability/images/countywide_sustainability_planning_policy.pdf

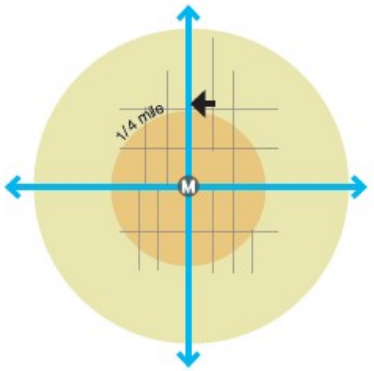


1. Metro Station Portal and Plaza
2. Signage with Real-Time Transit Information
3. Medallion Signage and Curb-Edge Banding
4. Colored Scramble Crossings
5. Advisory Bike Lane (see Rolling Lane)
6. Green Zone and Kiss-and-Ride
7. Bike Share/Bike Station
8. Bulb-Outs at Intersections
9. Traffic Calming
10. Enhanced Bus Facilities
11. Sidewalk Widening

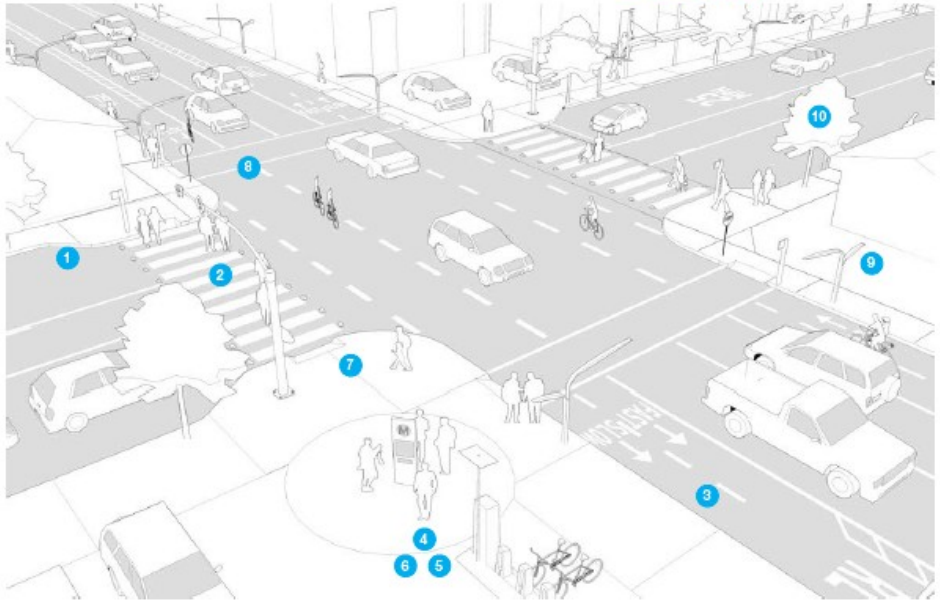
PUTTING IT TOGETHER - ILLUSTRATION

Transit-Friendly Zone

» Typical application in sub-regional centers that act as activity and transit hubs for surrounding suburban neighborhoods or lower density employment/industrial parks. Refer to CSPP Place-types A & B - http://media.metro.net/projects_studies/sustainability/images/countywide_sustainability_planning_policy.pdf



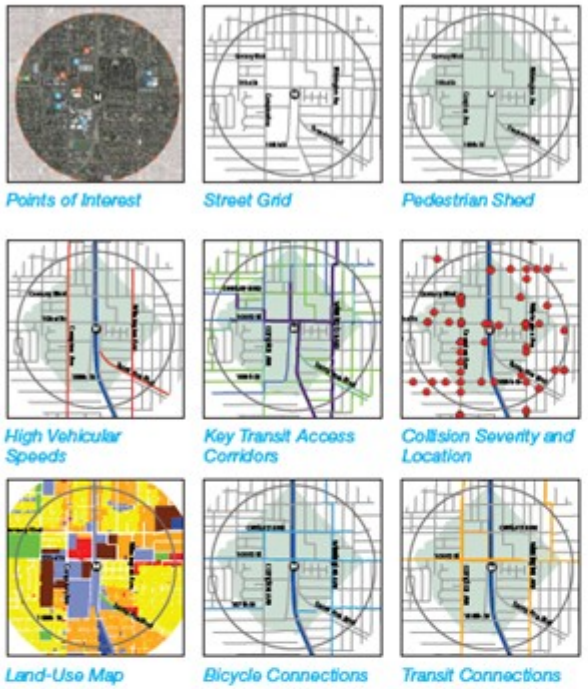
1. Medallion Signage
2. Continental Crosswalks
3. Rolling Lane
4. Car Share
5. Micro Park-and-Ride
6. Van Pool
7. Dual Curb Ramps
8. Signal Modifications
9. Pedestrian Lighting
10. Landscaping

