



**TOOLE**  
DESIGN



NOVEMBER 2020

**O-LINE PHASE ONE  
CONCEPTUAL DESIGN**



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# BACKGROUND & CONTEXT

# EXISTING BIKE TRAILS

## CITY OF ORLANDO CYCLING

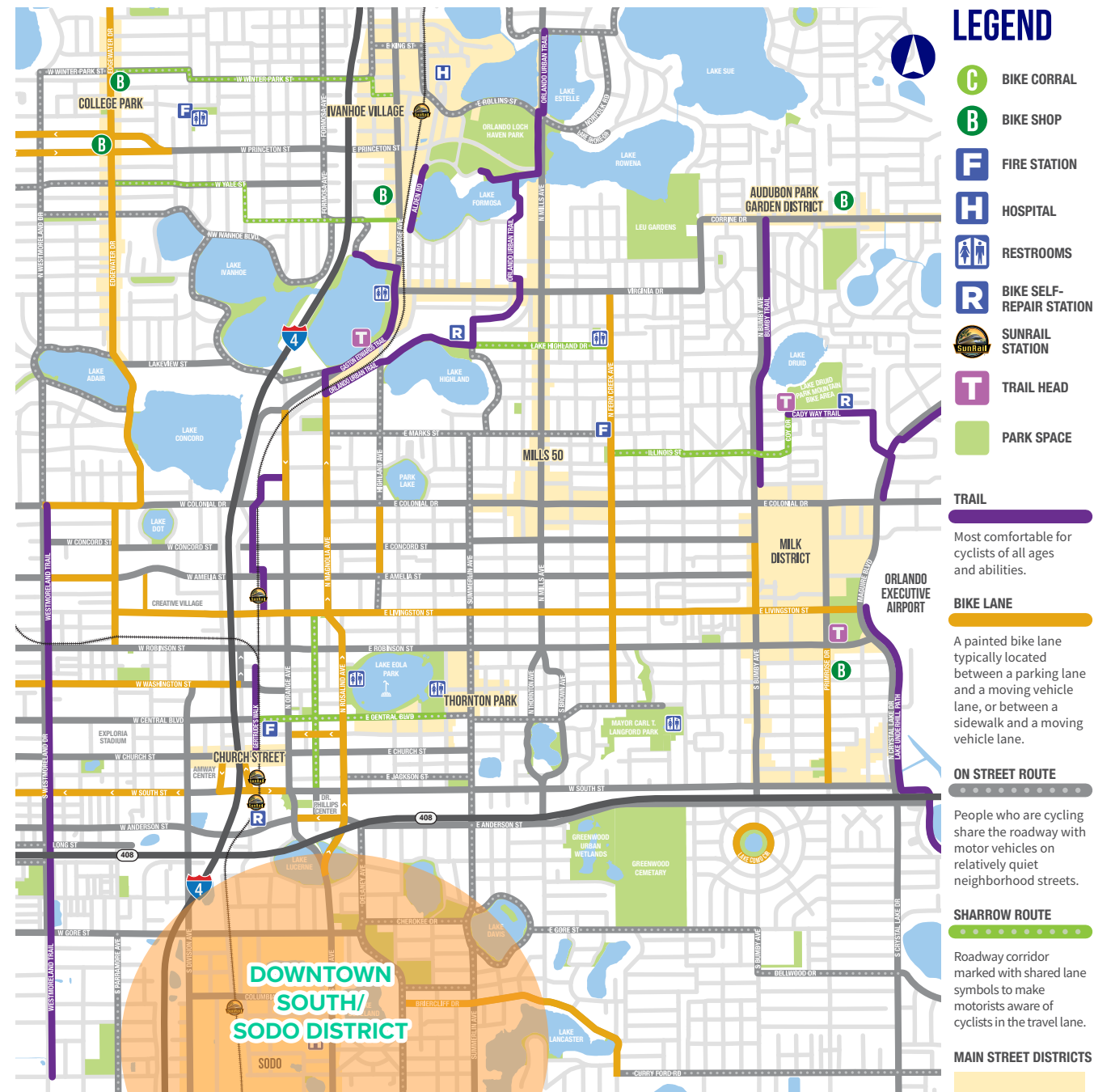


Figure 1-1. Downtown Orlando Bike Map

Currently, there are over 46 miles of off-street bike trails in the City of Orlando (Figure 1-1). Additionally, the City has numerous proposed bike and pedestrian improvements and recently completed projects such as the Colonial Overpass.

The Neighborhood Improvement District recognizes that there is a high priority to connect into Downtown Orlando from the surrounding districts through robust and safe pedestrian and bicycle infrastructure. Given its proximity to the Central Business District (CBD), it will be important for the district to minimize the barriers to the CBD which include I-4 and the 408. Continued improvements to multi-modal transportation in the District will be critical to maintain connectivity and safe access.





# TRAILS IN DOWNTOWN SOUTH NID

The Downtown South Neighborhood Improvement District supports the redevelopment of the vibrant Downtown South (SODO) neighborhood and seeks to improve the quality for those that live, work and play in the District. To improve trail connectivity throughout the District, five trail projects have currently been designed and funded and are either under construction or will be beginning construction in the coming year. Four trail infrastructure projects are currently in the planning process (Figure 1-2).

The list below shows the timelines of the current and future trail projects in the SODO District:

1	Orange Ave. Phase 1 (Pineloch St. -- Grant St.)	2019-2020
2	Orange Ave. Phase 2 (Grant St. -- W Gore St.)	2021-2022
3	Columbia Rebuild	2021-2022
4	Sligh Rebuild	2021-2022
5	Division Ave. Bike Trail	2021-2022
6	Gore St.	In Planning
7	Grant St.	In Planning
8	O-Line Phase 1	In Planning
9	Kaley St.	In Planning

To improve north-south connectivity and to improve access to downtown, the Division Avenue Complete Street Plan includes 1.3 miles of the Downtown Central Trail. East-west pedestrian and bicycle infrastructure improvements are planned on Gore Street, Columbia Street, Kaley Street and Grant Street.

