



Capital Metro Downtown Multimodal Station

Austin Pedestrian Advisory Council Briefing

March 2016



Agenda



Project Summary



Concept Evaluation



4th Street Traffic Analysis



5th Street



Opportunities



Next Steps



Project Summary

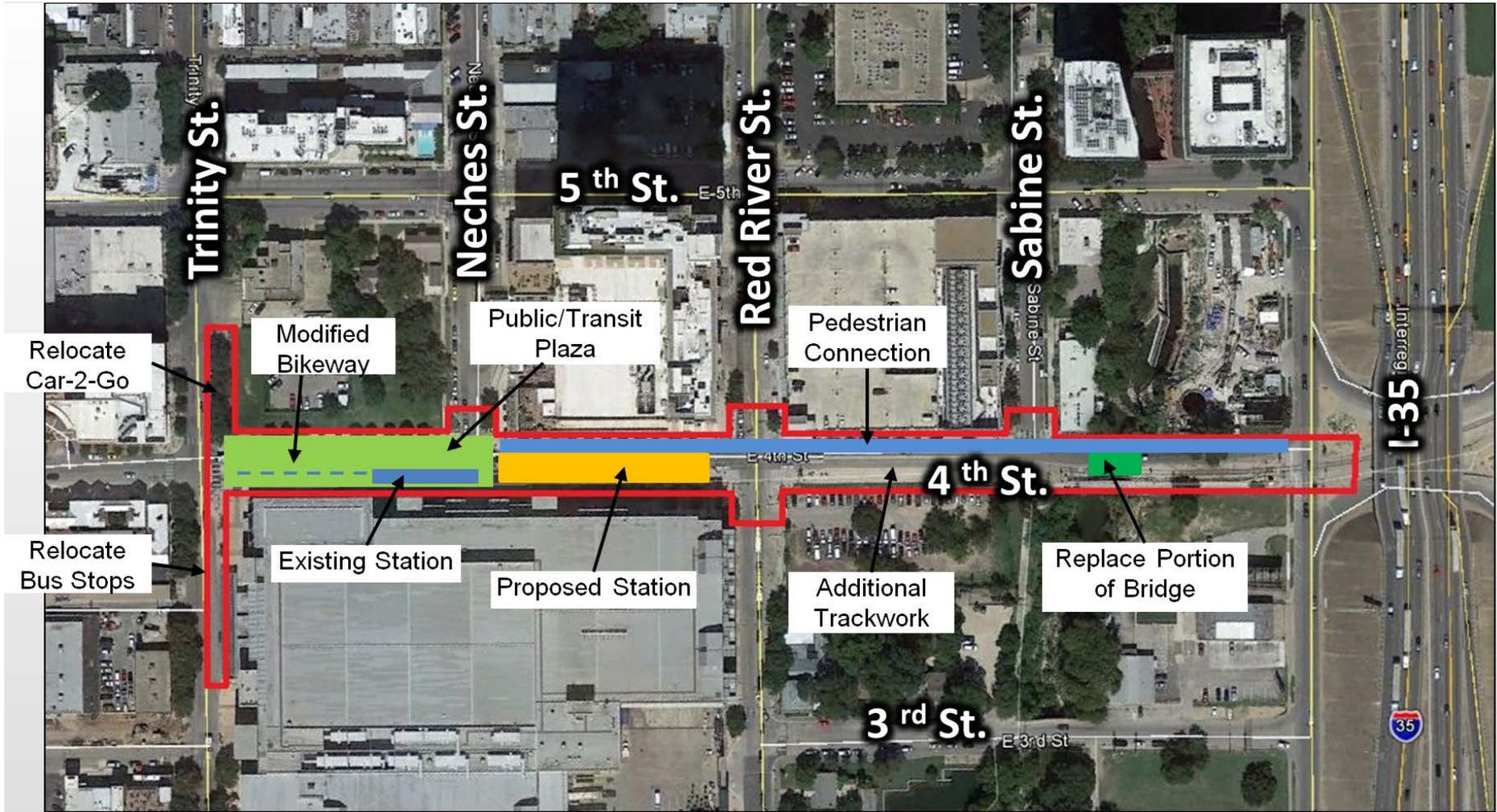
Downtown Multimodal Station



Existing Challenges



Project Boundary & Elements



Project Goals & Objectives



1

Address near- and long-term MetroRail operational needs

- 5-minute terminal arrival / departure headway
- Platforms to accommodate longer 2-vehicle consists

2

Address existing safety issues and modal conflicts (pedestrian, bicycle, transit, auto)

- Growth of various modes are not compatible in constrained space

3

Accommodate future multimodal needs

- Additional rail and local circulator routes

4

Improve aesthetics and compatibility with urban context

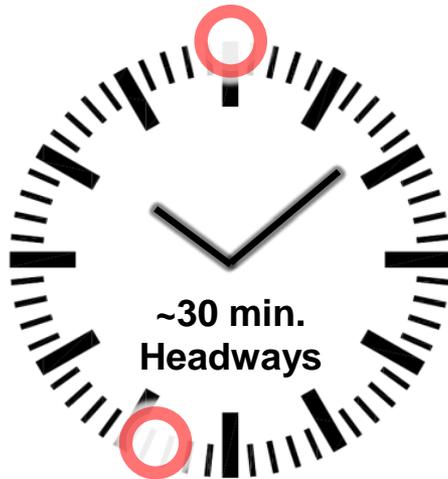
- Great Streets principles
- Urban aesthetics

Peak Hour Service Capacity

Today

Red Line

~200 pass./train

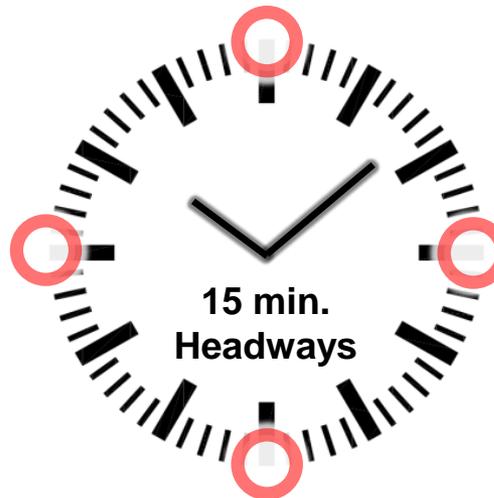
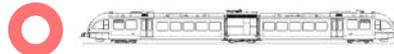


<400 people/
peak hour
(one way)

2018

Red Line with Downtown
Station & passing tracks

~200 pass./train

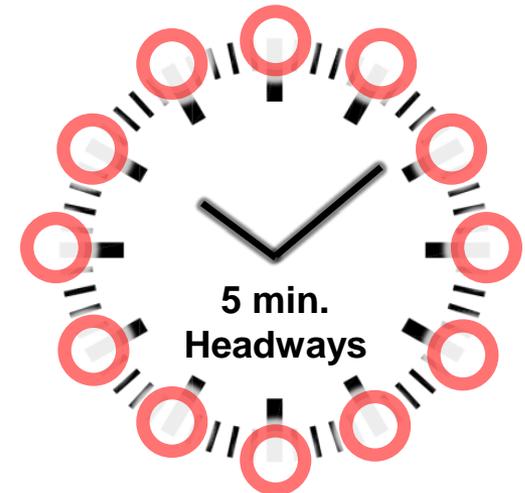
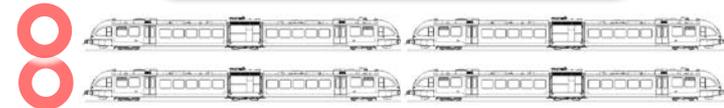


~800 people/
peak hour
(one way)