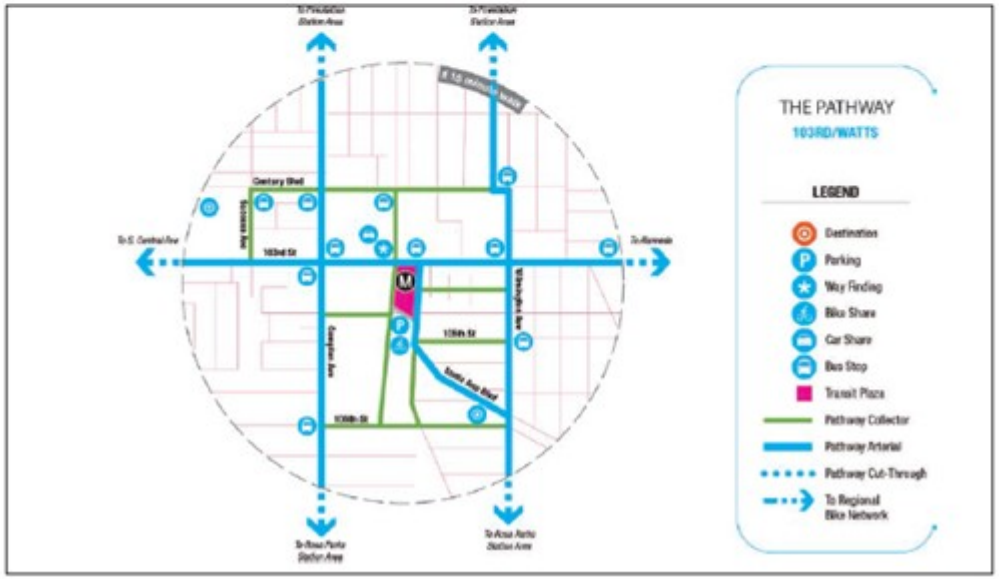


WHEN

103rd/Watts Station Network Design

UNIVERSALLY ACCESSIBLE

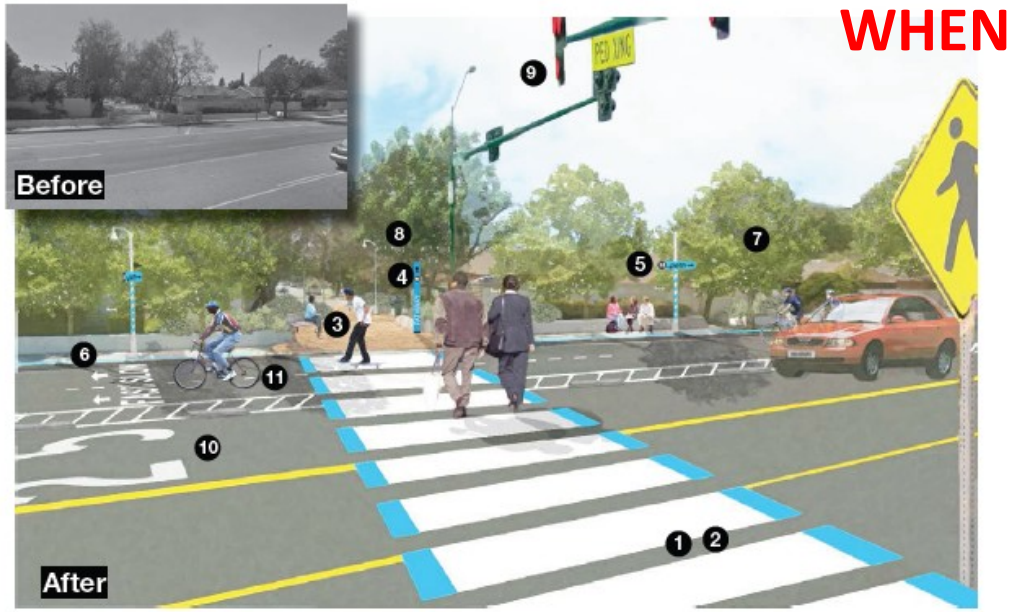




103rd/Watts Station, Location 1

103rd Place and Wilmington Avenue – Less intensive variation, non-seperated Rolling Lane

WHEN



Components Used at Case Study Site

Crossings Enhancements and Connections

1. Continental crosswalks
2. Mid-block and additional crossings
3. Cut-throughs (multi-modal pathway through pedestrian paseo)

Signage and Wayfinding

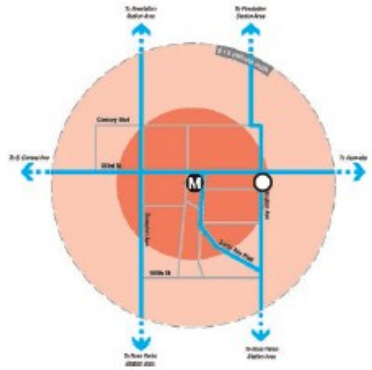
4. Signage
