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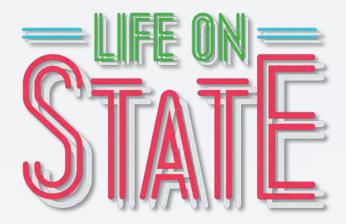


# **Today's Agenda**

- Update on Engagement
- Review State Street Design Concepts
- Understand Evaluation Process
- Discussion and Feedback
- Next Steps

# **Project Goals**

- Improve Safety & Security
- Improve Identity of Place
- Expand Connectivity
- Optimize Mobility
- Drive Economic Prosperity
- Support Equitable Living Opportunities
- Encourage Healthy & Sustainable Design



# **Public Engagement Highlights**



# Nearly 200 Participants

- the seal

# 3 Interactive Activities

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# **20 Workshop Maps**

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# 100 State Street Cross Sections

Alex

C.C.L.In

132 FT. RIGHT-OF WAR

# **Broad Support for** Goals

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IMPROVE SAFETY & SECURITY sale, and healthy by improving traffic safety for drivers, pedestrians, bicyclists and transit riders, as well as addressing crime prevention and security through

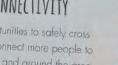
TATE GOALS

### IMPROVE IDENTITY OF PLACE

lo economic success.

### EXPAND CONNECTIVITY

Expand opportunities to safely cross State Street, connect more people to more places in and around the area, and improve access to nearby schools, businesses and community services.







GOAL

### OPTIMIZE MOBILITY



### DRIVE ECONOMIC PROSPERITY

increase investment, job growth internationally competitive corridor

### SUPPORT EQUITABLE LIVING **OPPORTUNITIES**

enable sustainable, urban living businesses and community services.

### ENCOURAGE HEALTHY & SIJSTATNABLE DESIGN a public

built environment that promotes healthy lifestyles and reduces the environmental impacts of new and existing development.

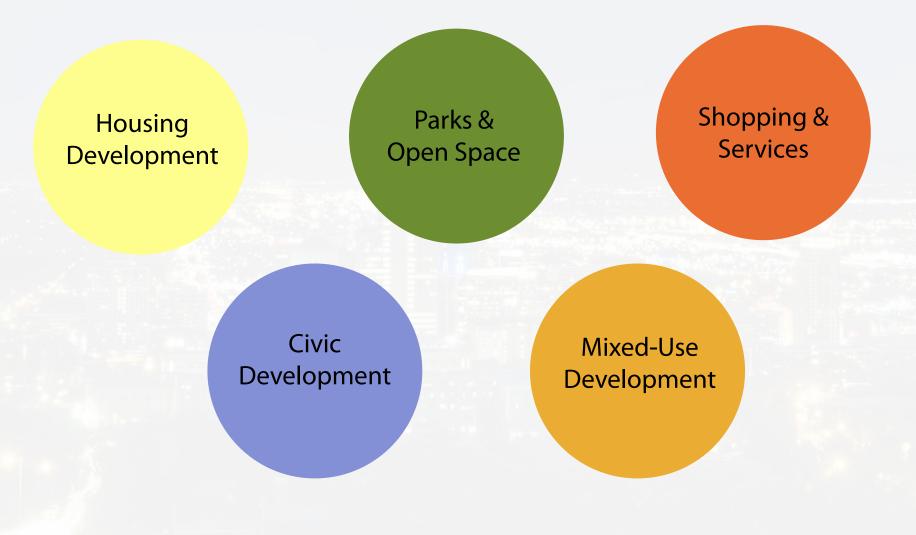




50 30 N S C 3300 S

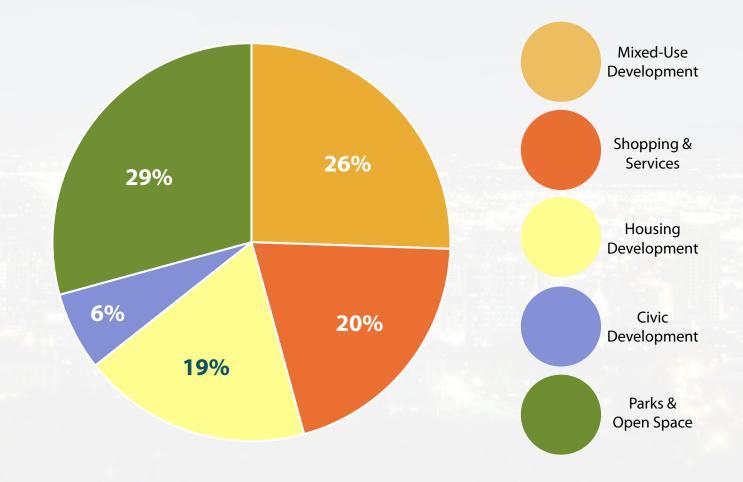


## **Development Game Pieces**



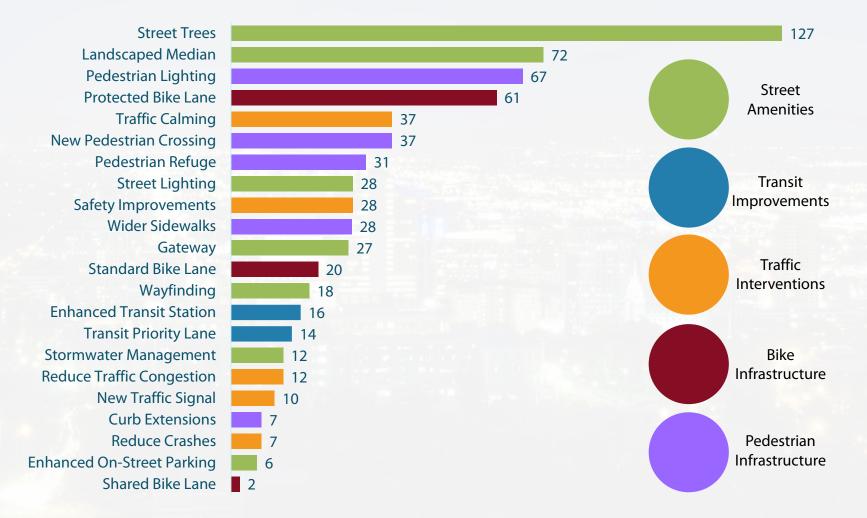


# **188 Total Development Game Pieces**



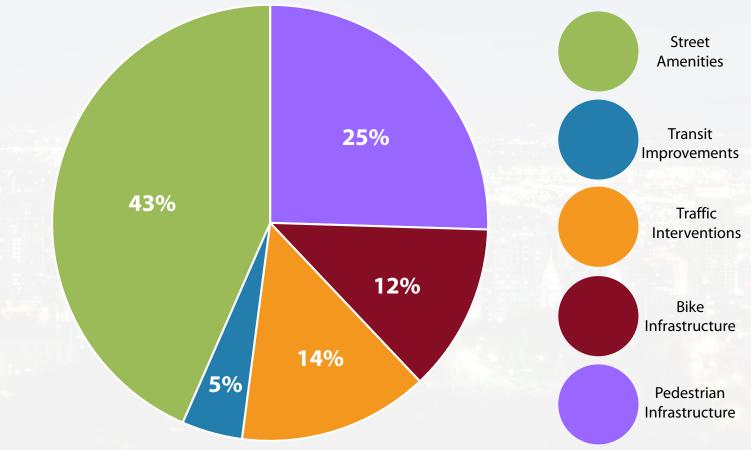


# 666 Total Street Game Pieces





# **Transportation Game Pieces -Thematic Groupings**





# Major Takeaways from the Mapping Exercise

### • More Green!

• Parks & Open Space, Street Trees, Landscaped Medians

### • Higher quality bike & ped infrastructure

- Protected Bike Lanes, Pedestrian Lighting, Pedestrian Refuges, New Crossings
- Traffic calming measures & General Traffic Safety Important BUT congestion not a major concern
  - Traffic Calming, Safety Improvements

### Transit not a major priority

 HOWEVER, the cross section exercise conflicts with this finding



# What's your design for State Street?

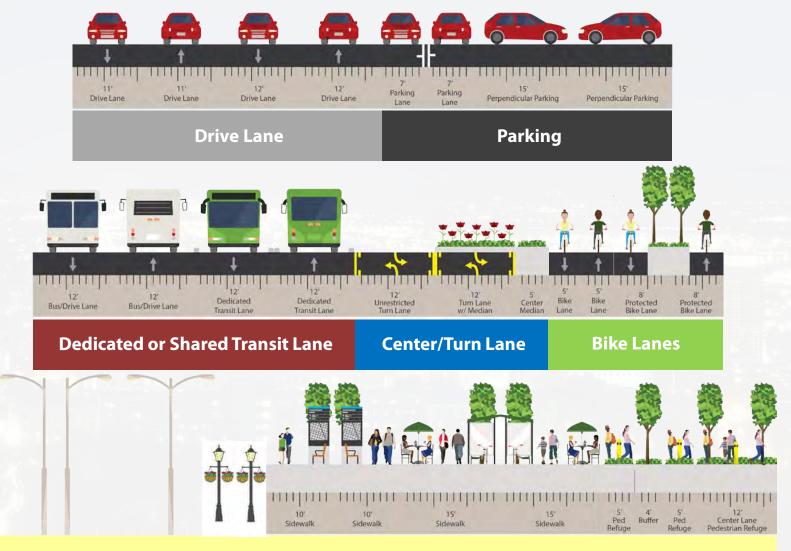
### 132 FT. RIGHT-OF-WAY



Where on State Street should this cross section be located? (Please use the back page to write additional comments.)