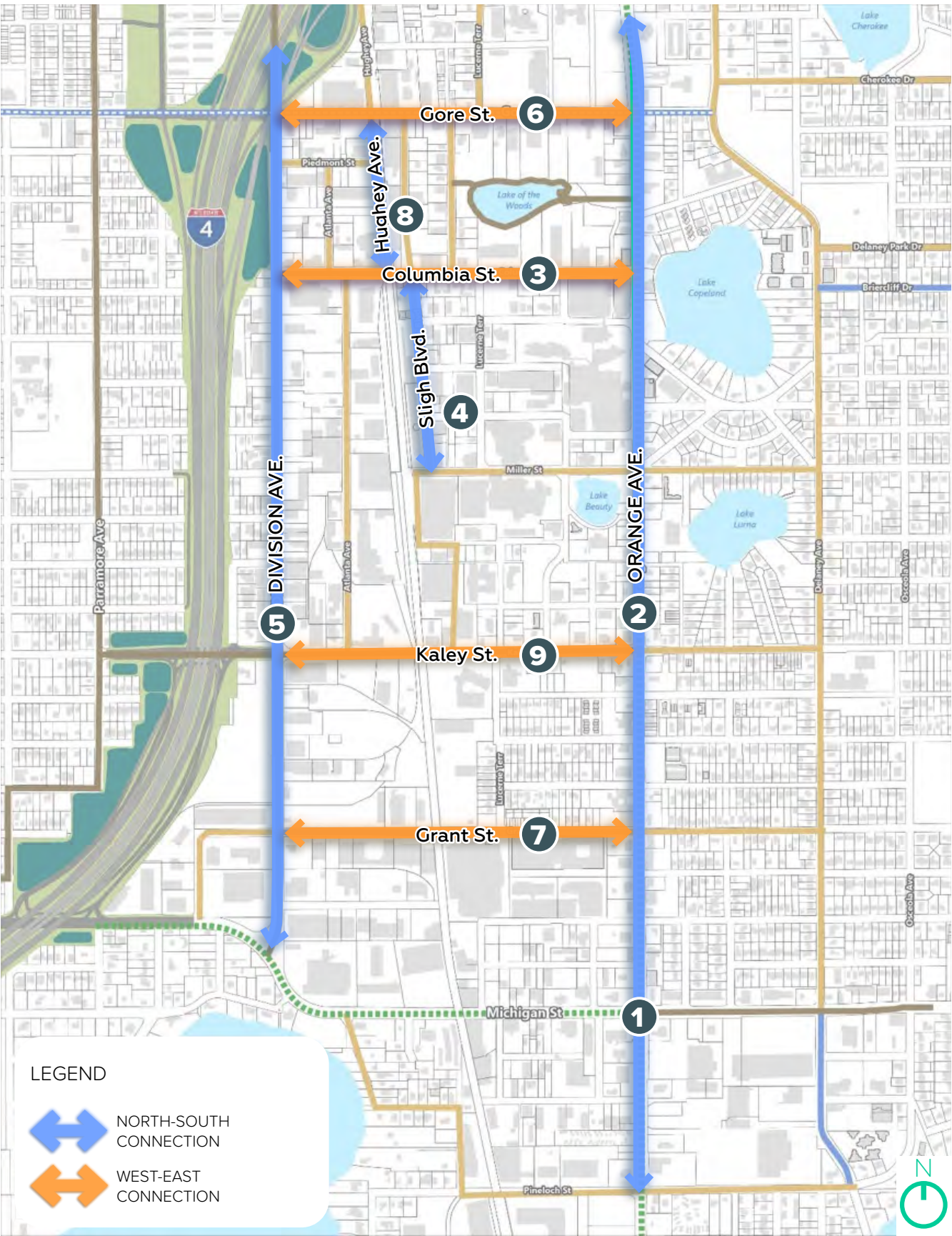


Figure 1-2. Downtown Central Trail

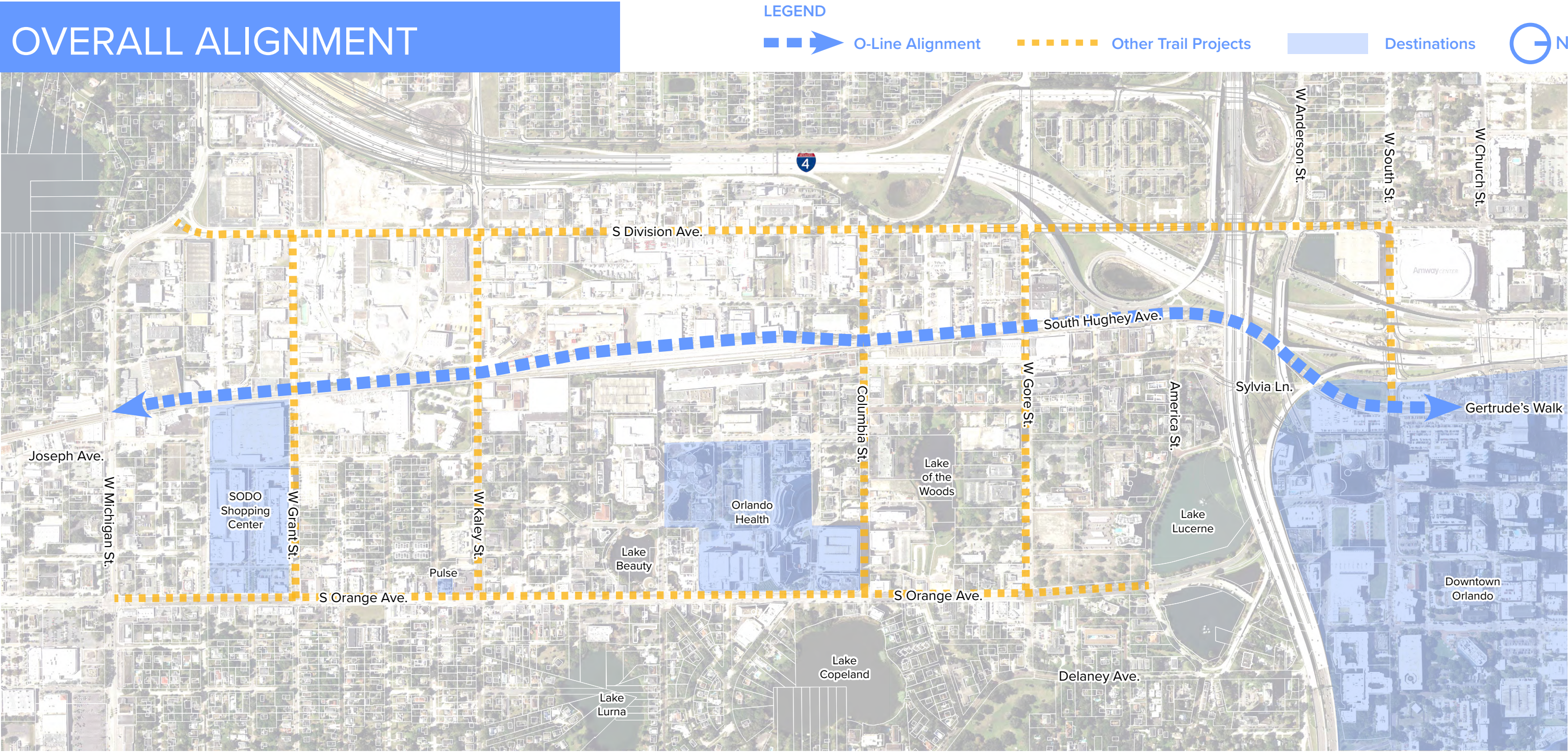


# VISION OF THE O-LINE



# WHERE IS THE O-LINE ?

## OVERALL ALIGNMENT



The overall alignment of the O-Line alignment occurs along the existing SunRail corridor, connecting north to Gertrude's Walk and south to

Figure 2-1. Pulse Corridor Concept Design



# WHAT IS THE O-LINE ?



Figure 2-2 Aerial of Orlando Downtown South Neighborhood Improvement District (DSNID) & O-Line

O-Line is a 'green spine' that will provide an oasis extending through the urban and industrial area of South Orlando (Figure 2-2).

The idea of the O-Line is to create a **common space** that serves as a linear park running through the District. It will be the **open space** that invites people into the corridor providing urban greenery, providing the opportunity for outdoor activities and providing a natural environment for social activities. There will be opportunities to incorporate not only **underground stormwater** but also **bio-swales into the project design**.

## Benefits:

- Transit-oriented development opportunities over time
- Spur economic development in the District
- Improved mobility infrastructure and network
- Improved safety
- Improved access to the downtown core

## O-LINE TO CREATE SYNERGIES

DOWNTOWN SOUTH is a unique district and includes diverse commercial and industrial businesses, residential areas and a large healthcare campus. As the District continues to develop and re-develop parcels, it is crucial that multi-modal transportation is both planned and implemented over time. A key goal of the District is to implement safer pedestrian and bicycle infrastructure into the existing transportation system. Achieving this goal will hinge on the re-design of several corridors throughout the District. It is important that the design of the O-Line capitalizes on several of the synergies identified – including incorporating creativity and innovation into this unique District.



Figure 2-3 Creating Synergies