Long-Range

Red Line & Future
extensions

~400 pass./train



~4800 people/
peak hour
(one way)

Project Context

1 TxDOT's I35 Mobility

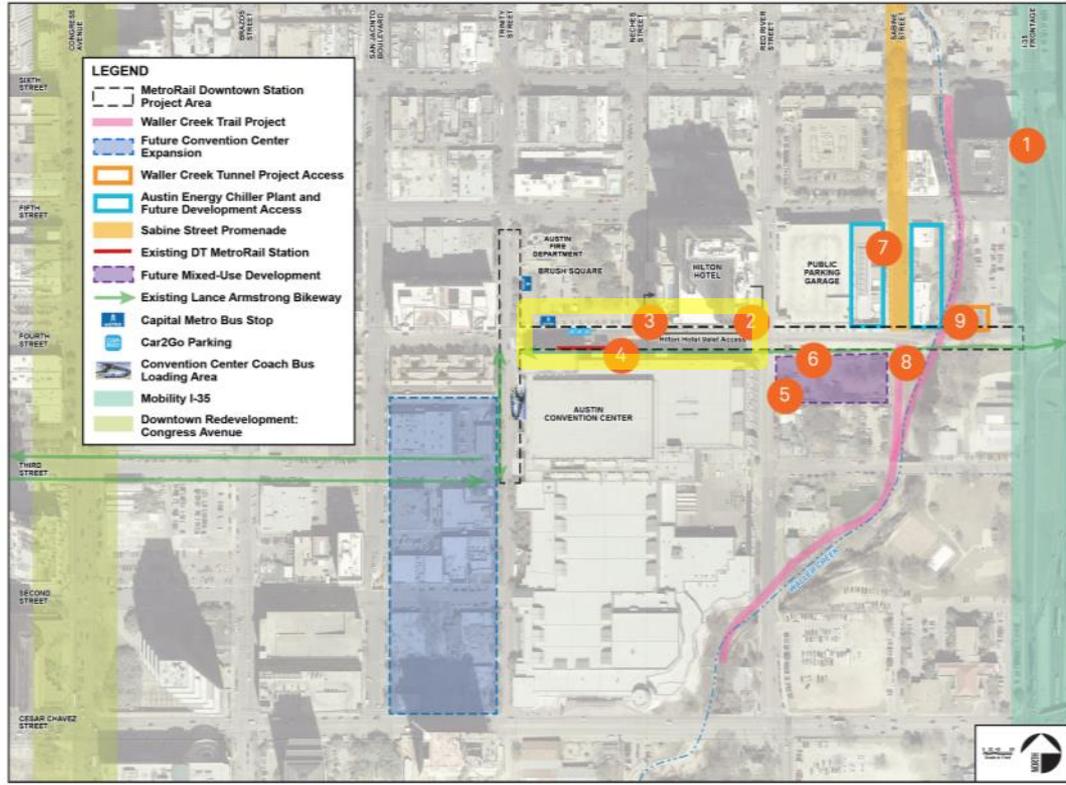
"Modified Existing" Concept (at Cesar Chavez)

"Fully Depressed" Concept (at Cesar Chavez)

Source: 2007 Mobility 30 District Area Corridor Implementation Plan (Dec 2010)

2 Hilton Valet Circulation

3 Hilton Overhead Bridge Connector



4 Multimodal Compatibility Needs

5 Future Private Development

6 Lance Armstrong Bikeway (4th St)

9 Adjacent Project Access Needs (4th St)

- A: Vehicular Access
- B: Tunnel Shaft
- C: Waller Creek Hike & Bike Trail

8 Waller Creek Trail

7 Sabine Steet Promenade

Great Streets

GREAT STREETS PRIORITIZE



Pedestrians



Transit



Bicycles



Cars

STREET USERS, PLACING THOSE USING THEIR **TWO FEET** FIRST.

In a thriving downtown environment with a variety of uses and services and an engaging street life, walking, cycling, and transit are the preferred methods of travel.

PROJECT
GREAT
STREETS

Theater on 2nd



Concept Evaluation

Downtown Multimodal Station



Starting Point – 10% Concepts (2014)

4th St – Restricted vehicle access (Trinity – Red River)



4th St – Limited access to vehicles

Building Support



- Austin Transportation Department
- Austin Fire Department, Police Department and EMS
- Austin Convention Center
- Austin Energy
- Austin Water Utility
- Hilton Austin
- City of Austin Economic Development
- City of Austin Parks and Recreation
- City of Austin Public Works
- City of Austin Real Estate
- City of Austin Special Events
- City of Austin Urban Design / Great Streets
- City of Austin Watershed Protection
- Development Services Department
- Downtown Austin Alliance
- Homeland Security & Emergency Management
- TxDOT
- Waller Creek Conservancy
- Private Entities
- General Public



Public & Stakeholder Outreach



- ✓ 5/23/14 – Stakeholder Workshop #1
- ✓ 7/25/14 – Stakeholder Workshop #2
- ✓ 11/14/14 – Stakeholder Workshop #3
- ✓ 1/31/15 – Public Workshop
- ✓ 8/27/15 – “Pop-Up” Open House
- ✓ 9/28/15 – “Pop-Up” Open House
- ✓ 10/5/15 – “Pop-Up” Open House
- ✓ 10/8/15 – Public Open House
- ✓ 12/9/15 – Key Stakeholder Meeting
- ✓ 12/11/15 – Open House & Stakeholder Meeting

Public & Stakeholder Input



- Majority recognize the benefits of Concept 1 for a conflict-free pedestrian space
- Stakeholders and coordinating agencies in favor of safety improvements and supporting multimodal mobility improvements
- Some public input indicated traffic concerns with removing autos from this segment of 4th Street

Citizen Feedback (Concept 1)

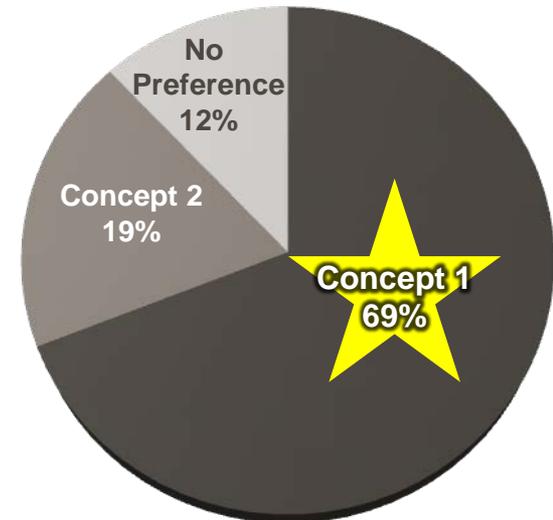
"I like the idea of having more pedestrian area. The vehicle lane isn't really that useful anyway."

"I lean more toward this concept to free more space for pedestrians and bikes."

"Seems like a better use of space but worried about flow of extra traffic displaced from lane of street. Good park space."