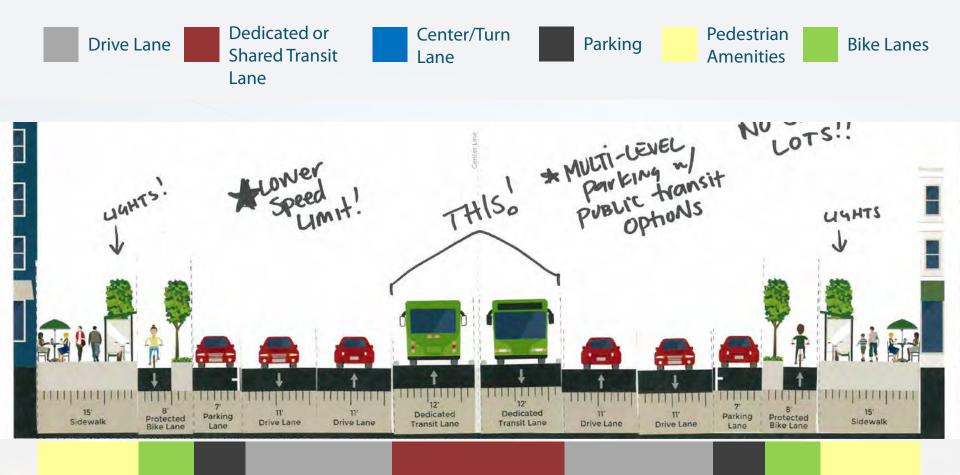


# What's your design for State Street?

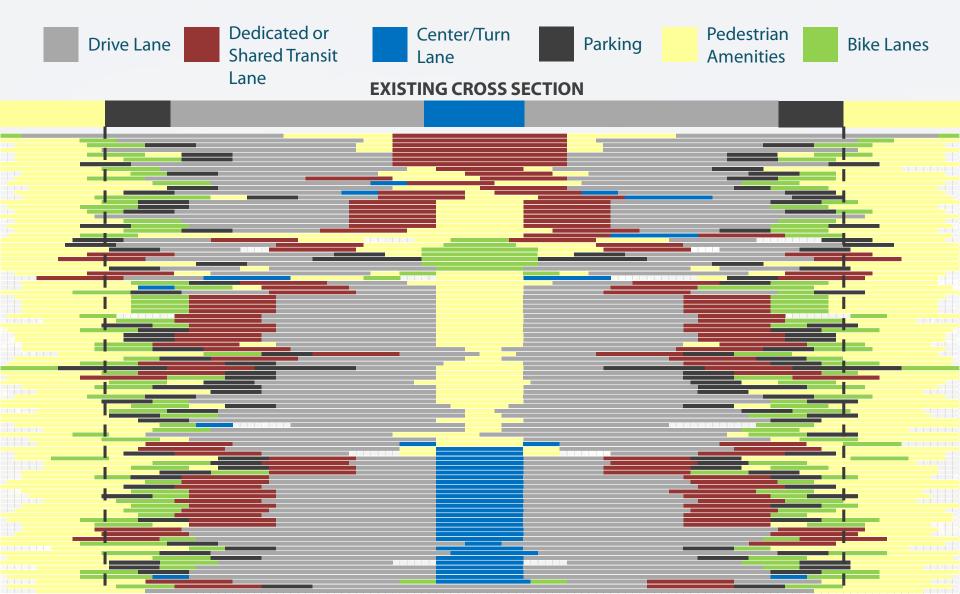


### **Pedestrian Amenities**

# total Cross Sections were completed by participants



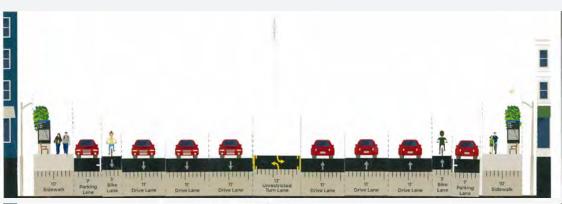
# total Cross Sections were completed by participants

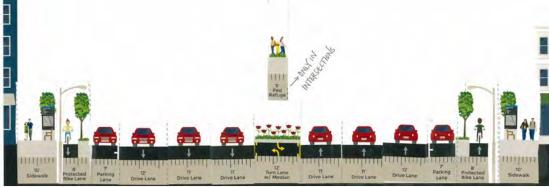




# **Car Travel Lanes**

• **22%** of participants **maintained** the current number of travel lanes (6)



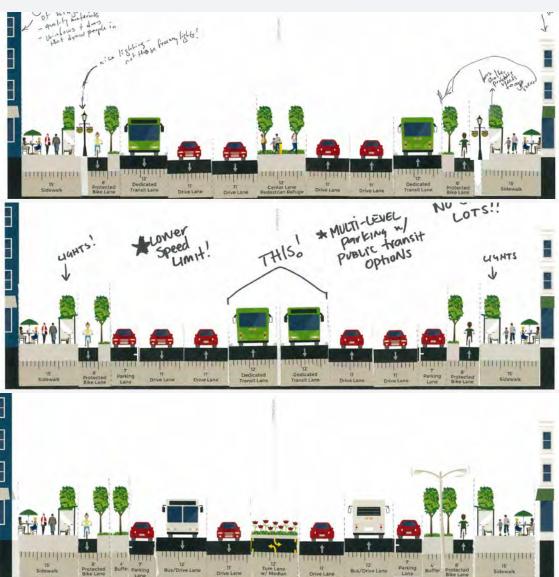






# **Car Travel Lanes**

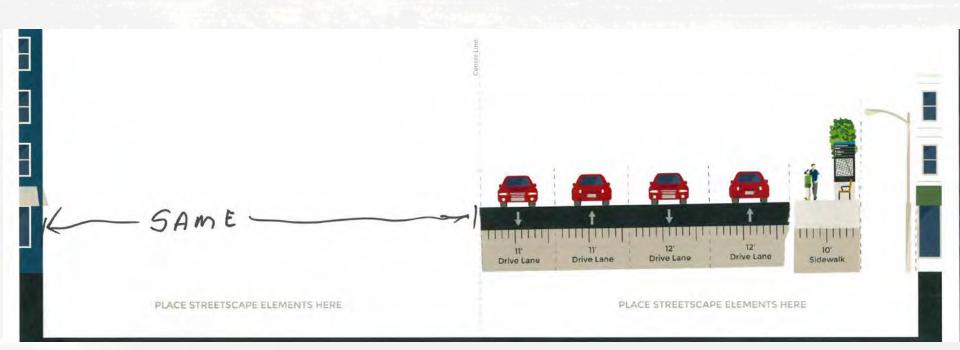
• **77%** of participants **reduced** the current number of travel lanes (<6)





# **Car Travel Lanes**

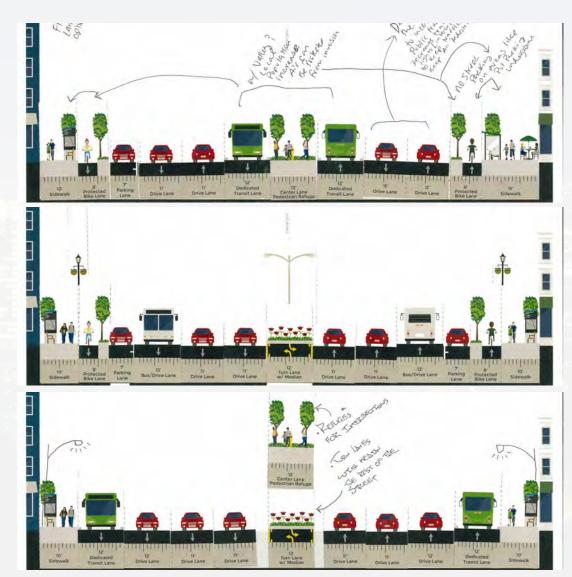
• Only 1% (1) of participants increased the current number of travel lanes (>6)





# **Bus Travel Lanes**

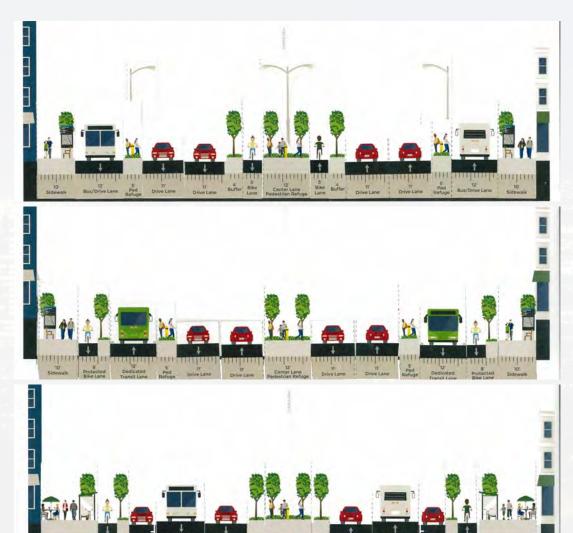
• **76%** of participants **included** dedicated transit lanes or transit/drive lanes





# **Pedestrian Refuges**

• **72%** of participants included a Center Lane Pedestrian Refuge and/or 5' Pedestrian Refuge



INTRACES OF STREET, ST

11 Drive Lane Buffer Center Lane Pedestrian Refoge Buffer Drive Lane 12 7 Bus/Drive Lane Parking

12 Bus/Drive Lane

15



# **Bike Lanes**

• 86% of participants included a 5' Bike Lane or 8' Protected Bike Lane



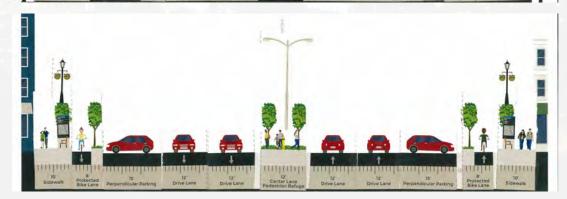




# Parking & Sidewalks

• **65%** of participants included parking of some sort





AND

• **49%** of participants **expanded** sidewalks to 15 feet or greater



# Major Takeaways from the Cross Section Exercise

### Reduce travel lanes to achieve other goals

• More than <sup>3</sup>/<sub>4</sub> of participants reduced lanes, while close to a quarter of participants maintained the current 6-lane cross section