5. Medallion signage
6. Curb-edge banding

Safety and Comfort

7. Landscaping/Shade
8. Lighting

Allocation of the Streetspace

9. Signal modification
10. Traffic calming
11. Rolling Lane (Buffered)



Ⓜ Metro Station Location

○ Visualization Location

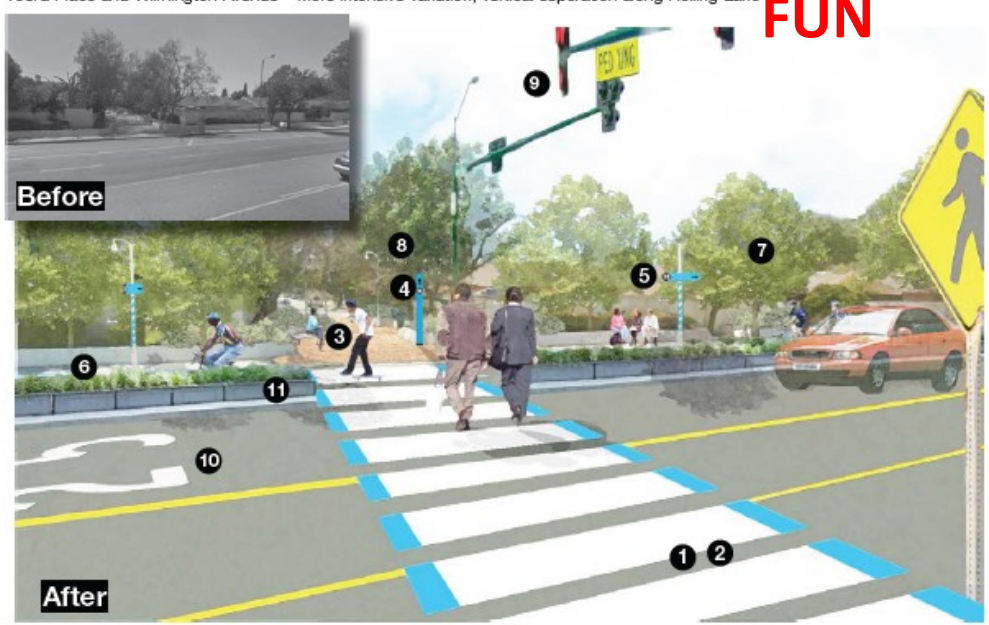
EXTENDED STATION ZONE (Area 1)
5-Minute Walk / 2-Minute Bike

TRANSIT-FRIENDLY ZONE (Area 2)
10-Minute Walk / 5-Minute Bike

103rd/Watts Station, Location 1 (enhanced)

103rd Place and Wilmington Avenue – More intensive variation, vertical seperation along Rolling Lane