Public Survey Results



Concept Confirmation - Technical Evaluation Criteria



1

1. Safety

- a. Mitigation of Multimodal Conflicts
- b. Rail Crossing Protection Requirements

2

2. Station Operations

- a. MetroRail Station and Platform
- b. Multimodal Access to Project Area

3

3. Traffic & Accessibility

- a. Pedestrian, Bicycle and Auto Circulation
- b. Lane Configurations and Utility
- c. Stakeholder Accessibility

4

4. Context-Sensitive Compatibility

- a. Mitigate Impacts to Adjacent Projects and Stakeholders
- b. Great Streets Compatibility
- c. Supportive of Future Development

Technical Evaluation – Safety



Evaluation Metric	Description	Concept 1 (Vacate Auto Access on 4 th)	Concept 2 (Restricted Auto Access on 4 th)
Multimodal conflict mitigation	Minimize pedestrian / bicycle conflicts through platform boarding area	✓	⊘
	Minimize pedestrian / auto conflicts	✓	⊘
	Minimize bicycle / auto conflicts	✓	⊘
Emergency access / egress	Supports efficient access / egress to/from platform area	✓	⊘
	Supports efficient access / egress to/from adjacent facilities	✓	⊘
Rail crossing protection	Minimize train control / signalization needs	✓	✓
	Minimize intersection crossing protection needs	✓	✓

Concept 1 is preferred:

- Reduces potential automobile conflicts with pedestrians and bicycles
- Allows wider boarding areas and pedestrian passage at platforms in front of Convention Center and Hilton Austin

Technical Evaluation – Station Operations



Evaluation Metric	Description	Concept 1 (Vacate Auto Access on 4 th)	Concept 2 (Restricted Auto Access on 4 th)
MetroRail station platform	Number of boarding locations supports CMTA long-term needs	✓	✓
	Center platform width	✓	⊘
	Minimize station platform access / egress conflicts	✓	⊘
	Auxiliary passenger queuing / ticketing area	✓	✓
Multimodal access in project area	Proximity of relocated bus stations	✓	✓
	Metro Bus Operations	⊘	⊘
	Car 2 Go access	✓	✓
	Transit gateway / information / wayfinding	✓	✓

Concept 1 is preferred:

- Fewer multimodal conflicts in near boarding areas & widest possible boarding platform

Technical Evaluation – Traffic and Accessibility



Evaluation Metric	Description	Concept 1 (Vacate Auto Access on 4 th)	Concept 2 (Restricted Auto access on 4 th)
Pedestrian circulation	Appropriate access to and circulation through platform boarding area and plaza	✓	⊘
Bicycle circulation	Appropriate access to and circulation through platform boarding area and plaza	✓	⊘
Auto circulation	Maintains access to Hilton & Convention Center	⊘	✓
	Austin Energy and Waller Creek (Public Works) access	✓	✓
4th St capacity	Maintains auto capacity from Red River to Trinity	⊘	✓

Concept 1 is preferred:

- Better pedestrian & bicycle level-of-service in the plaza area with fewest conflicts and best accessibility
- However, stakeholders have expressed additional access concerns

Technical Evaluation – Context Sensitive Compatibility



Evaluation Metric	Description	Concept 1 (Vacate Auto Access on 4 th)	Concept 2 (Restricted Auto access on 4 th)
Stakeholder needs	Minimize Convention Center and Hilton Hotel emergency egress conflicts	✓	⊘
	Maintains definition of Lance Armstrong Bikeway	✓	⊘
Supports future development	Convention Center expansion	✓	✓
	Future development parcel access needs	✓	✓
Great Streets compatibility	Sabine St Promenade	✓	✓
	Dedicated spaces for pedestrian, transit, bicycle and auto uses	✓	✓
	Walkability, wayfinding, and ease of use	✓	⊘

Concept 1 is preferred:

- More consistent with a multimodal vision for bringing all modes together in one place harmoniously

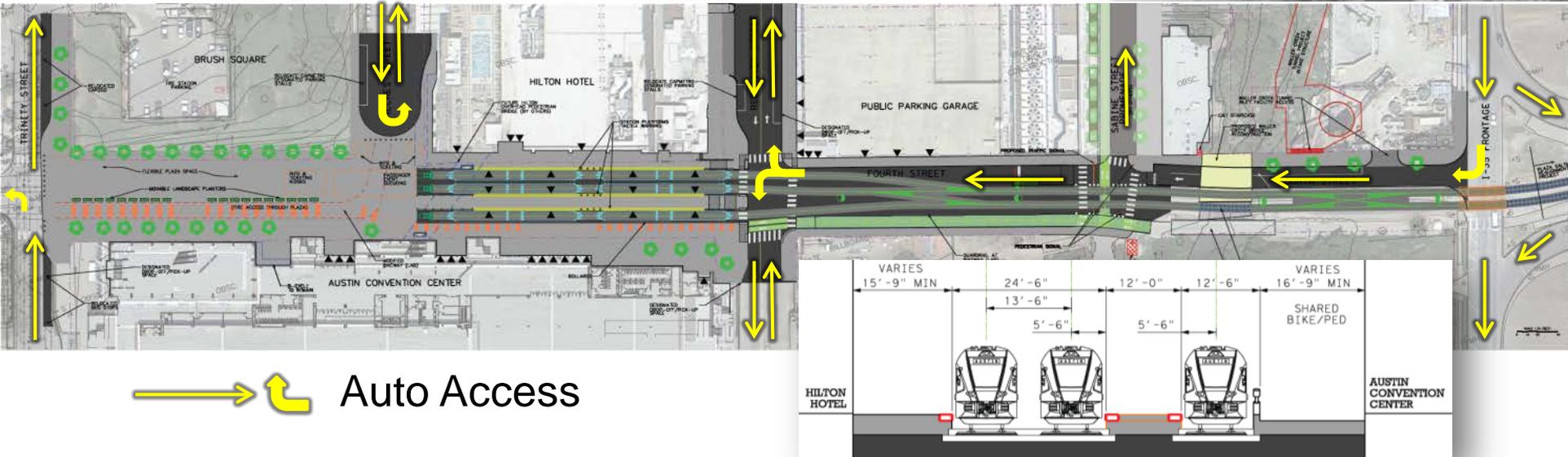
Technical Evaluation – Summary



Evaluation Metric	Preferred Concept 1 (Vacate Auto Access on 4th)	Less Preferred Concept 2 (Restricted Auto Access on 4th)
Safety	Best reduction of conflicts	Auto and bikeway conflicts remain
Transit Operations	Meets requirements	May compromise platform width to fit shared-use lane and emergency access
Traffic and Accessibility	Reduces auto accessibility	Maintains accessibility; requires bikes & autos to share
Context Sensitive Compatibility	Consistent with multimodal vision & hierarchy	Diminishes multimodal vision

- **Concept 1** is the best solution for reducing safety conflicts, meeting transit operational requirements, improving multimodal accessibility, and is consistent with the urban context
- Capital Metro is no longer pursuing Concept 2