### More robust transit

• Dedicated Transit Lanes (center running or side) or transit/auto lanes

### More frequent and protected crossings

Pedestrian Refuges

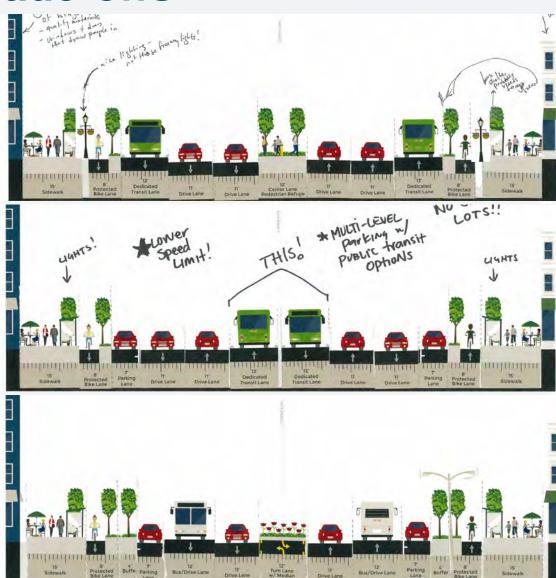
### Bike facilities

• Parking on State Street was a mixed bag



# **Cross Section Design Exercise: An Exercise in Trade-offs**

- 77% reduced lanes
  - 22% maintained current number of lanes (6)
  - 1% increased lanes
- 86% added bike lanes
- 76% added transit lanes
- 72% added pedestrian refuge
- 65% kept street parking
- 49% expanded sidewalks to 15 feet or more



# **Online Community Survey**

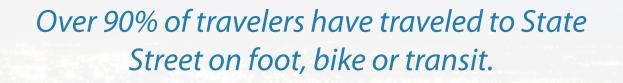


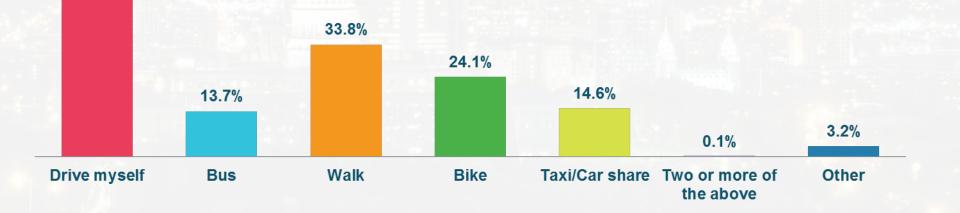


92.8%

# How do you typically travel to, from, or along State Street?

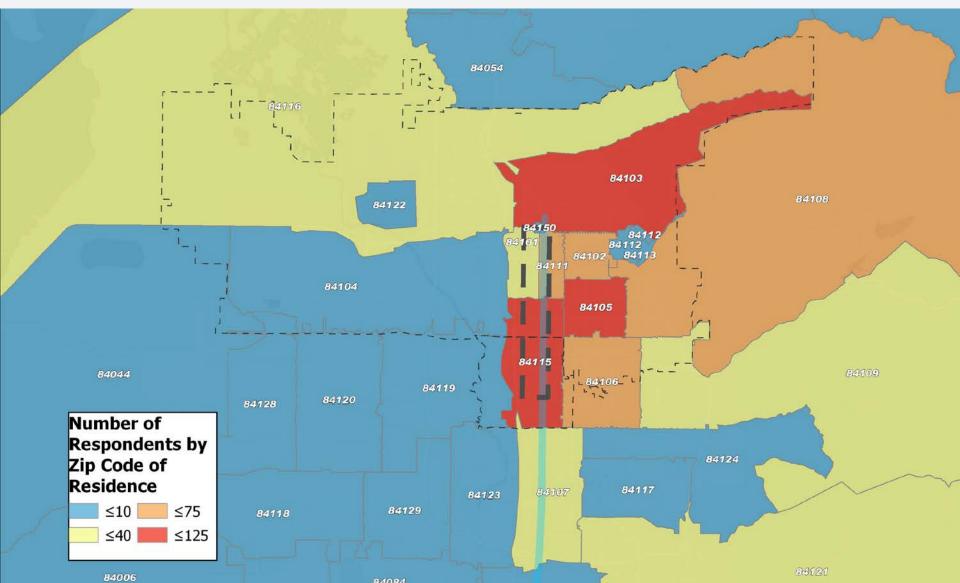
800 online survey respondents.







# Who are we hearing from? Online Survey Respondents by Zip Code



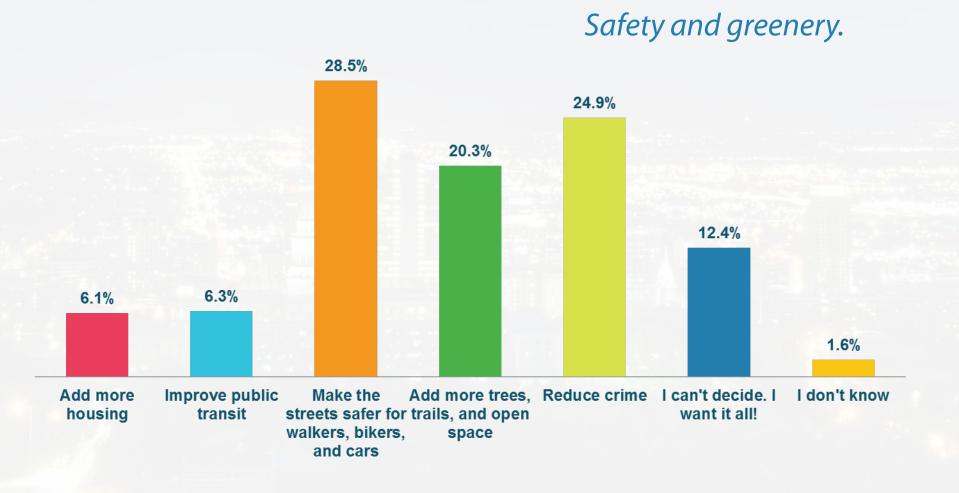
# =STATE:

# How do you usually use State Street?



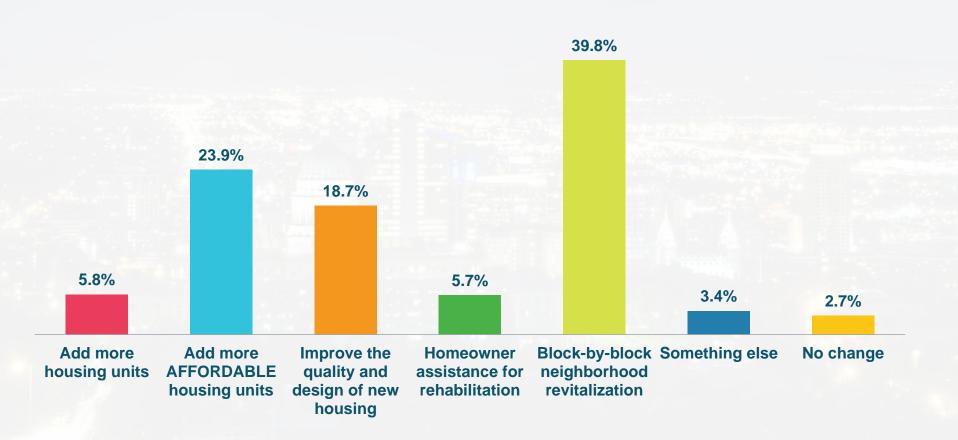


# If you could do just <u>ONE THING</u> for the corridor, what would be your <u>TOP PRIORITY</u>?

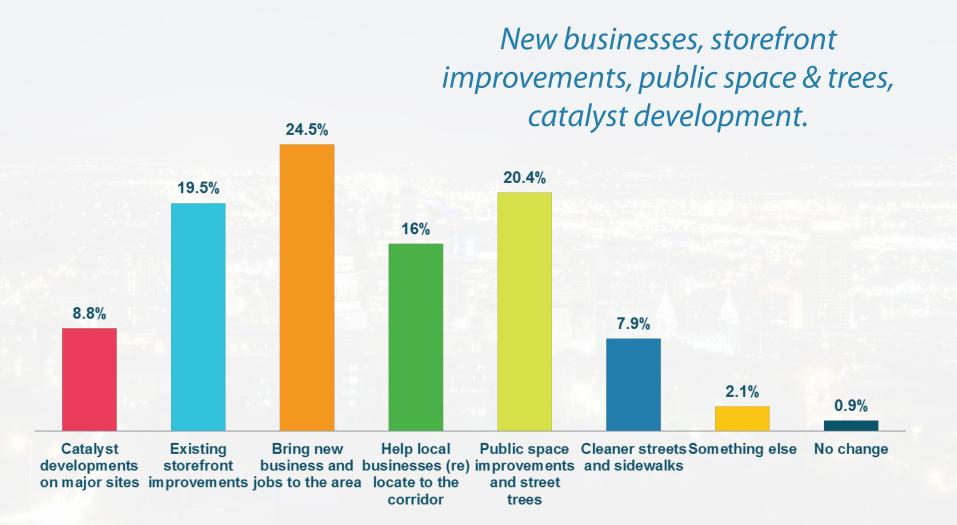




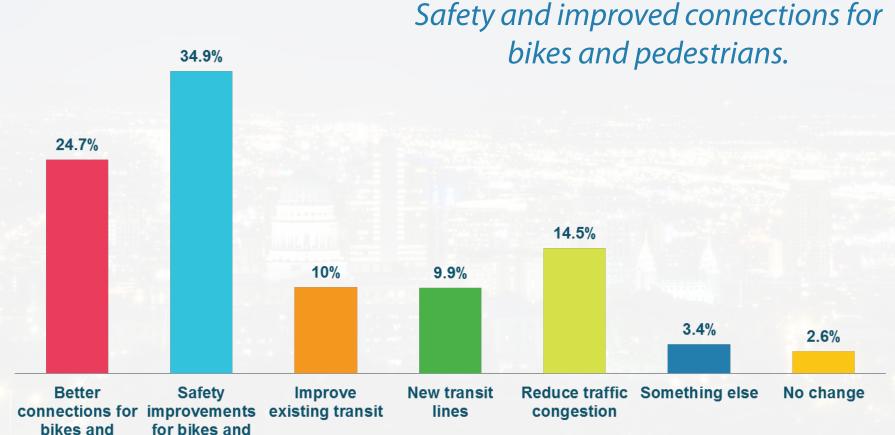
# What is your <u>TOP PRIORITY</u> for <u>HOUSING</u>?