FUN



Components Used at Case Study Site

Crossings Enhancements and Connections

1. Continental crosswalks
2. Mid-block and additional crossings
3. Cut-throughs (multi-modal pathway through pedestrian paseo)

Signage and Wayfinding

4. Signage
5. Medallion signage
6. Curb-edge banding

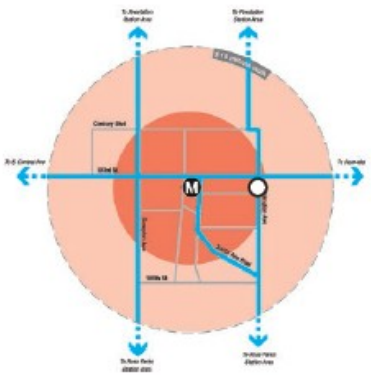
Safety and Comfort

7. Landscaping/Shade
9. Lighting

Allocation of the Streetspace

9. Signal modification
10. Traffic calming
11. Rolling Lane (vertical seperation)

*Note: Components dipicted are the same as previous visualization with the exception of the added vertical seperation between the Rolling Lane and vehicular path of travel.



Ⓜ Metro Station Location

○ Visualization Location

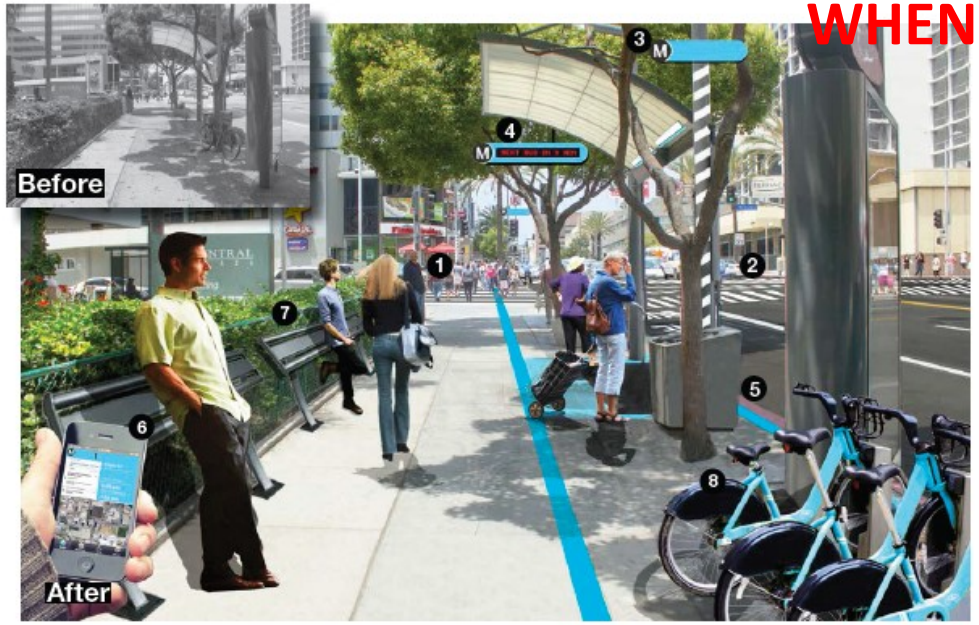
EXTENDED STATION ZONE (Area 1)
5-Minute Walk/2-Minute Bike

TRANSIT-FRIENDLY ZONE (Area 2)
10-Minute Walk/5-Minute Bike

Wilshire Normandie Station, Location 1

Wilshire Blvd. and S. Normandie Ave.

WHEN



Components Used at Case Study Site

Crossings Enhancements and Connections

1. Continental crosswalks
2. Scramble crossings

Signage and Wayfinding

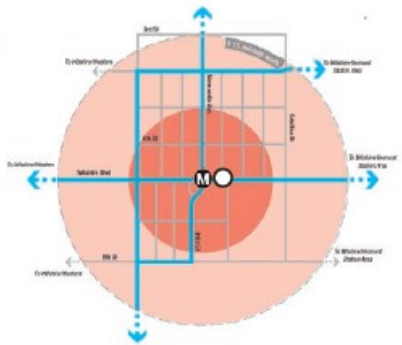
3. Medallion signage
4. Real-time signage, next train/bus
5. Curb-edge banding
6. Smart technologies