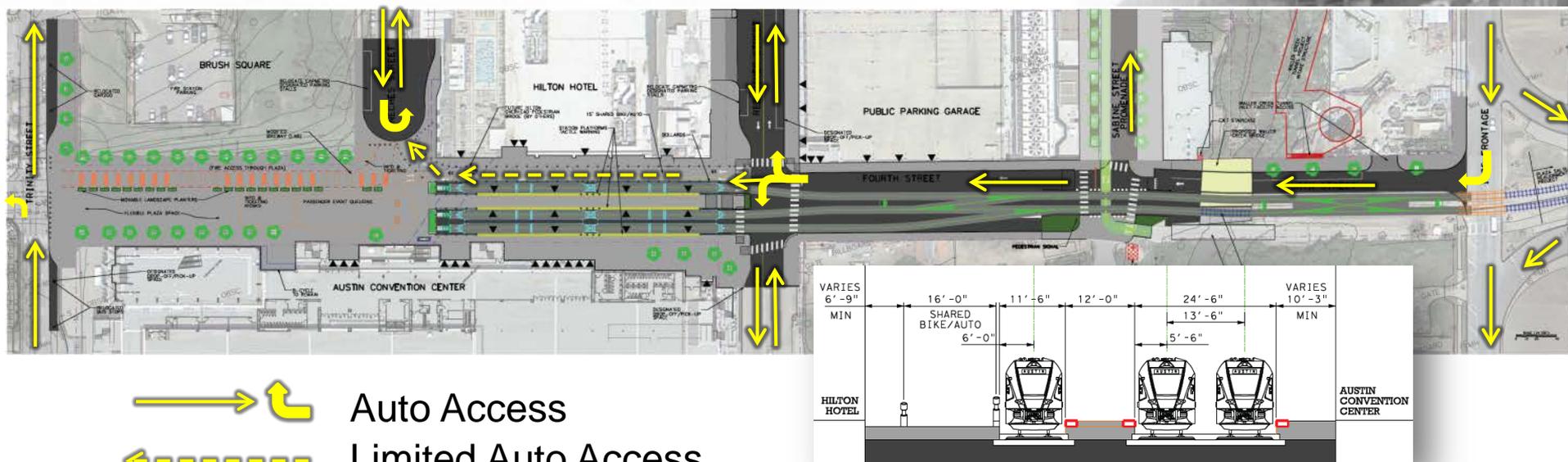
Preferred Concept 1



- 3 platform positions that accommodate (future) 2-car consists
- **Restrict auto access** on 4th St (between Red River and Trinity)
- Public plaza accommodates platform queuing (Neches to Trinity)
- Lance Armstrong Bikeway (modified for enhanced safety and awareness through platform/plaza area)

Less Preferred Concept 2

(Capital Metro is no longer pursuing this concept)



- ↪ Auto Access
- ← - - - Limited Auto Access

- 3 platform positions that accommodate (future) 2-car consists
- **Shared-use auto/bicycle access** on 4th St (Sabine to Neches)
- Public plaza accommodates platform queuing (Neches to Trinity)
- Lance Armstrong Bikeway (modified for enhanced safety and awareness through platform/plaza area)



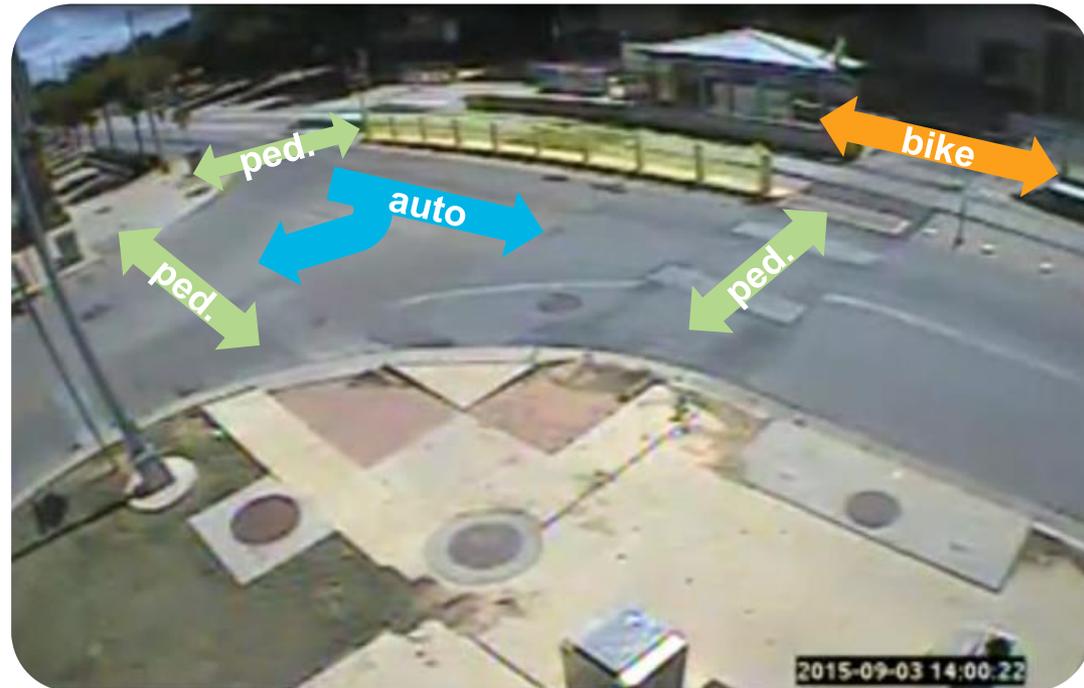
4th Street Traffic Evaluation

Downtown Multimodal Station



Traffic Data Collection

- Video camera set up at the corner of 4th Street and Neches
- 7-day, 24-hour counts (Thursday 9/3 to 9/10)
- Data for auto, pedestrian, and bike
- Historical counts on Cesar Chavez, 5th, and 6th Streets