# What is your **<u>TOP PRIORITY</u>** for **<u>BUSINESS</u>**?



### What is your **<u>TOP PRIORITY</u>** for **<u>MOBILITY</u>**?



pedestrians pedestria

pedestrians

# **Defining State Street Subdistricts**





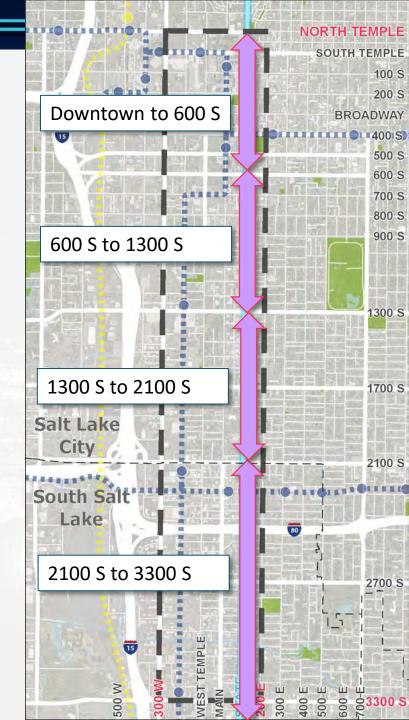
## What is State Street? Many Different Contexts

- Regional highway or local main street?
- Rapid transit corridor?
- One size-fits-all design or change with context?

#### For Example:

- Downtown to 600 S
- 600 S to 1300 S
- 1300 S to 2100 S
- 2100 S to 3300 S

#### What Defines the Subdistricts?

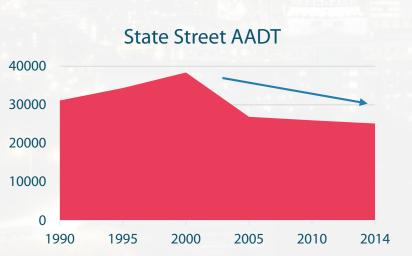


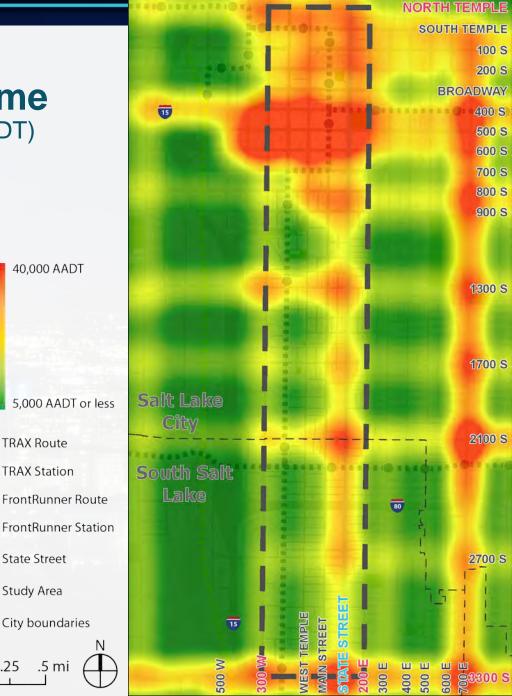


# State Street Traffic Volume

UDOT Average Annual Daily Traffic (AADT)

- 26,000 average daily auto trips in 2014 on State Street within the corridor
- 4 lane roads handle this avg. volume – examples around the state
- Varies by location so should road design vary too?



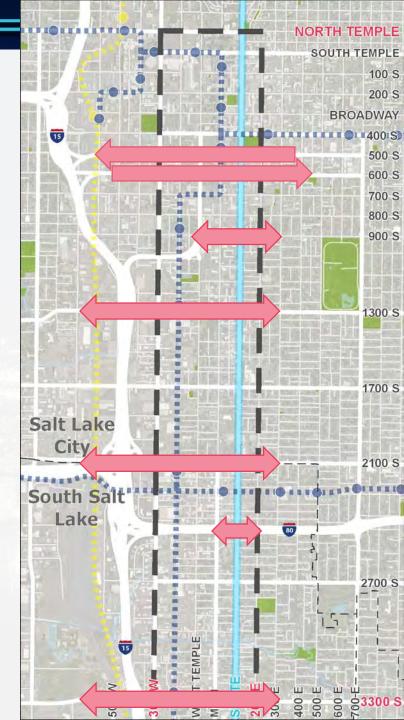




## East-West Freeway Access

Considerations for transition points between cross section concepts:

- 1. 500 S and 600 S
- 2. 900 S (off ramp & southbound)
- 3. 1300 S
- 4. 2100 S
- 5. **I-**80
- 6. 3300 S





## **Varying Land Use Characteristics**











# **Desired Land Use**

- Office, retail and housing with easy access to transit
- Complete & connected communities
- Beautiful civic & public spaces
- Access & mobility for all travelers
- Housing choice
- Sustainable growth & development
- Prosperous and safe













### **Expected Growth**

#### Projected to Double by 2040:

- 14,000 more people
- 10,000 more housing units
- 40,000 more jobs

WFRC 2040 Growth Projections





#### Desired Vision is Challenging with Current Roadway Designs in Study Area





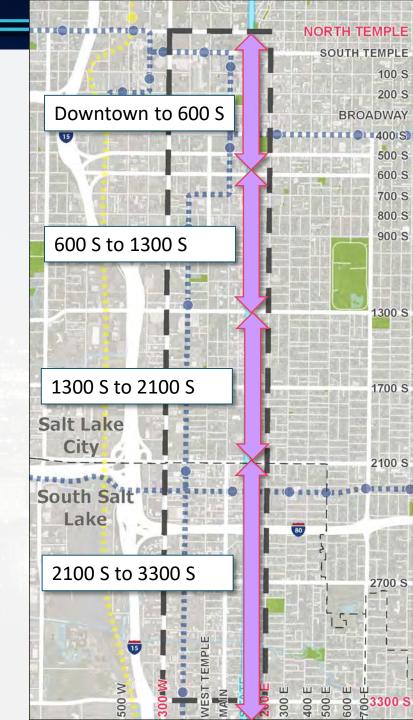
132 wide with ~80% of street dedicated to auto uses



## State Street Subdistrict Examples:

- Downtown to 600 S
- 600 S to 1300 S
- 1300 S to 2100 S
- 2100 S to 3300 S

Any Thoughts or Questions?



# **Streetscape Concepts**



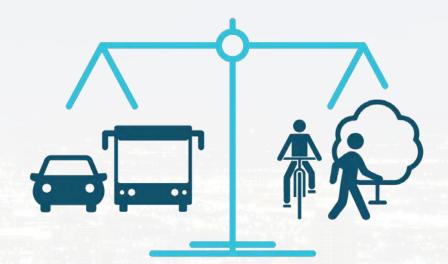


### What is the <u>RIGHT BALANCE</u> along the State Street Corridor?

#### **Exercise in Trade-offs and Balance:**

- Drive lanes?
- Rapid transit?
- Widened sidewalks?
- Landscaping and tree canopy?
- On-street parking?
- Bike lanes?
- Look for alternate routes?
- Change in peak hour congestion or diverted trips to other routes?

### What are Your Priorities within 132 Feet of Width?

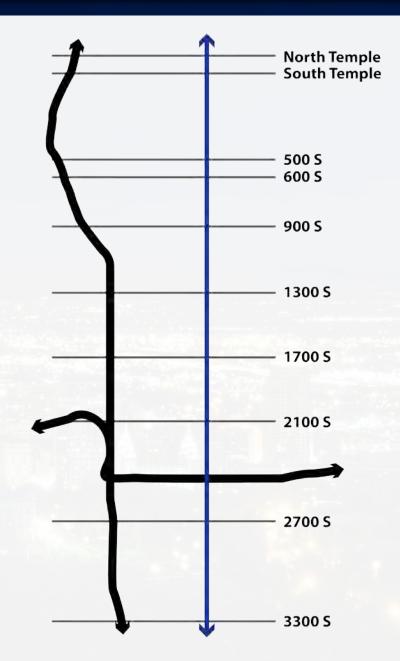




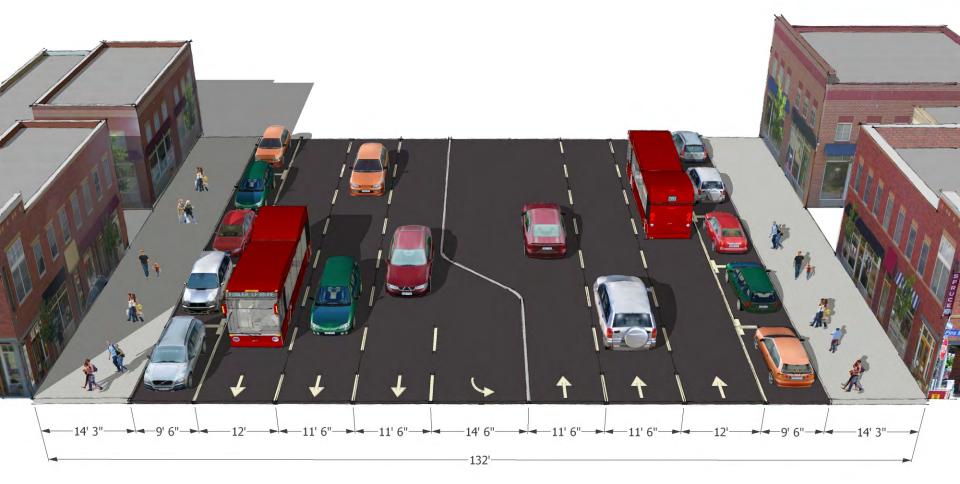
## Street Design Concepts

#### **Street Typologies**

- 1. Minor Enhancements
  - Maintain 7-lane Cross Section with Aesthetic Enhancements
- 2. Side Running Transit
- 3. Center Running Transit
- 4. Boulevard