# ORIGINAL CONCEPTS

The original concept of the O-Line reflects the green space/linear park atmosphere that was originally envisioned by the District. (Figure 1-5). Also, the original concept shows how future re-development will interface with the trail creating unique spaces for outdoor dining and other uses along the interface between the public and private development. The SunRail corridor will be transformed from an industrial rail line to great urban park with lush vegetation and

## EXISTING



Figure 2-3. O-Line Original Concept Existing Site Photo (S Hughey Ave.)

## DESIGN PROPOSALS

### PHASE 1



Figure 2-4. O-Line Original Concept Phase 1

### FUTURE DEVELOPMENT



Figure 2-5. O-Line Original Concept Future Development



# COMPARABLE PROJECTS

In order to further develop the vision of the O-Line and to advance the conceptual design of the space, S&ME collected images from comparable projects to generate ideas and to explore options for various site features. Below are examples of selected comparable project images that have been taken into consideration during the design process. S&ME also worked with City staff to develop a survey to gather public input on some of the comparable images in terms of the desired features of the design and overall feel of the space. Results from the public input survey can be found toward the end of this report and

## ARTISTIC ELEMENTS



The artistic elements include potential gateway features, artistic vertical elements, green screen fencing along the rail corridor and potential public art piece locations along the trail. The incorporation of these artistic elements ensures that the O-Line



# USER EXPERIENCE



A core objective of the O-Line project is to create a comfortable and appealing user experience throughout the corridor. The selected images show various design elements that can be incorporated into the design to enhance the user experience including the use of canopy trees and landscape areas, the use of adequate pedestrian and accent lighting, and the use of different pavement materials. These elements will give the O-Line a unique character and will



# VISION RENDERING

A DESCRIPTION OF  
EXISTING CONDITIONS  
(LOOKING NORTH)

EXISTING





A VISUAL ILLUSTRATION  
OF THE O-LINE  
IMPLEMENTATION  
(PRIOR TO FURTHER RE-  
DEVELOPMENT)