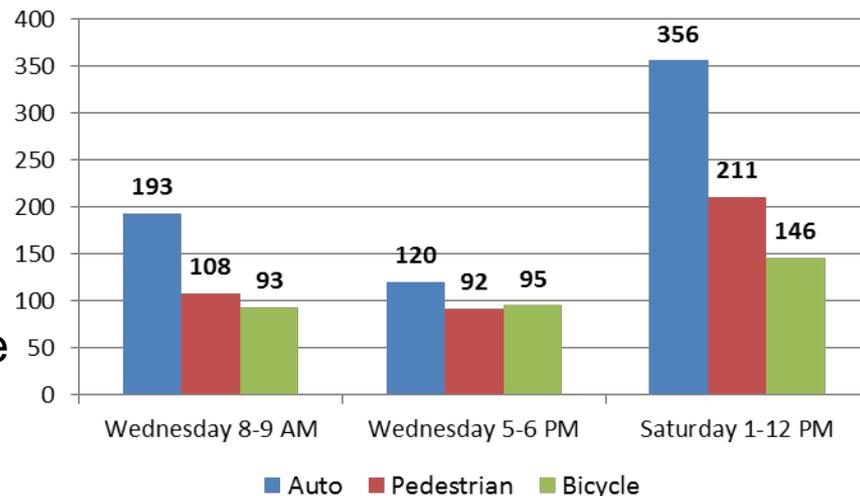


Evaluation Findings

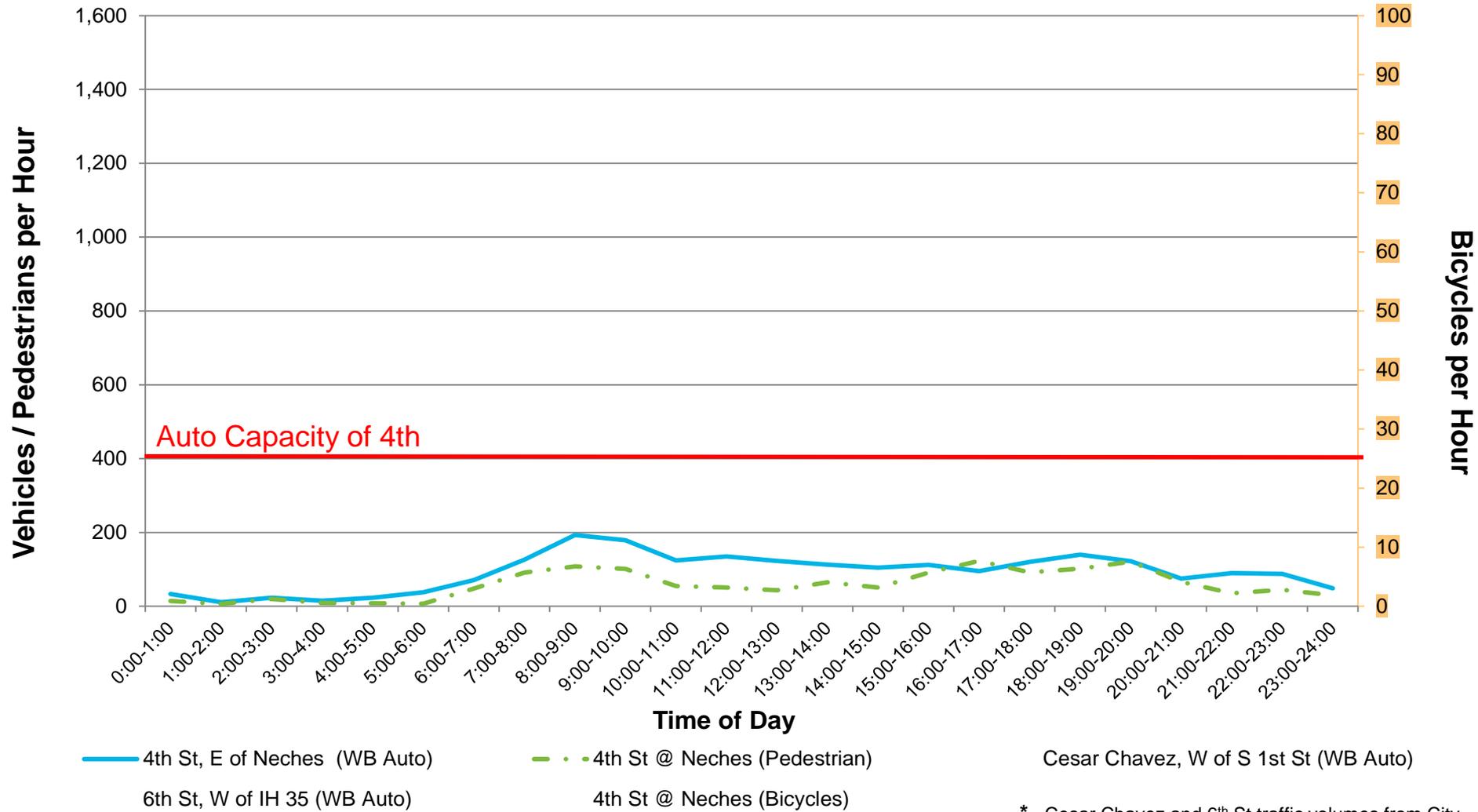
- **4th St. is multimodal**
 - Combined bike & ped. volumes already exceed auto traffic at the Neches/4th intersection
- **4th St. is not a commuter route**
 - Peak demand is during the weekend PM entertainment period
 - 6th Street peak demand is the during weekday AM commuter period
 - Cesar Chavez Street peak demand is the during weekday PM commuter period
- **Conclusion**
 - 6th Street and Cesar Chavez have excess capacity to absorb the displaced volume of traffic during both peak and entertainment periods