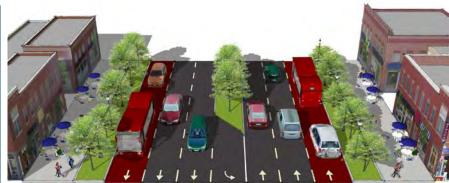
### Street Concepts Existing



## **Street Concepts: Examples of Types**



1. Minor Enhancements



2. Side Running Transit



3. Center Running Transit



4. Boulevard



# Wide Range of Concepts to Evaluate

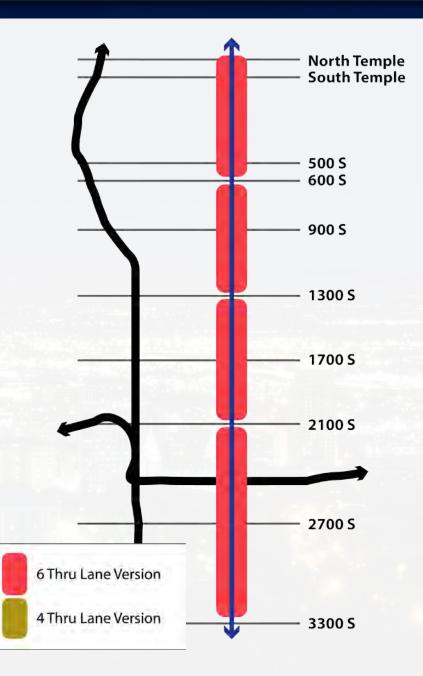




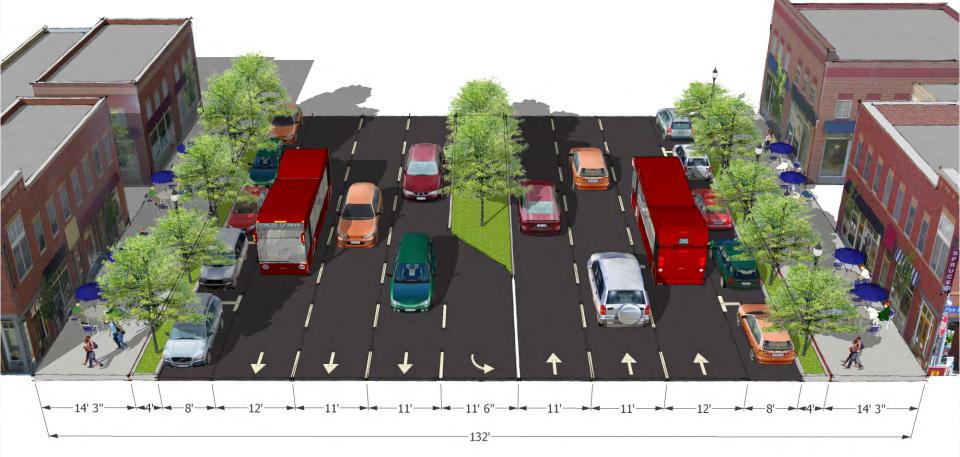
#### Concept 1A: **Minor Enhancements** Limited Aesthetic & Safety Enhancements

#### **Key Elements**

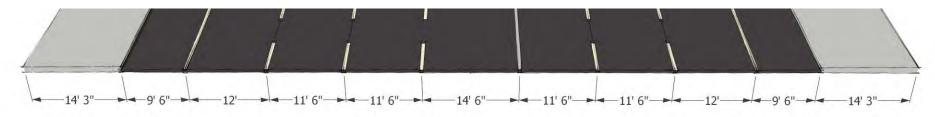
- Maintain 6 thru lanes & turn lane for entire study area
- No dedicated or priority transit lanes
- Add landscaped center medians and sidewalk planter strips with trees
- Increase midblock crossings



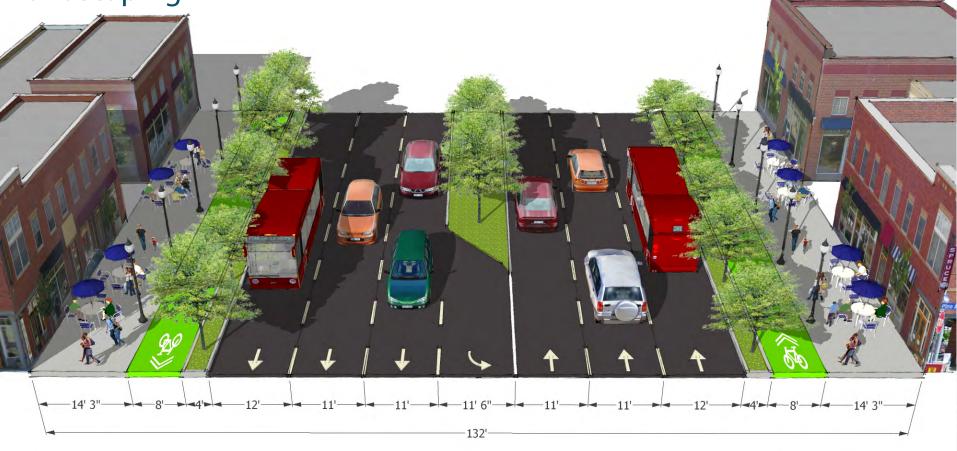
#### **Aesthetic Enhancements to Current Cross Section:** No thru lane reduction, add landscaping



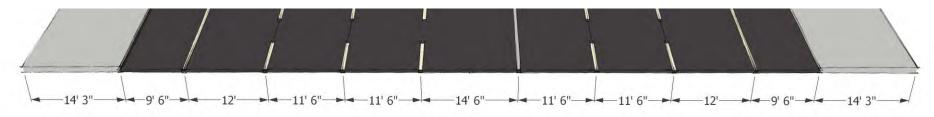




Aesthetic Enhancements to Current Cross Section: No thru lane reduction, remove parking, add bike lanes and landscaping









## Local Case Study: State Street (Hwy 89), Orem, UT

- ROW 132 ft
- AADT 35,000 50,000
- Maintain thru lanes with added landscaping, and parking or bicycle infrastructure (in places)





## Local Case Study: State Street (Hwy 89), Orem, UT

- ROW 132 ft
- AADT 35,000 50,000
- Maintain thru lanes with added landscaping, and parking or bicycle infrastructure (in places)





## Local Case Study: St. George Blvd (Hwy 34) , St. George, UT

- ROW 90 ft
- AADT ~28,000
- Maintain thru lanes with added landscaping, fewer thru lanes with higher AADT than State Street in study area





## Local Case Study: St. George Blvd (Hwy 34) , St. George, UT

- ROW 90 ft
- AADT ~28,000
- Maintain thru lanes with added landscaping, fewer thru lanes with higher AADT than State Street in study area

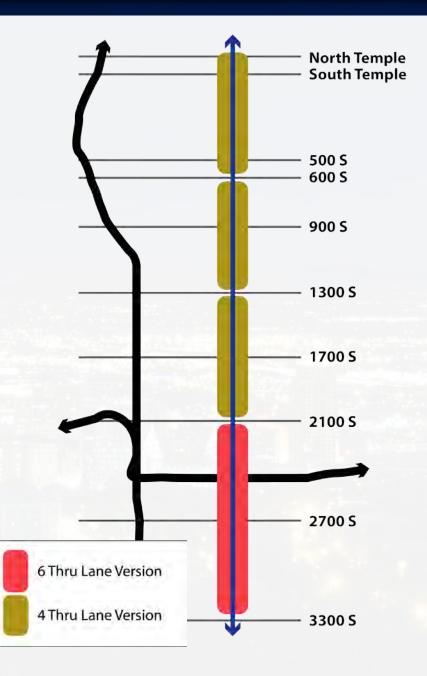




#### Concept 2A: Side Running Transit

#### **Key Elements**

- 4 consistent thru lanes north of 2100 S
- Maintain 6 thru lanes south of 2100 S
- Add dedicated and/or priority transit lanes
- Add landscaped center medians and sidewalk planter strips with trees
- Increase midblock crossings
- Add *either* bike lanes or preserve onstreet parking (depending on cross section option chosen)

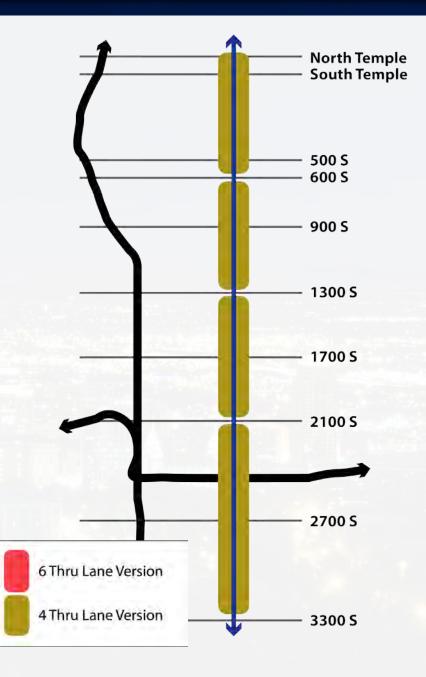




#### Concept 2B: Side Running Transit

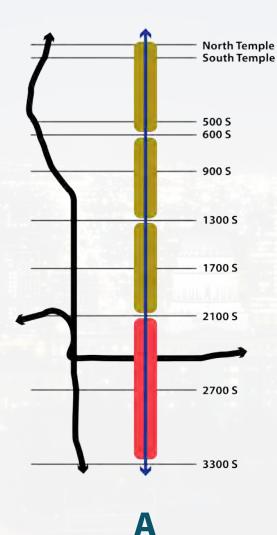
#### **Key Elements**

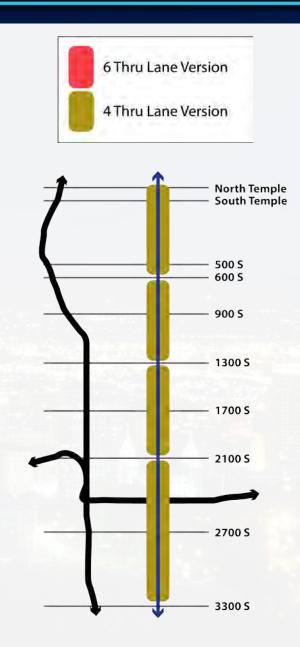
- 4 thru lanes for entire corridor
- Add dedicated and/or priority transit lanes
- Add landscaped center medians and sidewalk planter strips with trees
- Increase midblock crossings
- Add *either* bike lanes or preserve onstreet parking (depending on cross section option chosen)