## PHASE 1





NEW MIXED-USE  
DEVELOPMENTS

A VISUAL ILLUSTRATION  
OF THE O-LINE  
IMPLEMENTATION  
SHOWING FUTURE MIXED-  
USE RE-DEVELOPMENT  
ALONG THE CORRIDOR

# FUTURE DEVELOPMENT

DAYTIME VIEW





A VISUAL ILLUSTRATION  
OF THE O-LINE  
IMPLEMENTATION  
SHOWING FUTURE MIXED-  
USE RE-DEVELOPMENT  
ALONG THE CORRIDOR

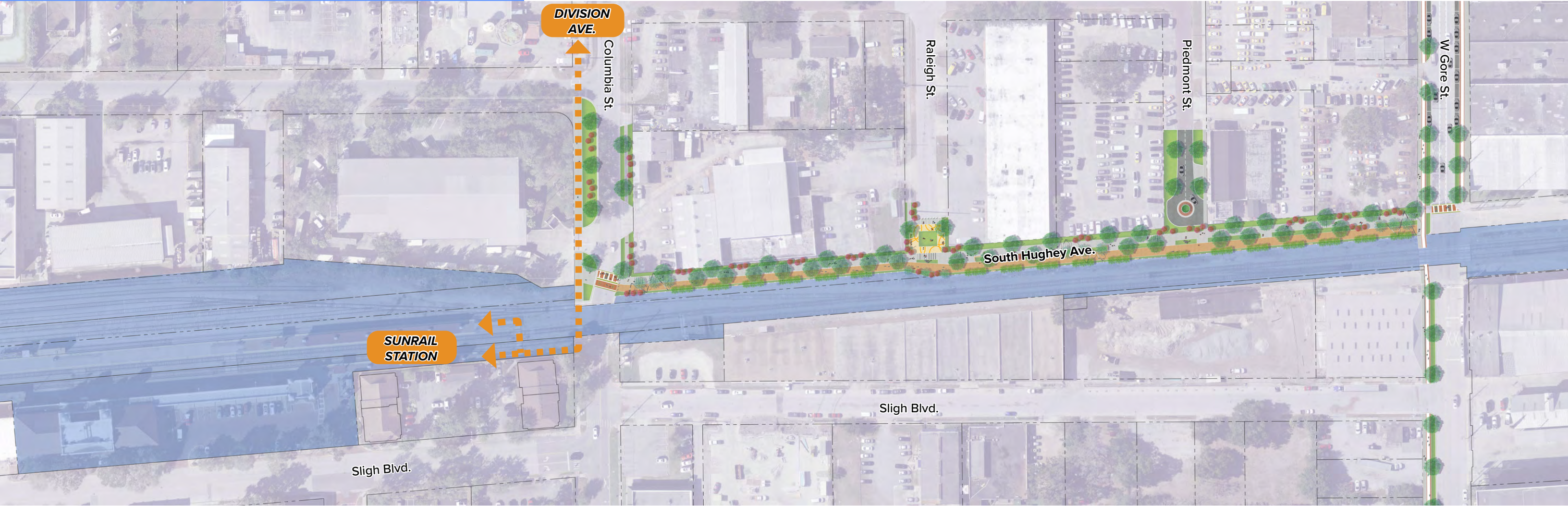
# FUTURE DEVELOPMENT NIGHT VIEW





# PHASE 1 CONCEPTUAL DESIGN

## PHASE 1 CONNECTIVITY



This plan shows the connection from Phase 1 of the O-Line to the existing SunRail Station south of Columbia St. and also to the future Division Avenue Trail which will begin construction in the near future. It is important to ensure that Phase 1 of the O-Line is well-connected to existing and planned infrastructure and that it further increases multi-modal connectivity within the District.

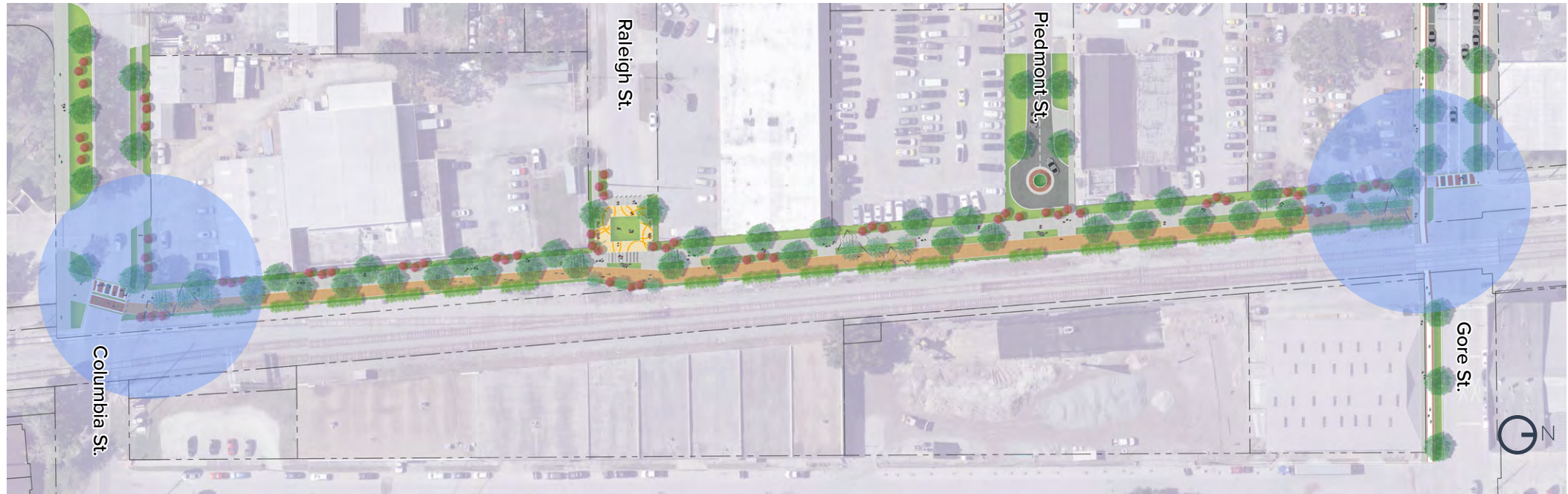


# PHASE 1 DESIGN ELEMENTS



This plan shows the Phase 1 rendering of the O-Line and highlights the various design elements for this initial phase. Based on our public input survey, we discovered that providing ample shade as well as the use of native plants is very important to stakeholders in creating a comfortable and highly utilized outdoor space. The plan identifies the various design elements of the project including locations for benches and public art as well.