Safety and Comfort

7. Street furniture

Integrated Transit Access Solutions

8. Bike Share

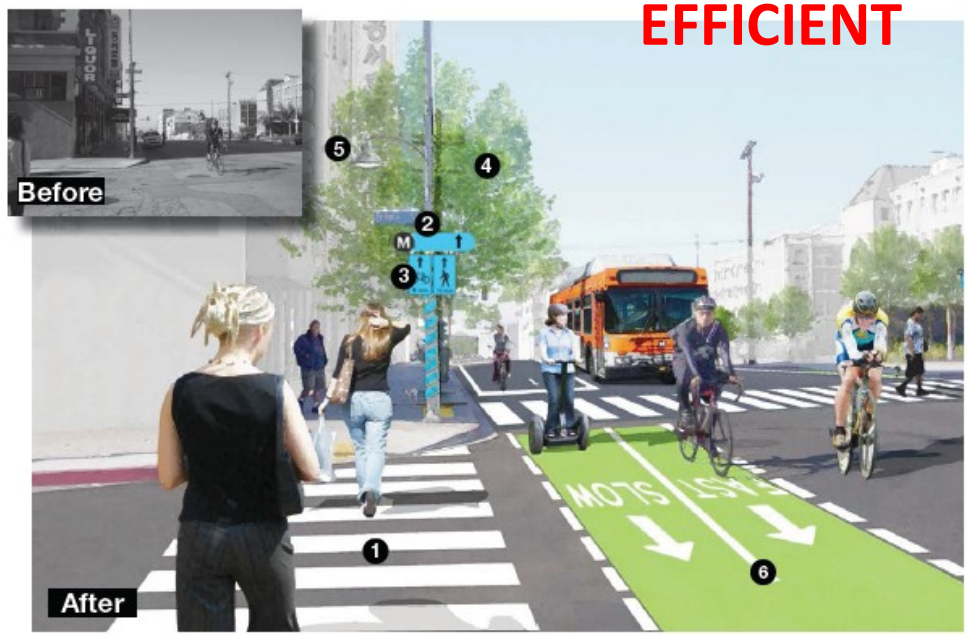


- Metro Station Location
- Visualization Location
- **EXTENDED STATION ZONE** (Area 1) 5-Minute Walk/2-Minute Bike
- **TRANSIT-FRIENDLY ZONE** (Area 2) 10-Minute Walk/5-Minute Bike

Wilshire Normandie Station, Location 2

8th St. and Fedora St.

EFFICIENT



Components Used at Case Study Site

Crossings Enhancements and Connections

1. Continental crosswalks

Signage and Wayfinding

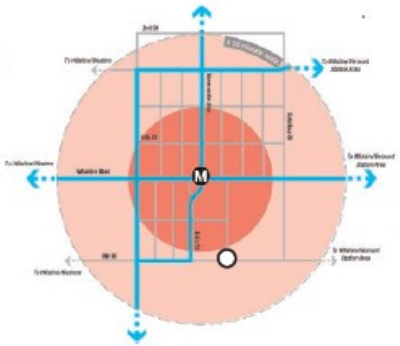
2. Medallion signage
3. Time-to-station notation

Safety and Comfort

4. Landscaping/Shade
5. Lighting

Allocation of the Streetspace

6. Rolling Lane



- Metro Station Location
- Visualization Location
- **EXTENDED STATION ZONE** (Area 1) 5-Minute Walk/2-Minute Bike
- **TRANSIT-FRIENDLY ZONE** (Area 2) 10-Minute Walk/5-Minute Bike