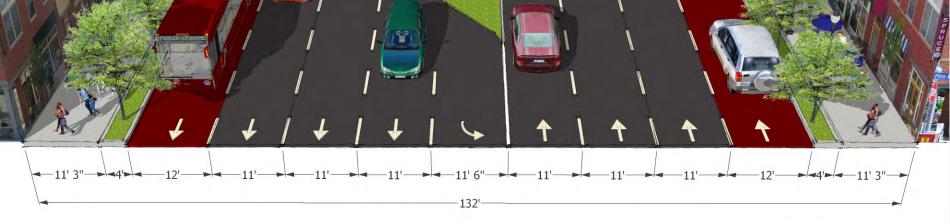
## Side Running Transit Concepts



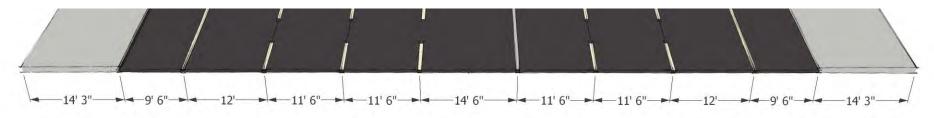


B

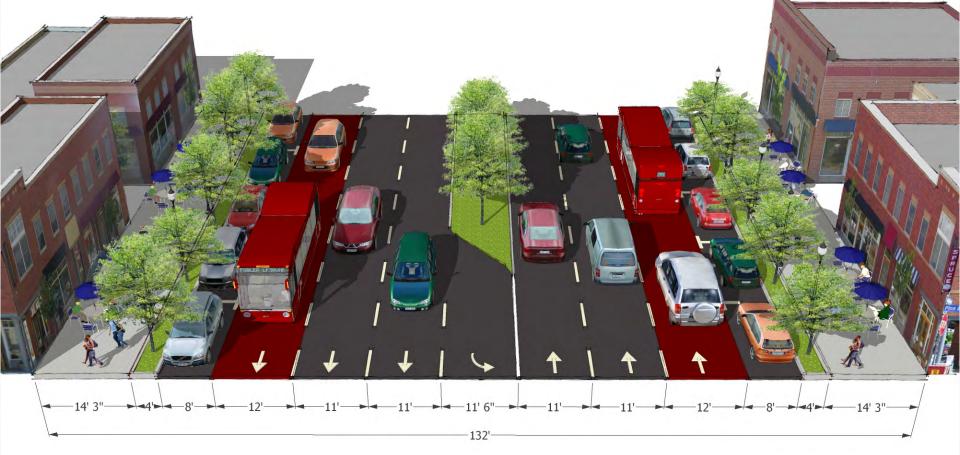
#### 6 Thru Lane + Transit Priority Lanes No thru lane reduction, remove on-street parking, narrow sidewalks, add priority transit lanes and landscaping



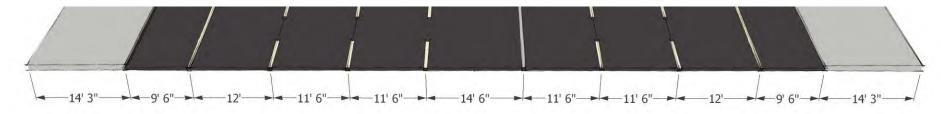




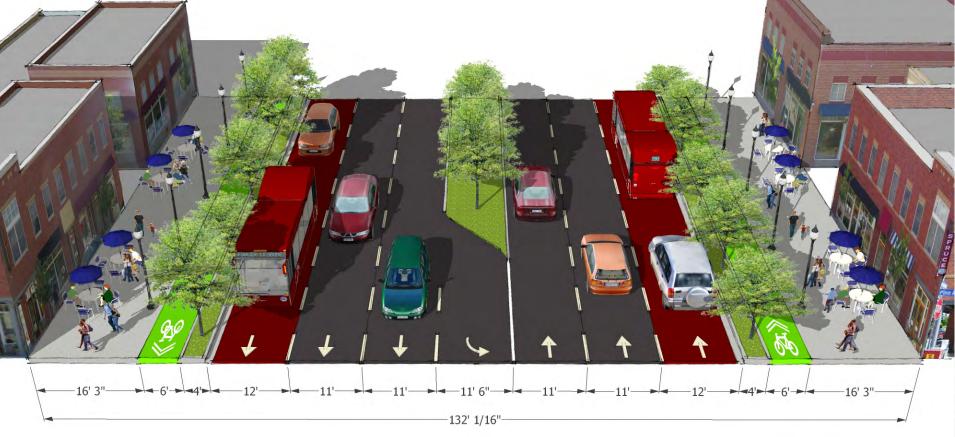
#### **4 Thru Lane + Transit Priority Lanes** Reduce to 4 thru lanes, keep parking, add landscaping



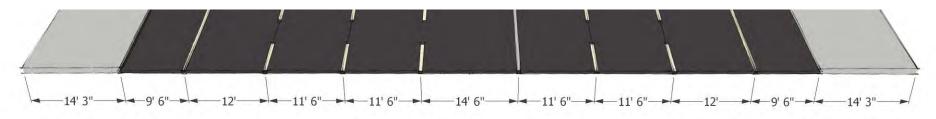
**Existing:** 



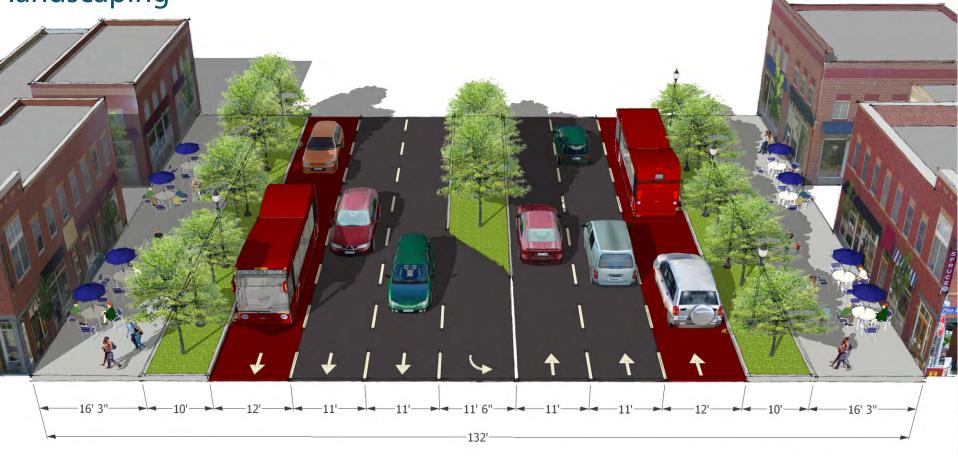
#### **4 Thru Lane + Transit Priority Lanes** Reduce to 4 thru lanes, remove parking, add protected bikeway and landscaping



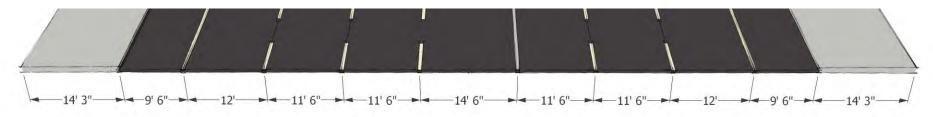




# **4 Thru Lane + Transit Priority Lanes** Reduce to 4 thru lanes, remove parking, expand sidewalk and landscaping



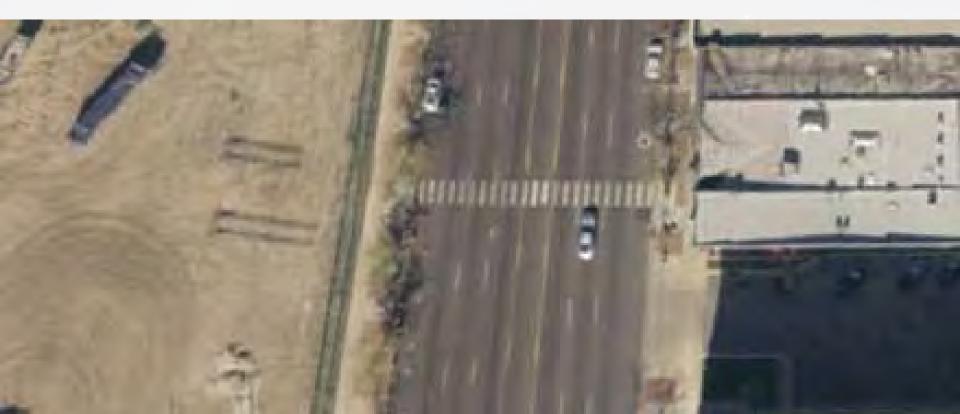






### Local Case Study in 4 Thru Lanes Redesign: Washington Blvd (Hwy 89), Ogden, UT

- ROW 132 ft
- AADT 28,015
- 7-lane road diet to 4-5 lane cross section with mid-block crossings, pedestrian refuges, landscaped medians and non-buffered cycling facilities





### Local Case Study in 4 Thru Lanes Redesign: Washington Blvd (Hwy 89), Ogden, UT

- ROW 132 ft
- AADT 28,015
- Though this road did not go through a transformation or road diet, it is a good example of a 4-5 lane cross section with mid-block crossings, pedestrian refuges, landscaped medians and non-buffered cycling facilities





### Local Case Study in 4 Thru Lanes Redesign: Washington Blvd (Hwy 89), Ogden, UT

- ROW 132 ft
- AADT 2014 28,015
- Though this road did not go through a transformation or road diet, it is a good example of a 4-5 lane cross section with mid-block crossings, pedestrian refuges, landscaped medians and non-buffered cycling facilities





## National Case Study: Aurora Blvd (Hwy 99), Shoreline, WA

- ROW ~120 ft
- AADT 2015 32,000
- Landscape medians; brick paved crossings; expanded pedestrian area/street trees; BAT lanes

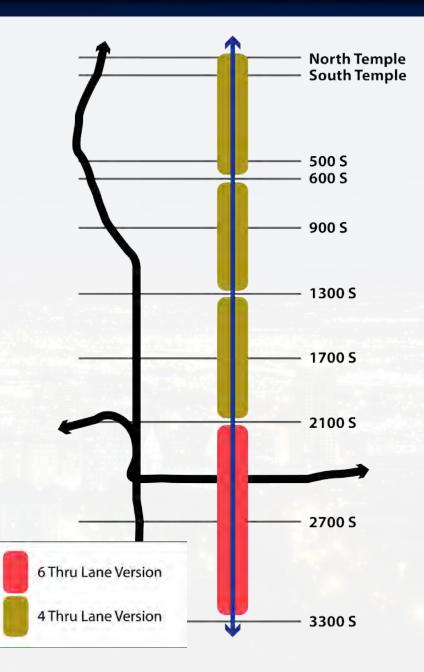




#### Concept 3A: Center Running Transit

#### **Key Elements**

- 4 consistent thru lanes north of I-80
- Maintain 6 thru lanes south of I-80
- Add dedicated, center running transit lanes
- Add landscaped sidewalk planter strips with trees – no center landscaped median due to transit
- Increase midblock crossings utilize station platforms where possible
- Add *either* bike lanes or preserve onstreet parking (depending on cross section option chosen)