The gateway design for both entrances into Phase 1 (as both Gore St. and Columbia St.) is also a core component of the conceptual design. The south crossing at Columbia St. identifies a pedestrian and bike crossing that connects to the future trail improvements along the south side of Columbia St. Likewise, a pedestrian crosswalk across Gore St. is also identified in order to tie in to future streetscape improvements along Gore St. Another key component of the gateways is the incorporation of the metal arches that serve as vibrant vertical elements and invite



GATEWAY ENTRANCE AT COLUMBIA

ENLARGEMENTS



GATEWAY ENTRANCE AT GORE ST.





As part of the O-Line Phase One implementation, the vehicular access from Raleigh St. and Piedmont St. onto S. Hughey Ave. will be eliminated. However, it was important that existing curb cuts and vehicular access into the adjacent properties were maintained as part of the design. Enlargements on this page show how both Raleigh St. and Piedmont St. can be terminated to eliminate vehicular access into the O-Line corridor but to maintain access to those parcels and associated businesses.

At the terminus of Raleigh St. the design provides an open lawn/ plaza space. This space is located midway along Phase 1 and serves as a small pocket park along this linear corridor.

## ENLARGEMENTS



OPEN LAWN/PLAZA AT RALEIGH ST.



AT PIEDMONT ST.



# TYPICAL SECTION

The graphic below shows the typical cross-section for the O-Line Phase One implementation. A future development setback of 20' (10' minimum) is preferred to allow ample space for outdoor dining and pedestrian circulation along the future mixed-use developments. A separate pedestrian walk and bike trail allows for various users to travel through the space with minimal conflict. The bike trail is placed closer to the rail corridor and further away from future redevelopment as that is more likely to be a higher speed corridor than the closer pedestrian walk. Landscape areas are placed through the length of the corridor to provide canopy trees for shade and the break up the pavement areas to create a comfortable and enjoyable space.





# ALTERNATE ALIGNMENTS

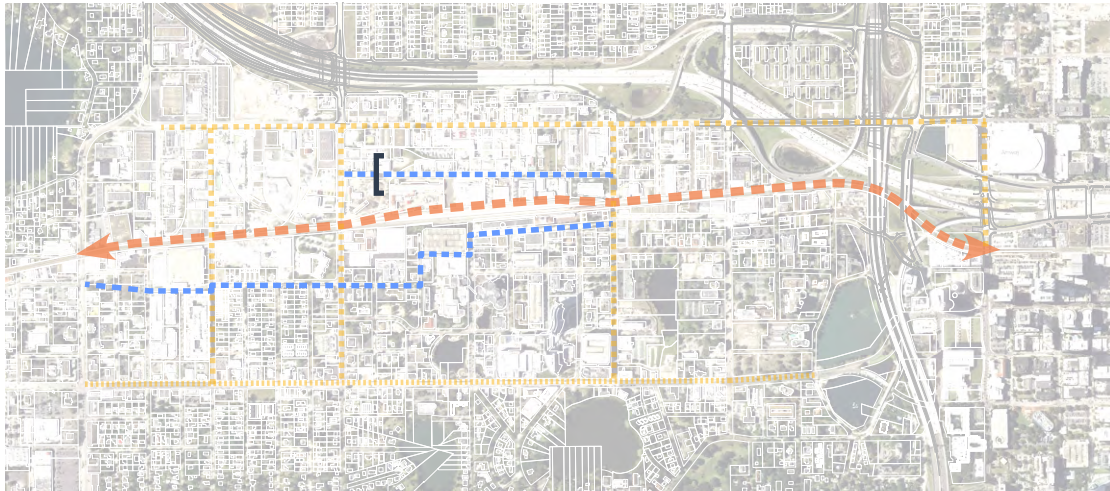


The map illustrates the proposed Phase 1 development area in downtown Orlando. The area is bounded by S Division Ave. to the north, S Orange Ave. to the south, S Gore St. to the east, and S Sligh Blvd. to the west. Key landmarks within the area include the SODO Shopping Center, Orlando Health, Lake of the Woods, Lake Lucerne, and Lake Copeland. Major streets shown include S Division Ave., S Orange Ave., S Lucerne Terrace, S Sligh Blvd., S Gore St., S South St., and S Church St. A large orange dashed line outlines the Phase 1 area, and a black arrow labeled 'Phase 1' points from the center towards the left side of the map.