Points of Interest

Street Grid

Pedestrian Shed

High Vehicular Speeds

Key Transit Access Corridors

Collision Severity and Location

Land-Use Map

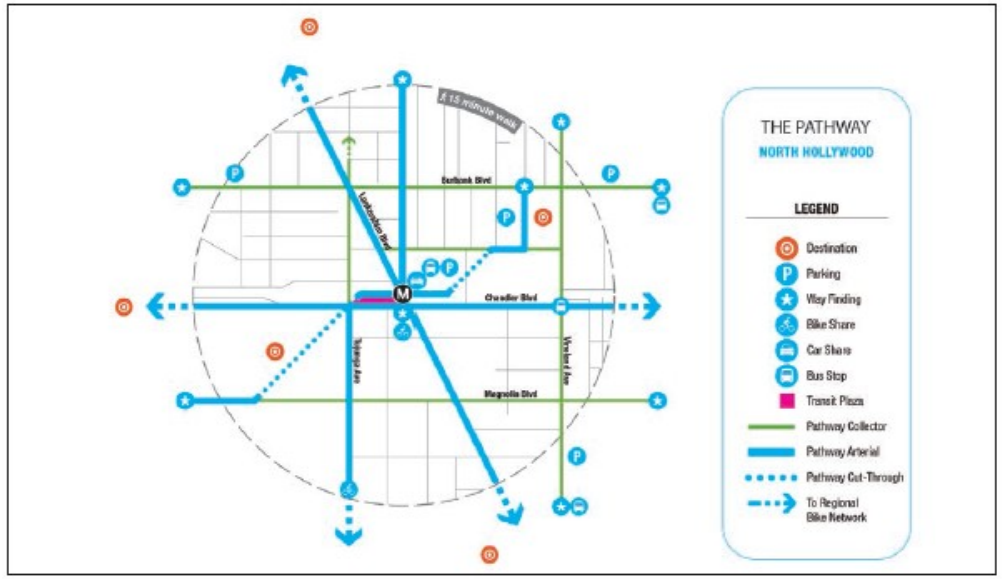
Bicycle Connections

Transit Connections

North Hollywood Station Network Design

WHEN

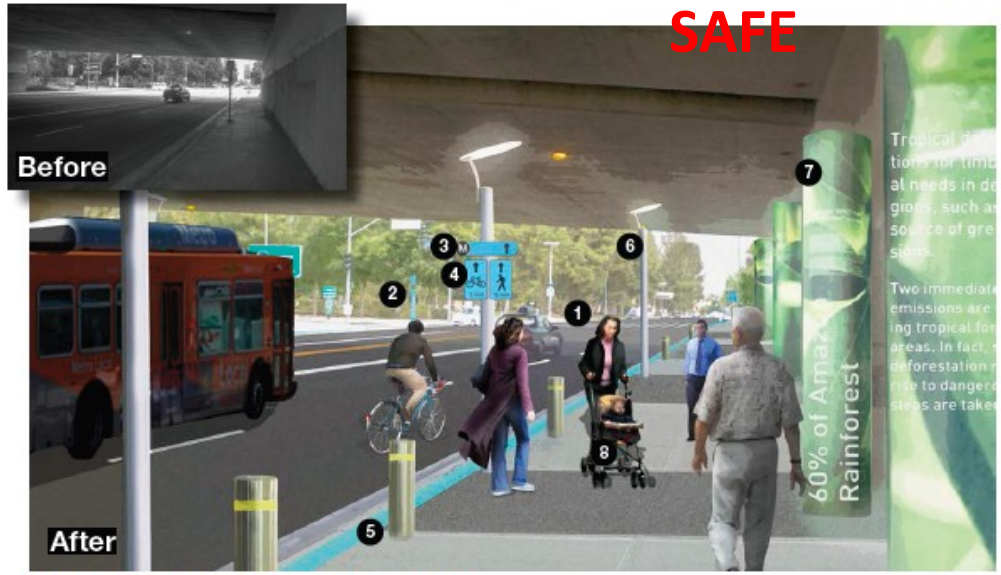
Utilizing the approach outlined in Chapter 3 of these guidelines, a Pathway network design was developed for the North Hollywood Station Area. The Metro Red Line comes in from the east and terminates at this station underground; the Orange line also terminates here, arriving at grade from the west. Pathway arterials run east – west along Chandler, north through the Metro parking lot linking to Elmer, south along Tujunga, and cutting through North Hollywood Park to the southwest and the Metro Parking lot to the northeast. Cut-throughs (refer to p. 32) provide critical time saving improvements for these heavily utilized stations.