**Auto, Pedestrian & Bicycle
Peak Hourly Volumes on 4th Street**

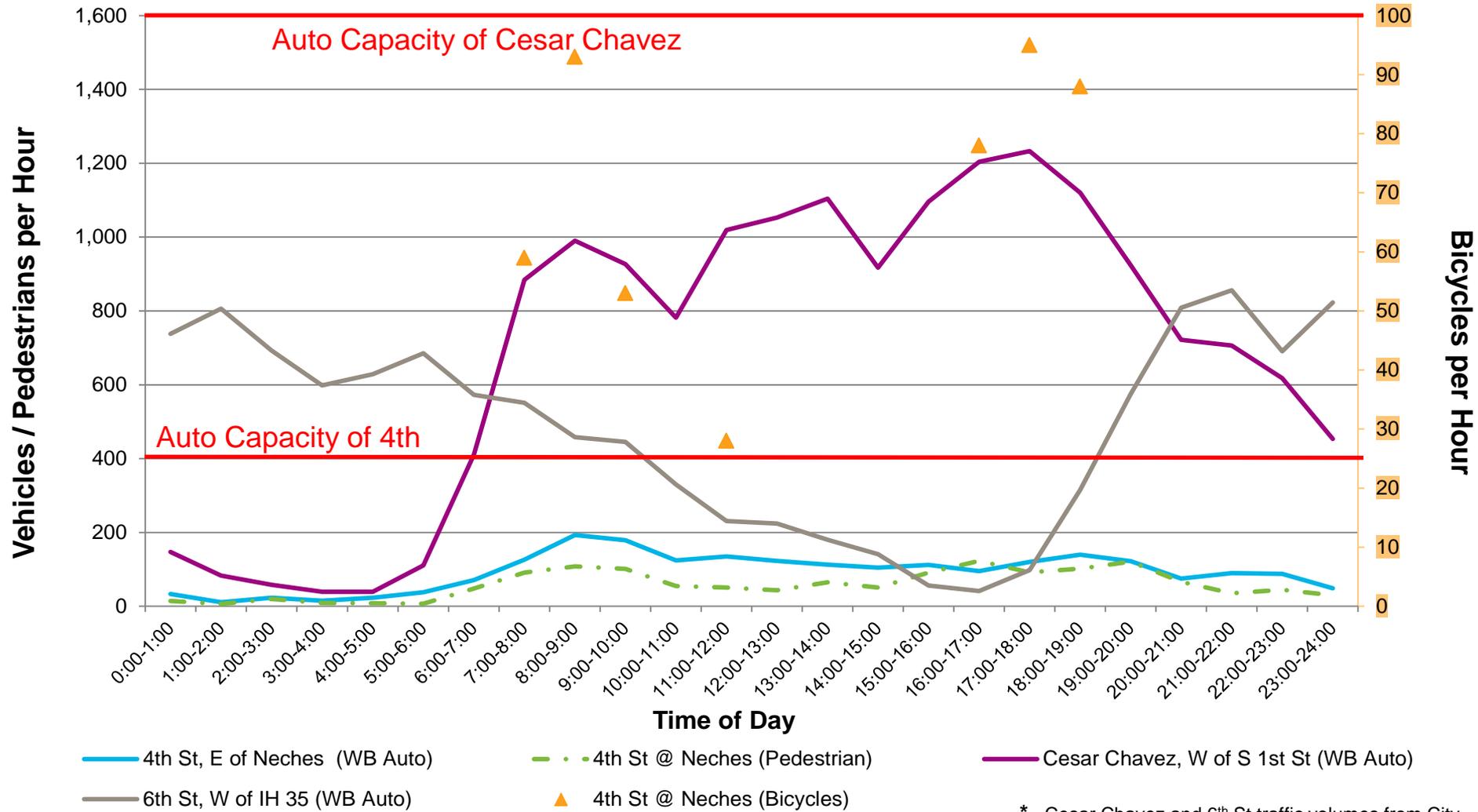


Data Summary – Hourly Volumes on Typical Weekday*



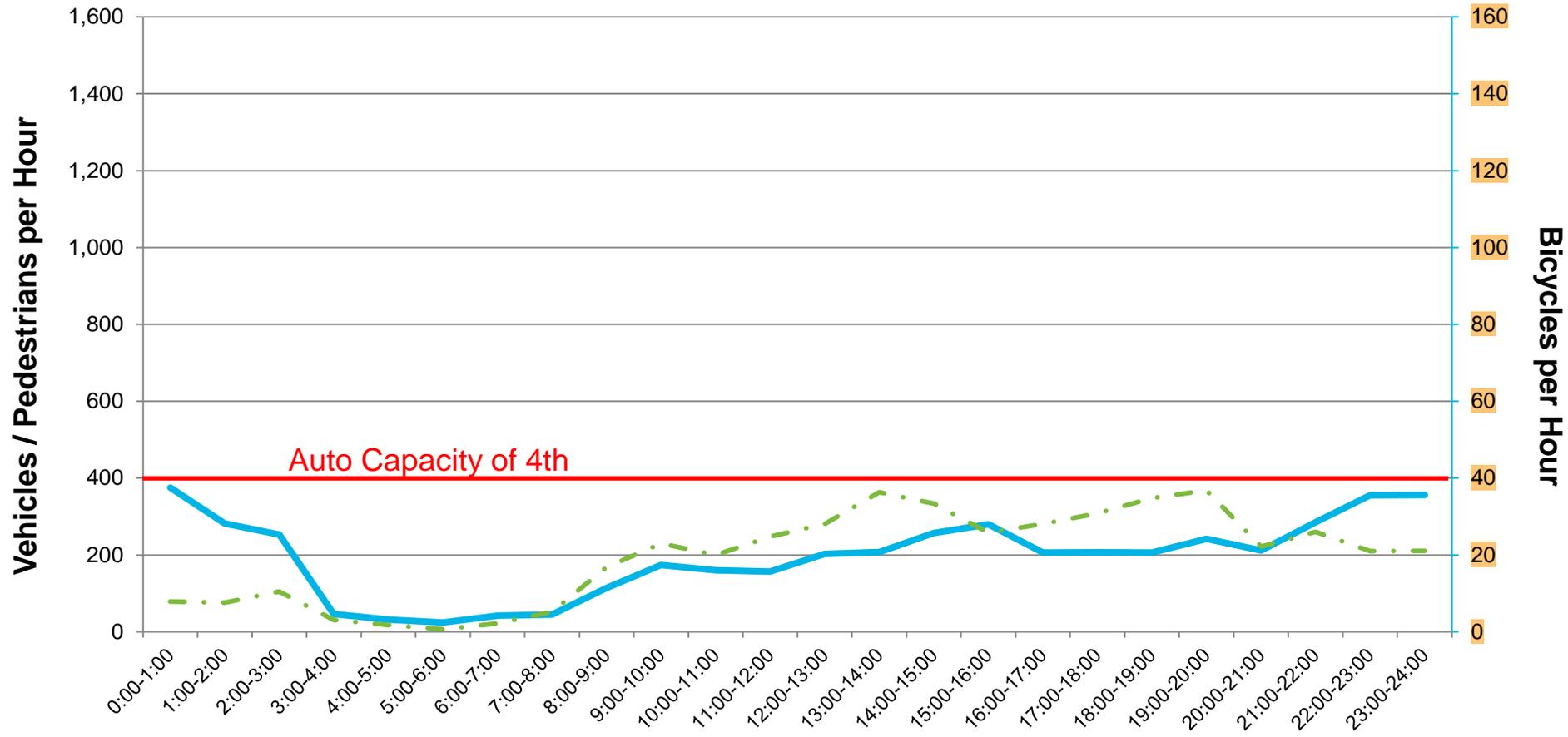
Cesar Chavez, W of S 1st St (WB Auto)
 * - Cesar Chavez and 6th St traffic volumes from City of Austin historical data

Data Summary – Hourly Volumes on Typical Weekday*



* - Cesar Chavez and 6th St traffic volumes from City of Austin historical data

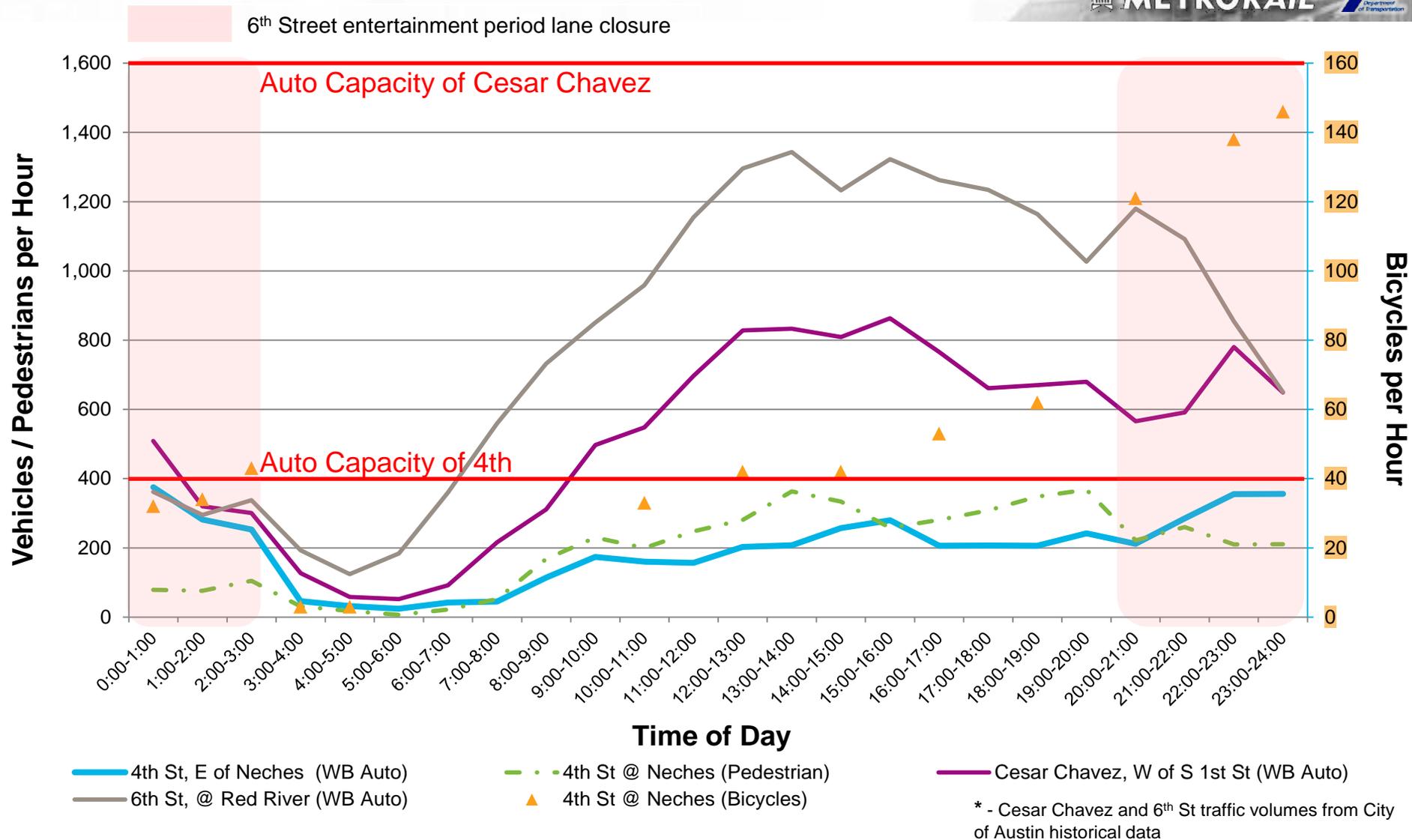
Data Summary – Hourly Volumes on Typical Weekend* (Saturday)



— 4th St, E of Neches (WB Auto) / 6th St, @ Red River (WB Auto)
 - . - 4th St @ Neches (Pedestrian)
- . - 4th St @ Neches (Bicycles)
— Cesar Chavez, W of S 1st St (WB Auto)

* - Cesar Chavez and 6th St traffic volumes from City of Austin historical data

Data Summary – Hourly Volumes on Typical Weekend* (Saturday)





5th Street

Downtown Multimodal Station



Potential 5th Street 2-Way Conversion by City of Austin



- Minimum Lane Configuration → 2 EB auto lanes, 1 WB auto lane
- Limits of 2-way conversion:
 - Option 1 - Two-way on 5th (I35 to Brazos)
 - Option 2 – Two-way on 5th (I35 to Trinity) and on Trinity
- Both options
 - Maintain local westbound access issue for when 6th Street closed (weekly basis)
 - Resolves local circulation for Hilton Hotel and Convention Center