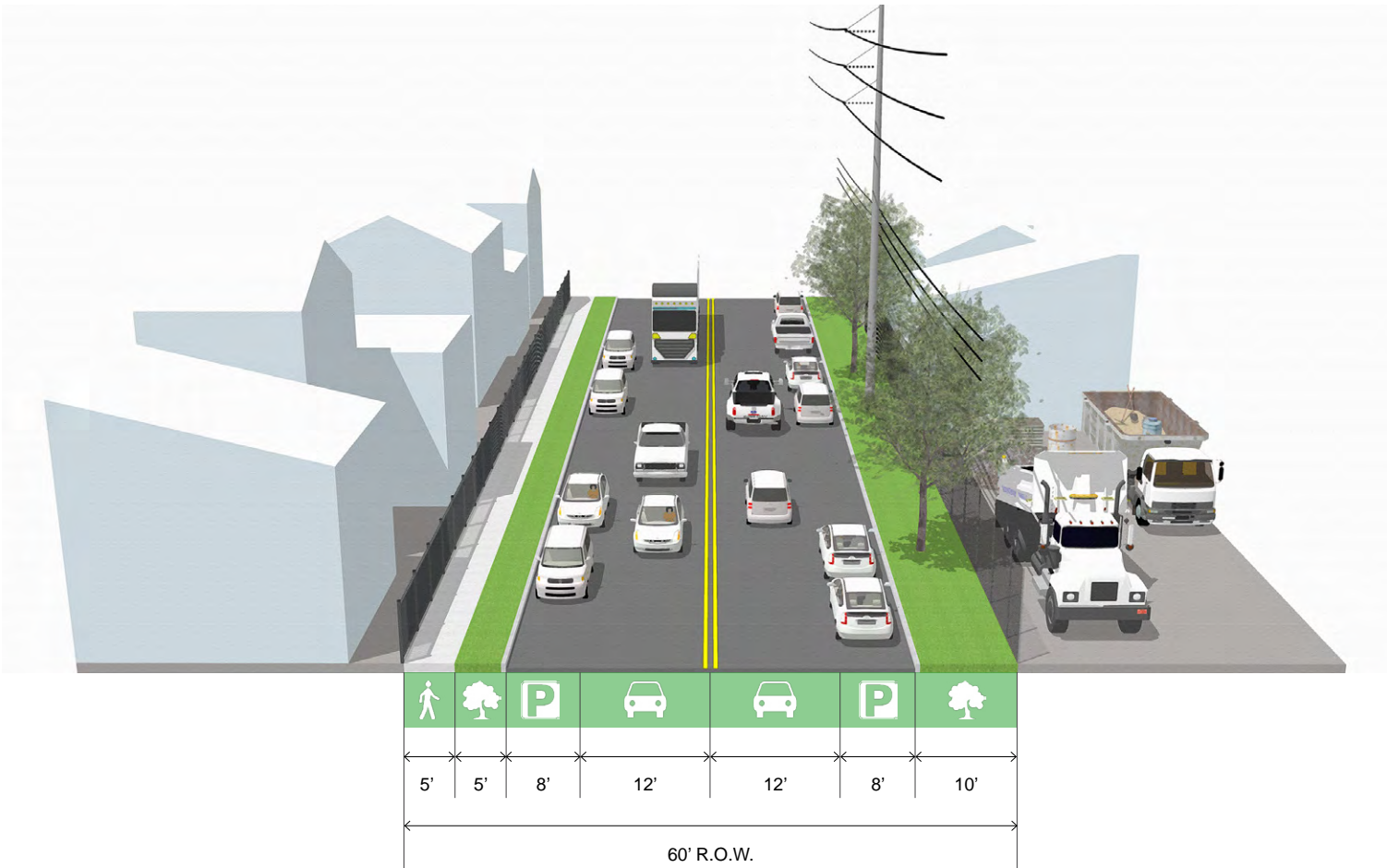
# ATLANTA AVE. - SOUTH

## PROPOSED SECTION 1



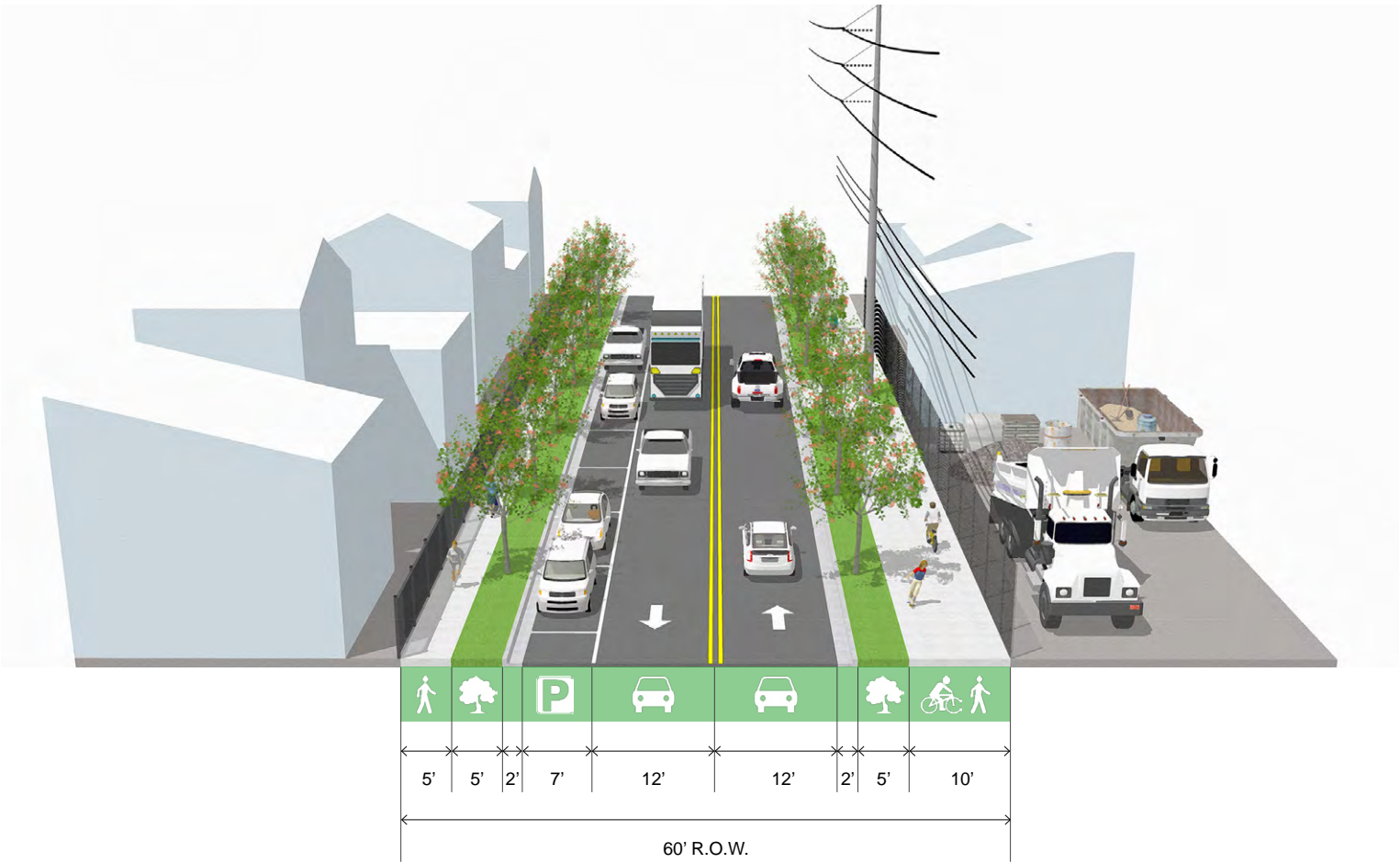
### EXISTING CONDITION

The existing condition along the south portion of Atlanta Ave. consists of two traffic lanes with on-street parking on both sides of the street. Only the west side of the street currently has a pedestrian sidewalk.