North Hollywood Station, Location 3

Magnolia Ave. Underpass

SAFE



Components Used at Case Study Site

Crossings and Connections

1. Continental crosswalks

Signage and Wayfinding

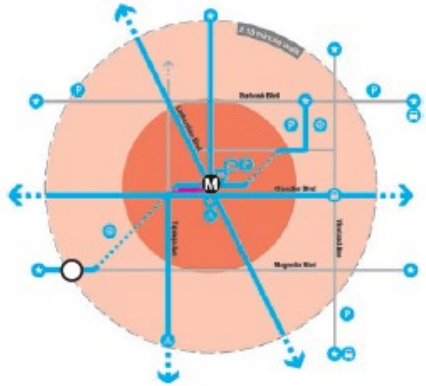
2. Signage
3. Medallion signage
4. Time to station notation
5. Curb-edge banding

Safety and Comfort

6. Lighting
7. Enhanced freeway underpass

Allocation of the Streetscape

8. Sidewalk widening



Metro Station Location

Visualization Location

EXTENDED STATION ZONE (Area 1)
5-Minute Walk/2-Minute Bike

TRANSIT-FRIENDLY ZONE (Area 2)
10-Minute Walk/5-Minute Bike

North Hollywood Station, Location 4

NoHo Park at Magnolia Avenue

WHEN

Components Used at Case Study Site

Crossings and Connections

1. Continental crosswalks
2. Cut-through and shortcuts

Signage and Wayfinding

3. Signage
4. Medallion signage
5. Time-to-station notation

Safety and comfort

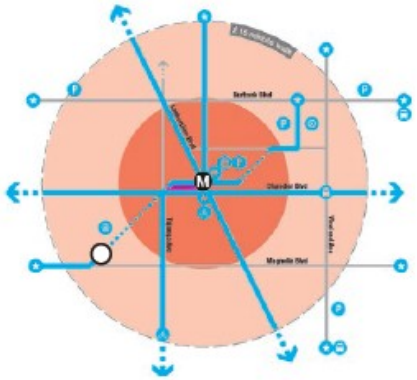
6. Street furniture
7. Landscaping
8. Lighting

Allocation of the Streetspace

9. Sidewalk widening

Integrated Transit Access Solutions

10. Car share
11. Park-and-Ride

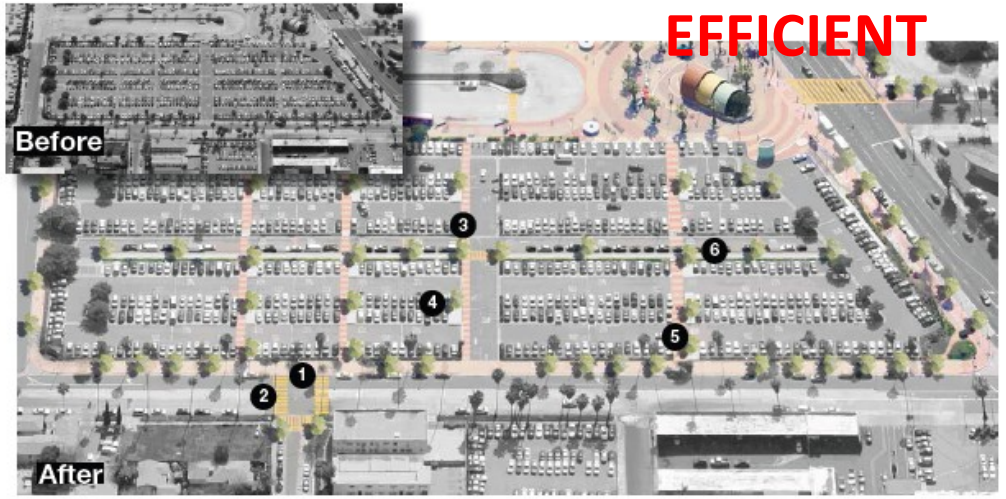


- Metro Station Location
- Visualization Location
- **EXTENDED STATION ZONE** (Area 1) 5-Minute Walk/2-Minute Bike
- **TRANSIT-FRIENDLY ZONE** (Area 2) 10-Minute Walk/5-Minute Bike