Potential 5th Street 2-Way Conversion by City of Austin



- Existing Capacity
 - 5th Street Capacity → 2-4 lanes x 800* vph = 1600-3200 maximum vph
- Supporting Existing Demand
 - EB peak hr volume (5th St at IH-35) ≈ 784** vph
 - Proposed *V/C ≤ **0.5** for 2 EB lanes to remain (1600 vph capacity)
- Supporting Additional Peak-Period Load
 - WB peak hr volume (4th St at Red River) ≈ 400 vph
 - Proposed *V/C ≤ **0.5** for 1 new WB lane (800 vph capacity)

* ~ 800 vehicles per hour (vph) per lane based on CAMPO's roadway capacity look-up table

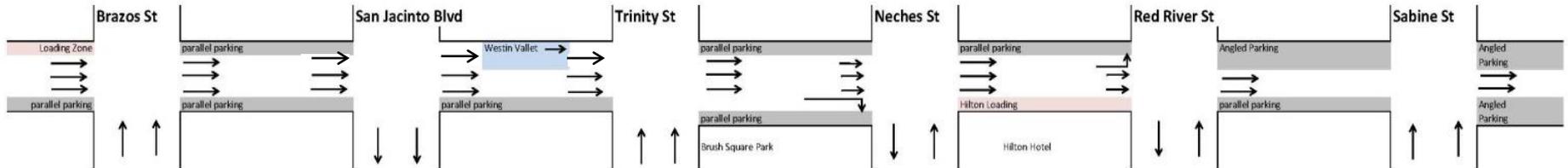
** COA 2009 Traffic Data Report

Potential 5th Street 2-Way Conversion by City of Austin

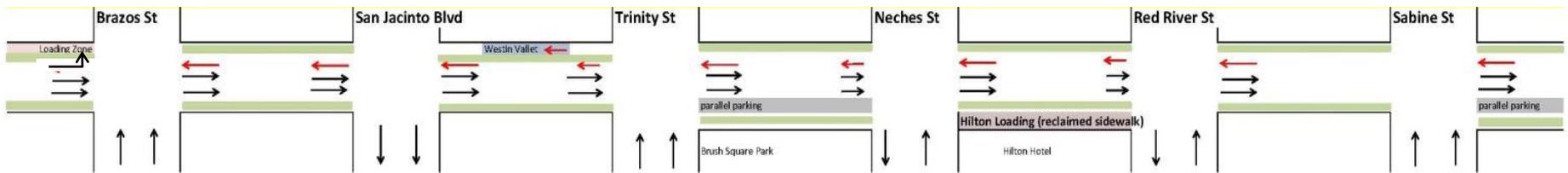
Lane Configuration Options



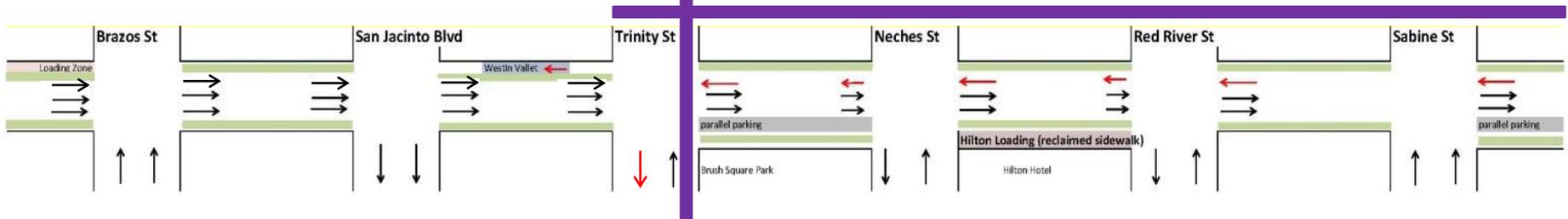
Existing



Option 1 - Two-way on 5th (I35 to Brazos)



Option 2 - Two-way on 5th (I35 to Trinity) and on Trinity



- Limits of 2-way conversion

- Protected bicycle lane (potential)