### PROPOSED DESIGN

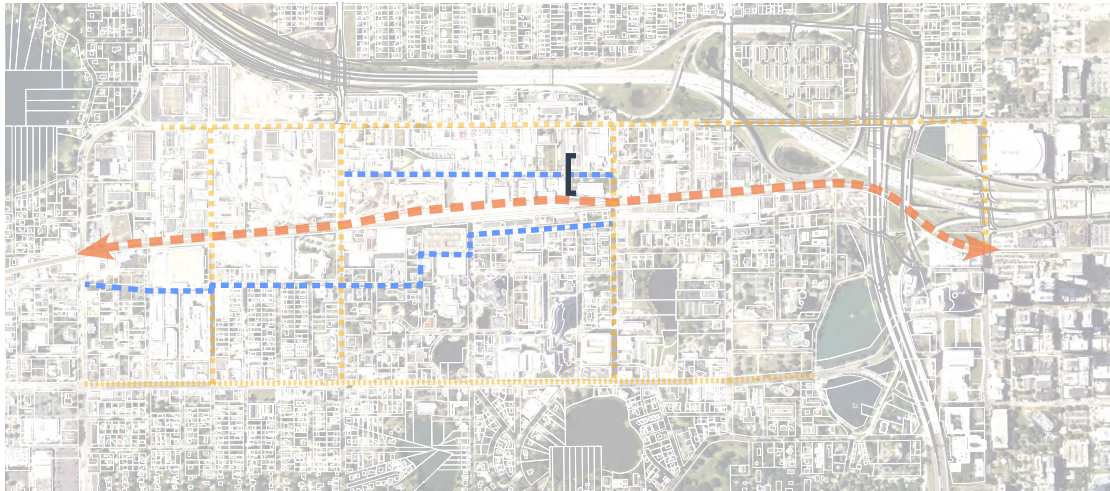
By eliminating on-street parking on one side of the street we are able to include a 10' multi-use path along the east side of the road corridor. Both sides of the street also contain a 5' lawn strip with street trees along the length of the corridor.