North Hollywood Station, Location 1

Park-and-Ride Lot

EFFICIENT



Components Used at Case Study Site

Crossings and Connections

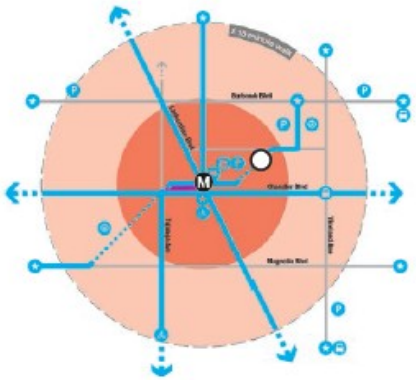
1. Continental crosswalks
2. Mid-block and additional crossings
3. Cut-throughs (multi-modal pathways through existing parking lot)

Safety and Comfort

4. Landscaping/Shade
5. Lighting

Allocation of the Streetspace

6. Sidewalk widening (through parking lot)



- Metro Station Location
- Visualization Location
- **EXTENDED STATION ZONE** (Area 1) 5-Minute Walk/2-Minute Bike
- **TRANSIT-FRIENDLY ZONE** (Area 2) 10-Minute Walk/5-Minute Bike

ABOUT CONCLUSIONS …

First Last Mile Planning the first and last mile access challenge in transportation planning, provides guiding policy context, and reviews challenges specific to transit access

3

The Pathway The Pathway is introduced as a strategic response to the first and last mile challenge. Pathway goals, policy context and guiding principles are reviewed. Pathway users, both today and in the future, are discussed.

Network Identification provides a methodology and approach for the layout of Pathway networks within station areas. Site area definition, existing conditions analysis, network component and layout are all covered.

Pathway Toolbox outlines possible improvements that may occur along identified Pathway network routes. Each individual improvement includes a visual example, discussion of goals, and guidance on how to integrate the specific improvement with the overall Pathway system.

Applying the Toolbox to Real Places

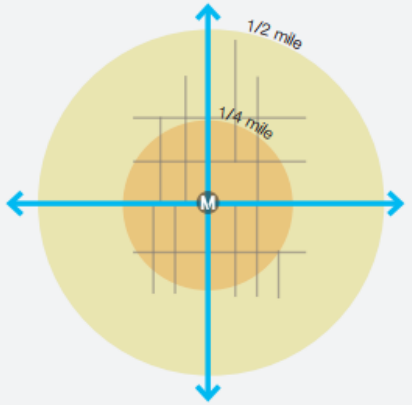
Components aim to:

- *Expand the station's sphere of influence and improve the transit rider experience*
- *Contribute to a hierarchy of improvements that are more concentrated, visible, and frequent as transit users approach transit stations*
- *Be flexible in order to fit into diverse settings around stations*

Pedestrian Safety

Bicyclist Safety

Expanding the Sphere of Influence



M Metro Station
Pathway Collector
↔ Pathway Arterial

EXTENDED STATION ZONE (AREA 1)
5-Minute Walk/2-Minute Bike

- Pathways are more visible
- Enhanced safety features
- Larger, more prominent Pathway signage
- Directional markers with time-to-station signage
- Frequent crossings
- Train time arrival/departure digital displays

TRANSIT-FRIENDLY ZONE (AREA 2)
10-Minute Walk/5-Minute Bike

- Less overt, more passive wayfinding and Pathway markers
- Address the most pressing safety and access improvements, such as:
  - New crossings
  - Curb ramps
  - Maintenance
  - Lighting and landscaping

First Last Mile Strategic Plan & Planning Guidelines - APA Awards 2015

https://www.youtube.com/watch?v=ZInM5PAO6PM

Automated road last mile

https://www.youtube.com/watch?v=gg43evs1xDk

Korea ITS

https://www.youtube.com/watch?v=dS4pWnNlxfA

Austria

https://www.youtube.com/watch?v=pLvarU3X-Ig

Los Angeles

https://www.youtube.com/watch?v=v9J6gDya40k

USA automobile industry

https://www.youtube.com/watch?v=p-I8GDklsN4

Anti Streetcar Conspiracy: ITS FACT

https://www.youtube.com/watch?v=0WORIrHpC8M

Red Car - The Life and Death of Public Transit in Los Angeles

https://www.youtube.com/watch?v=sri8RH8Saug

Secret Passages (S01E12) Los Angeles Underground Streetcar Terminal

https://www.youtube.com/watch?v=z_QbMOKEI4w