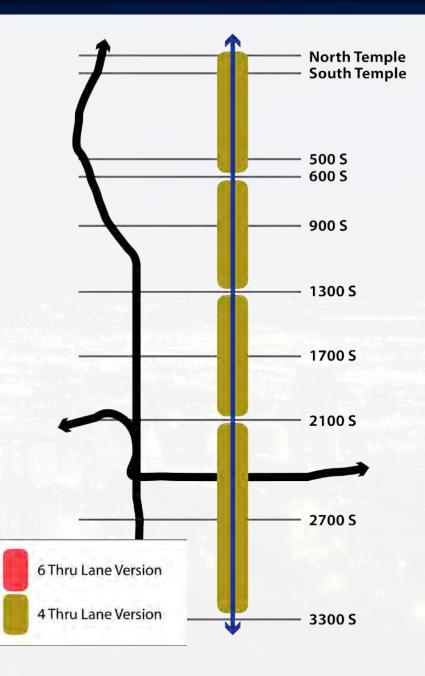




#### Concept 3B: Center Running Transit

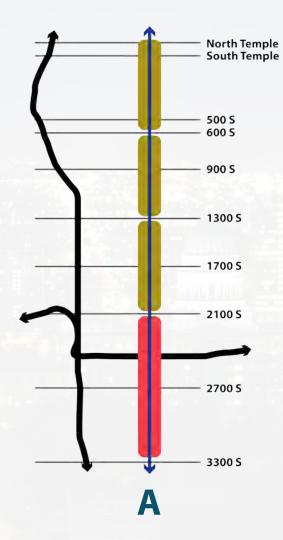
#### **Key Elements**

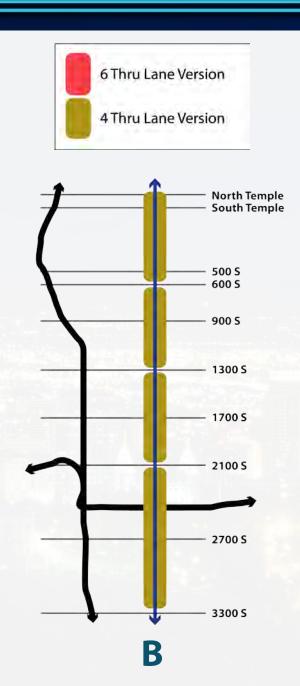
- 4 thru lanes for entire corridor
- Add dedicated and/or priority transit lanes
- Add landscaped center medians and sidewalk planter strips with trees
- Increase midblock crossings
- Add *either* bike lanes or preserve onstreet parking (depending on cross section option chosen)



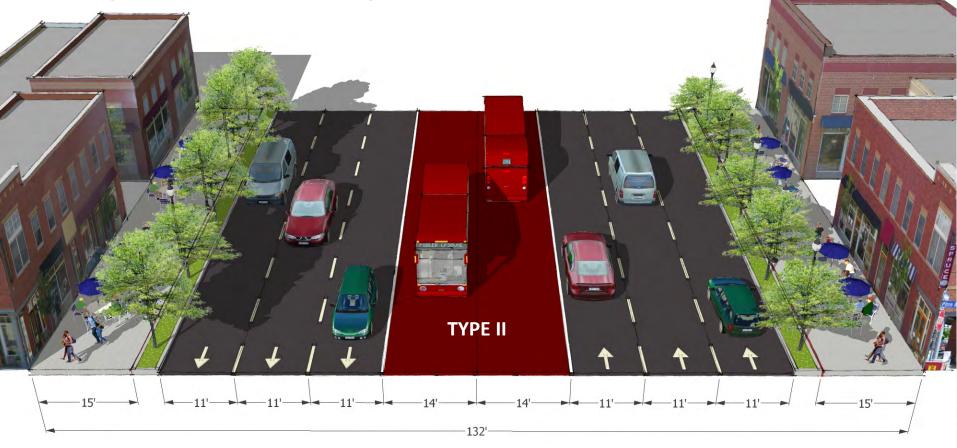


### All Center Running Transit Types

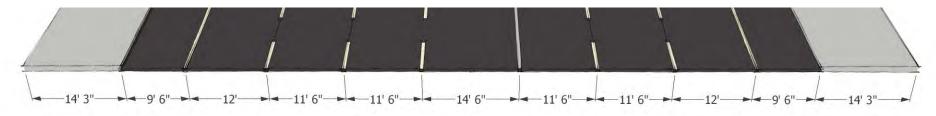




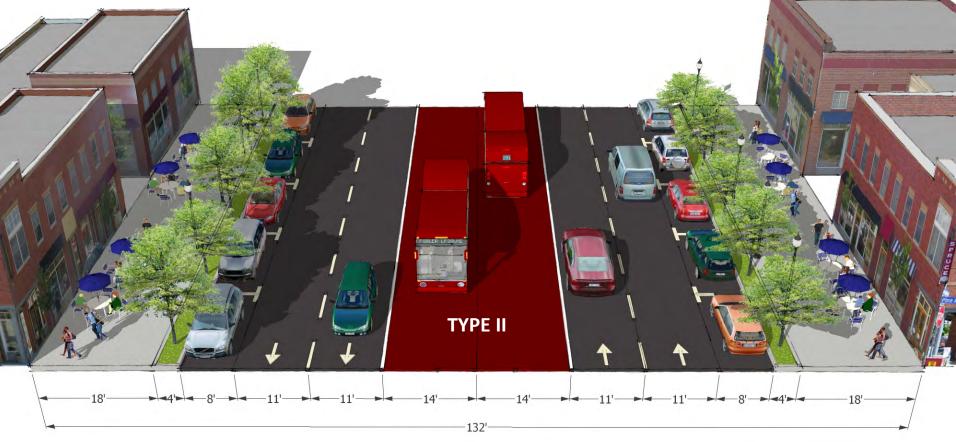
No thru lane reduction, remove center turn lane, remove on-street parking, add side landscaping

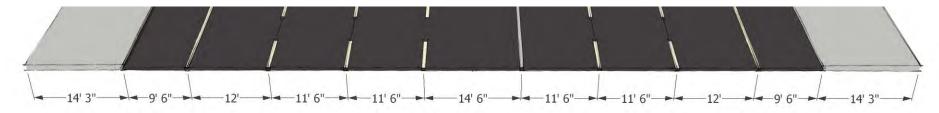




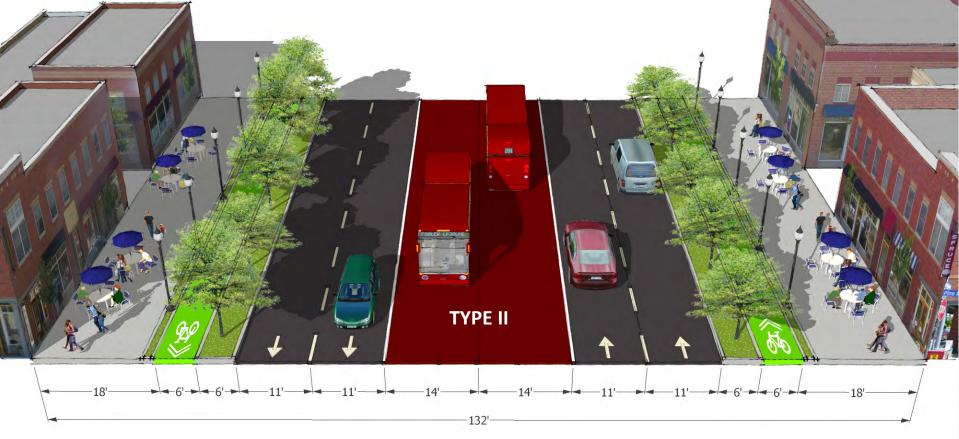


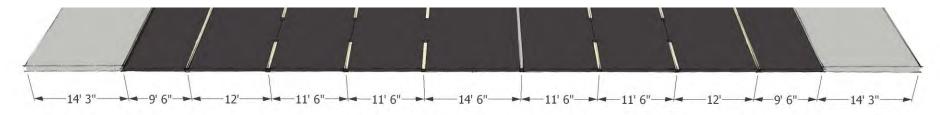
Reduce to 4 thru lanes, remove center turn lane, keep on-street parking, expand sidewalk, add landscaping



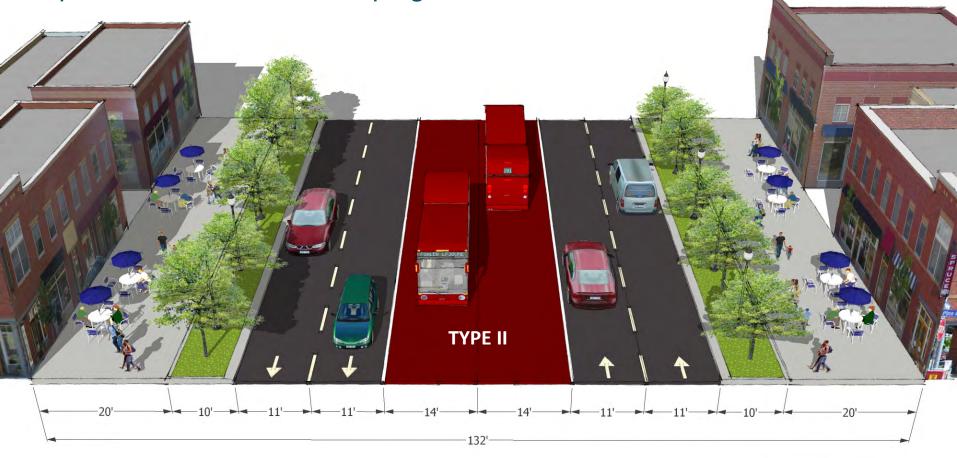


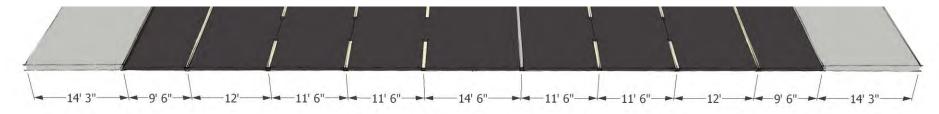
Reduce to 4 thru lanes, remove center turn lane, replace on-street parking with protected bike lanes, expand sidewalk, add landscaping