Opportunities

Downtown Multimodal Station



Case Studies



Pioneer Square, Portland, OR



Pioneer Square, Portland, OR

Case Studies



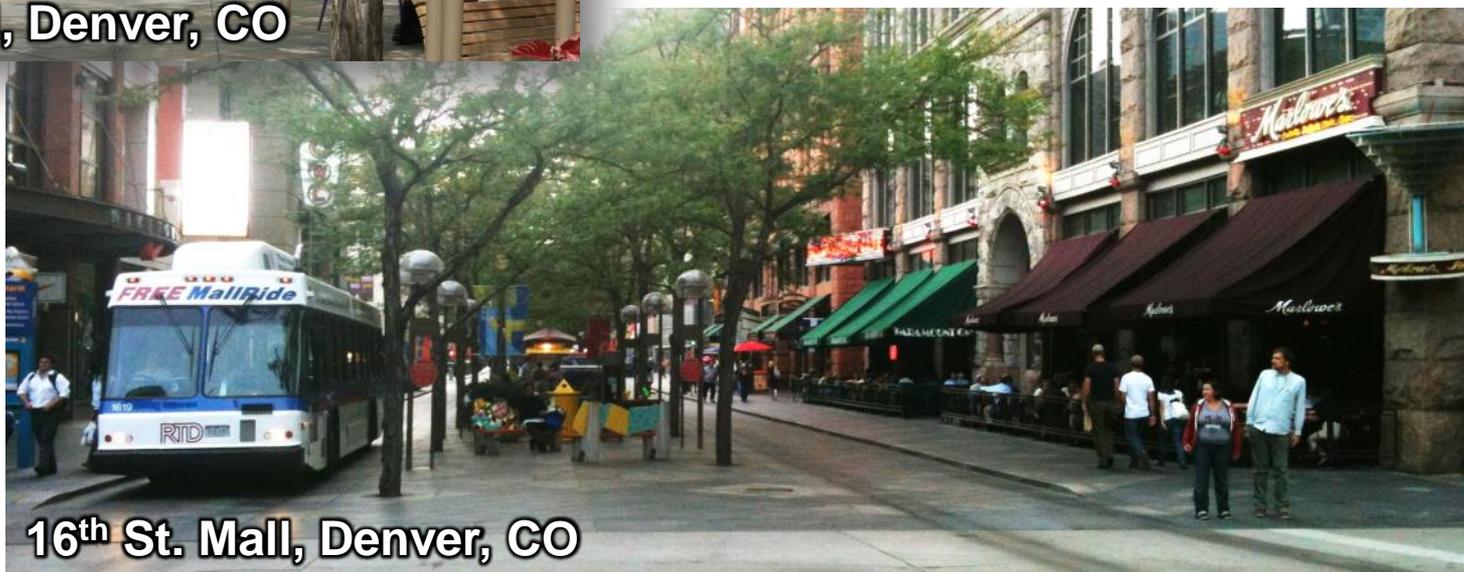
Case Studies



Case Studies



16th St. Mall, Denver, CO



16th St. Mall, Denver, CO

Case Studies



Madison, WI

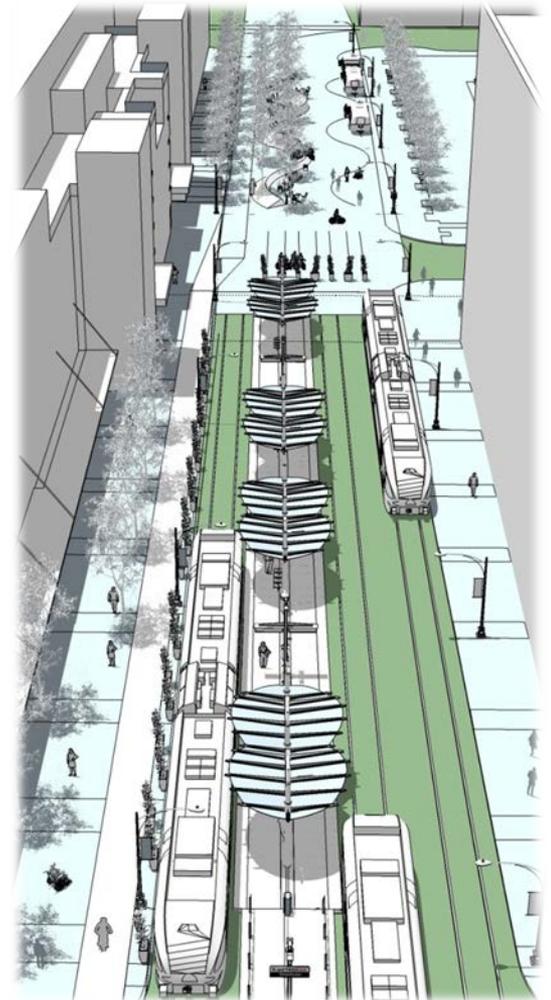
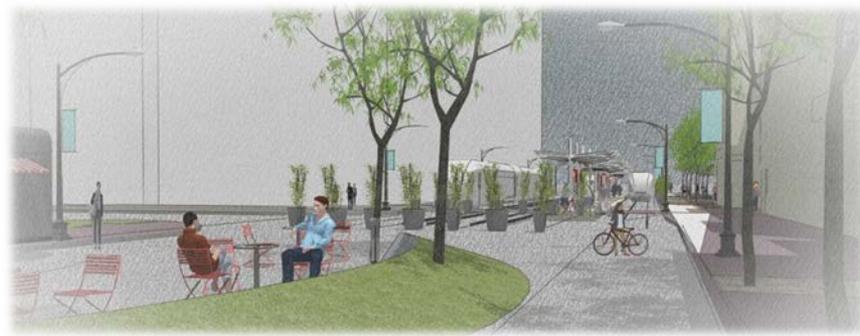
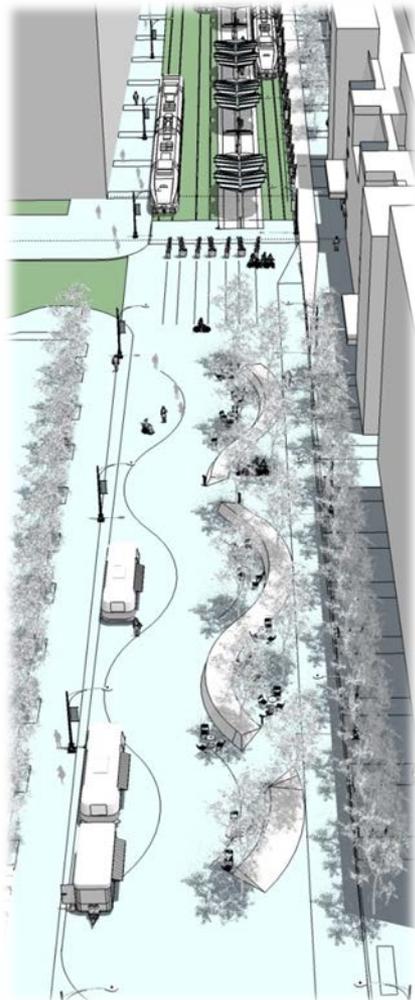


Bryant Park, New York, NY



Bryant Park, New York, NY

Design Study





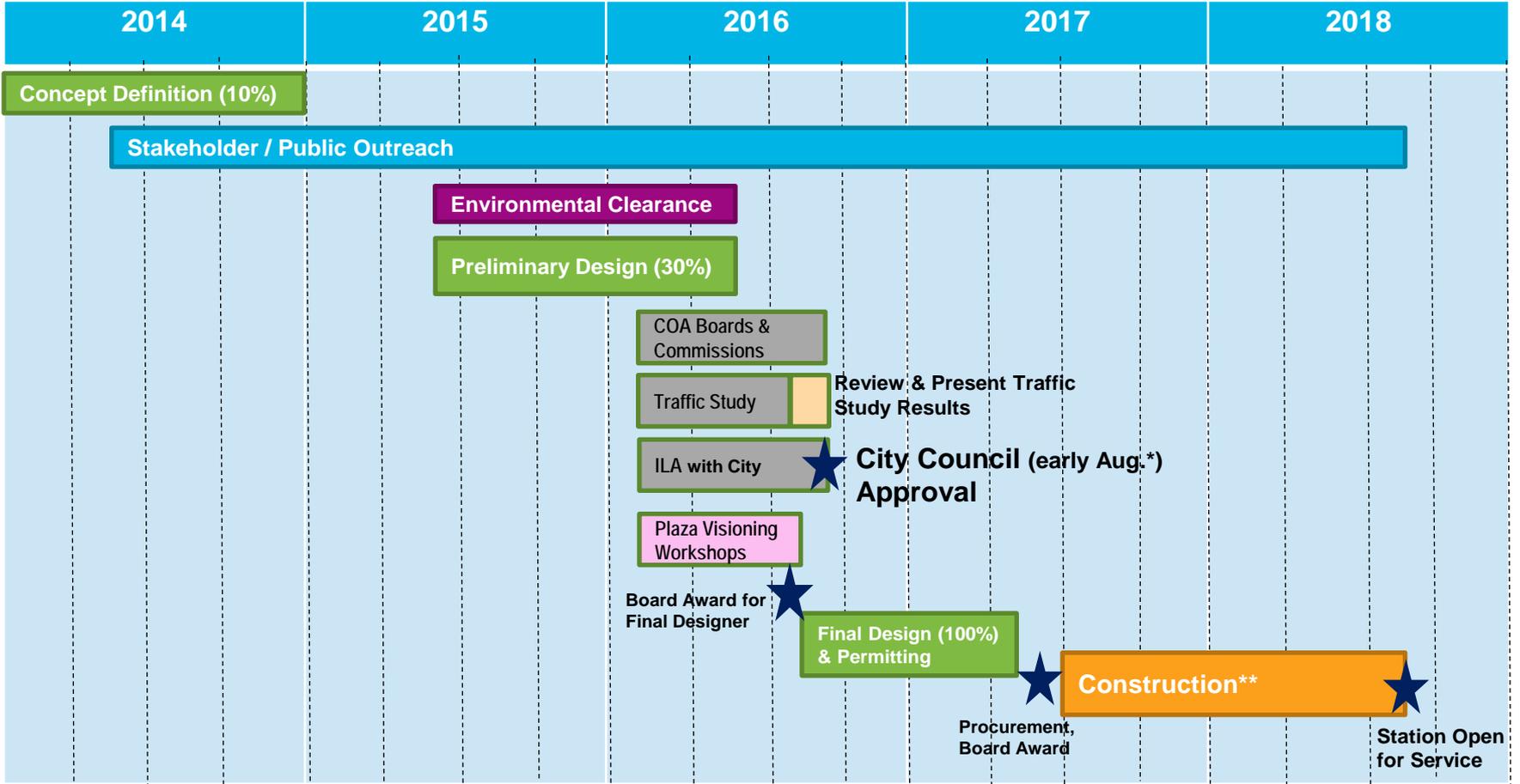
Next Steps

Downtown Multimodal Station



Downtown Station

Preliminary Schedule



*June City Council agenda preferred if traffic studies are completed sooner

**All construction activities are pending environmental clearance and City permitting



Thank You

Downtown Multimodal Station