Reduce to 4 thru lanes, remove center turn lane, remove on-street parking, expand sidewalk and landscaping







### Local Case Study in Center Transit: North Temple, SLC, UT

- ROW 132 ft
- ~27,000 AADT Stayed consistent through and since construction; AADT of adjacent E-W corridors 300 N and 400 S also remained consistent
- Center running transit line with bike lanes, expanded pedestrian areas, street trees and pavement treatments for improved safety and visibility; formerly UDOT road HOWEVER road underwent jurisdictional transfer to SLC prior to redesign





#### Local Case Study in Center Transit: N University Ave (Hwy 189), Provo-Orem BRT Not Yet Complete

- ROW ~120 ft
- AADT 2014 25,000-35,000 (varies by location)
- Center running BRT; 10 ft wide multi-use path (in places); pedestrian improvements; shoulders removed to provide for dedicated bus lane





### National Case Study in Center Transit: K Street, Washington, DC

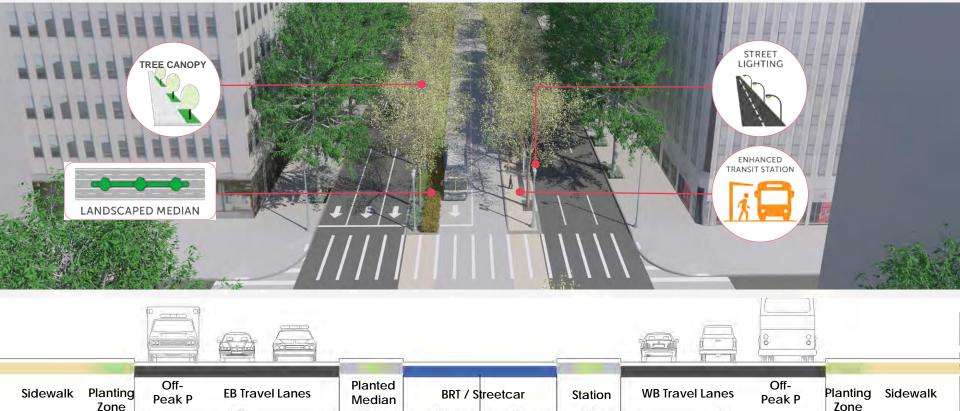
10'--

12'

- ROW 150 ft
- AADT 2014 Unknown

32'

 Center running BRT; Planted median; Expanded sidewalks & street trees; off peak parking/travel lanes



- 10' -

32'

- 12'

108' CURB-TO-CURB



### National Case Study in Center Transit: Euclid Ave, Cleveland, OH

- ROW ~100 ft
- AADT 2014 15,000-24,000 (varies by location)
- Center running BRT; 2 thru lanes, on-street parking, curb extensions
- >16,000 daily riders in 2014

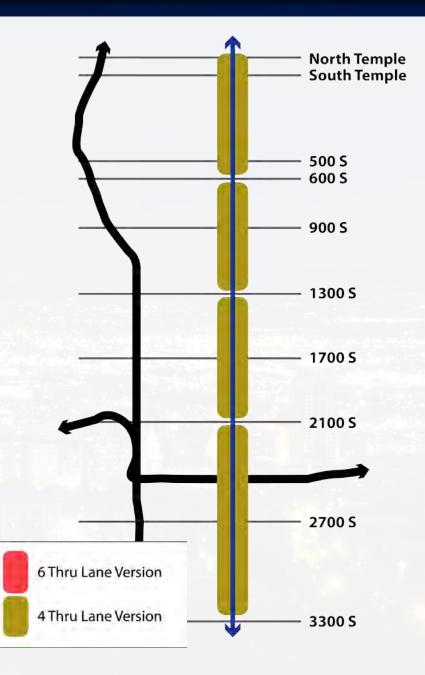




### Concept 4A: Boulevard

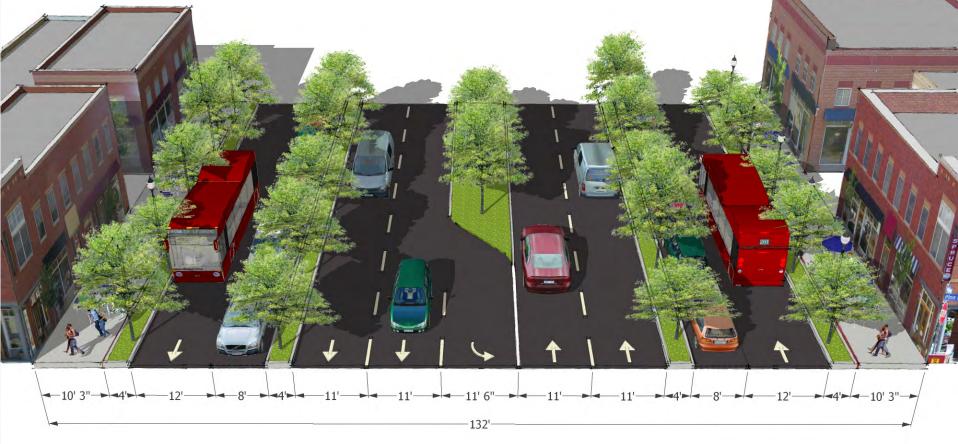
#### **Key Elements**

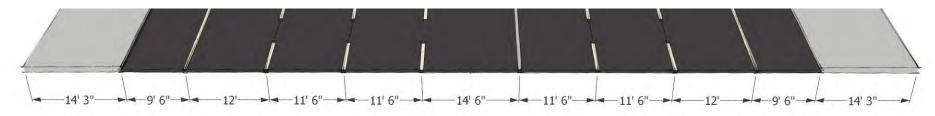
- 4 thru lanes for entire corridor
- 2 outside slip lanes for local access, parking, transit and sharrow
- Add landscaped center medians and sidewalk planter strips with trees
- Increase midblock crossings
- Preserve on-street parking



#### **Boulevard 1:**

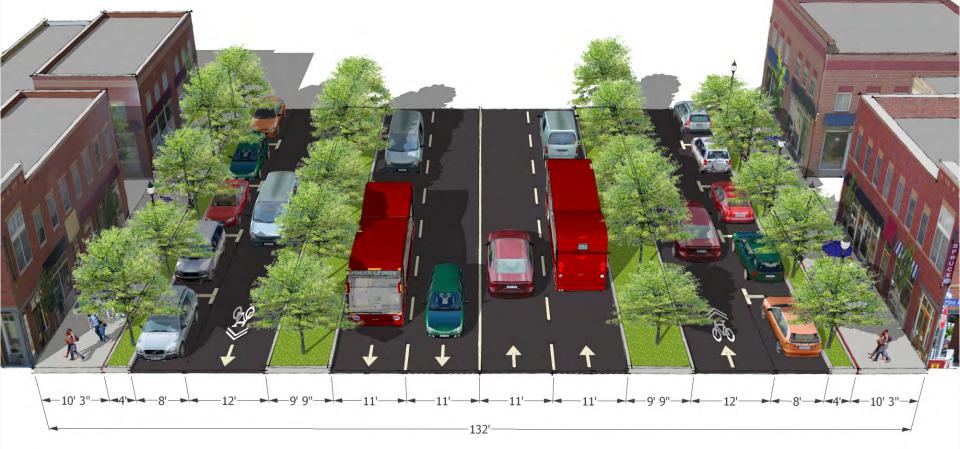
Reduce to 4 thru lanes, slower slip lanes with sharrows, transit access and inside parking, several landscaping strips, narrow sidewalk

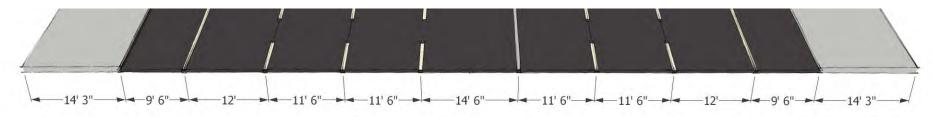




#### **Boulevard 2:**

Reduce to 4 thru lanes, slower slip lanes with sharrows and parking, wide landscaping/pedestrian refuge/transit platform strips, narrow sidewalk







### NATIONAL CASE STUDY: OCTAVIA BLVD, SAN FRANCISCO, CA

- ROW 132 ft
- AADT 44,000
- Former freeway converted to boulevard with 4 thru lanes and 2 local access lanes; no major increases in congestion with "spillover" to alternate routes effectively managed through existing grid system





# Wide Range of Concepts to Be Evaluated

Typologies	Less Change		More Change
Minor Enhancements	Α		
Side Running Transit		Α	B
Center Running — Transit		Α	В
Boulevard —			Α

#### **Street Concepts: Examples of Types**



#### 1. Minor Enhancements



2. Side Running Transit



3. Center Running Transit



#### 4. Boulevard

### **Evaluation Process**





### **Evaluation Metrics Tied to Project Goals**

#### **Improve Safety & Security**

- 1. Change in injuries & fatalities
- 2. Change in transportation choices (mode split)

#### **Expand Connectivity**

- 1. Change in number of safe crossings
- 2. Walking, biking and transit trips

#### **Optimize Mobility**

- 1. Person throughput by mode
- 2. Change in transportation choices
- 3. Vehicle miles traveled
- 4. Volume/capacity ratio
- 5. Household transportation costs

#### **Encourage Healthy & Sustainable Design**

- 1. Walk trips
- 2. Public health



### What's Next?

### **Public Engagement**

- Second online survey targeting commuters and regional audience
- Mini-workshops with major employers along the corridor
- Convening advisory group of local businesses/residents
- Second survey of street design alternatives
- Community events table
- Social media #lifeonstate

#### Have we gotten the outreach audiences right?



### What's Next?

### May-June

- Scenario development and evaluation
- Demonstration Sites defined
- Concept Plan with Draft Action Plan completed
- Demonstration Site Plan development
- Advanced transportation modeling setup

Early Summer: Next Executive Team Meeting

## Questions?

STATC