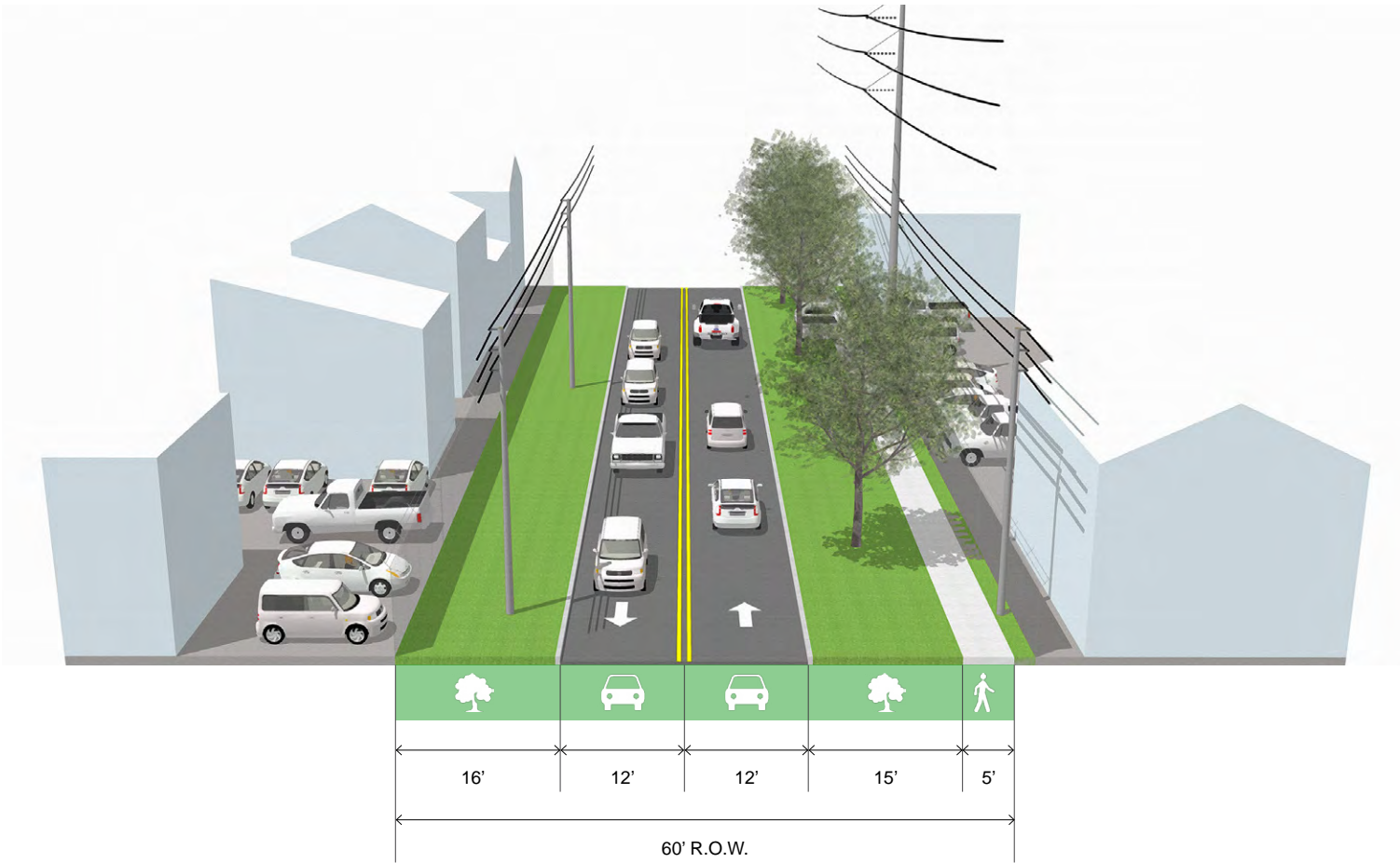
# ATLANTA AVE. - NORTH

## PROPOSED SECTION 2



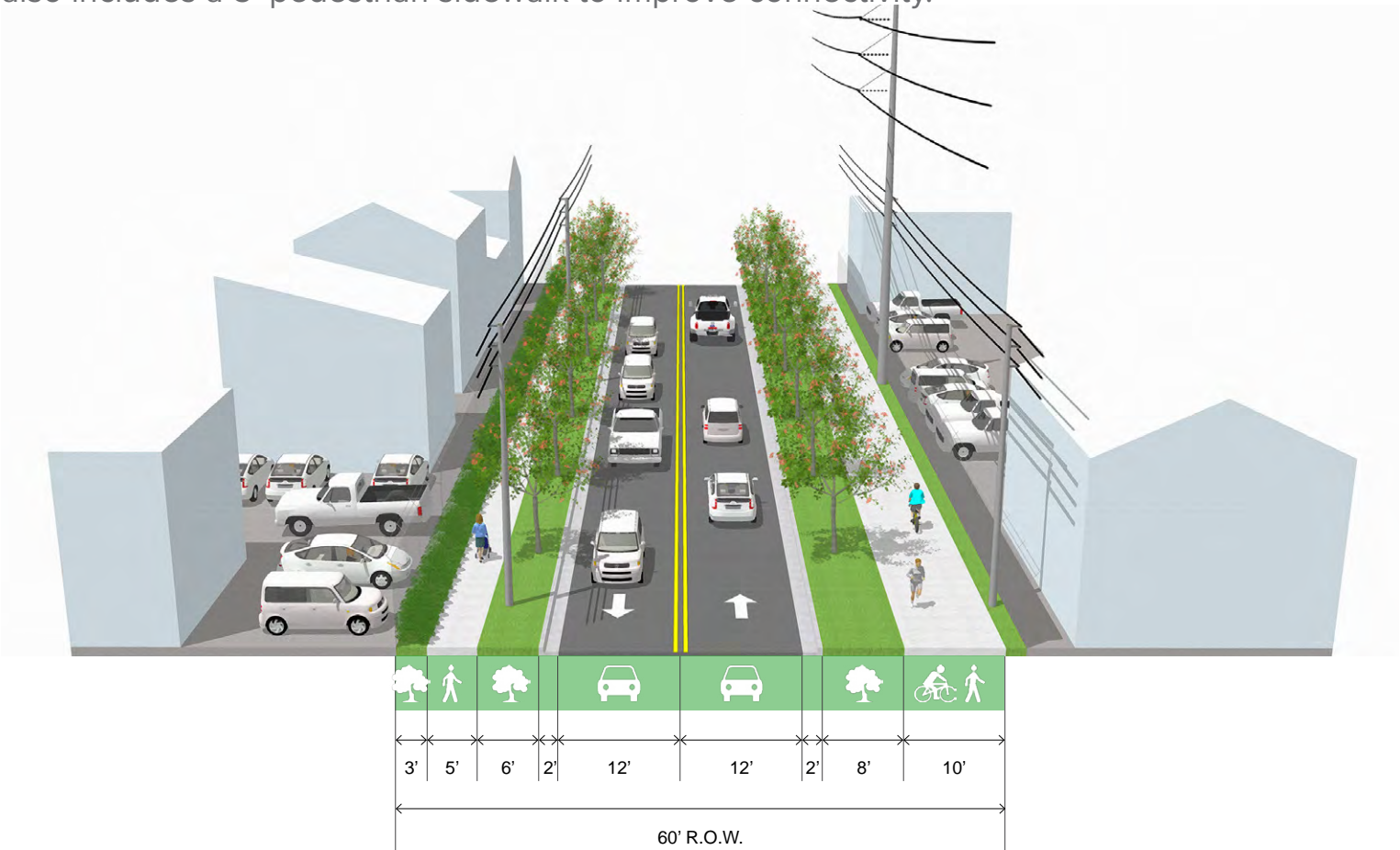
### EXISTING CONDITION

The existing condition along the north portion of Atlanta Ave. consists of two traffic lanes with no on-street parking. Only the east side of the street currently has a pedestrian sidewalk.



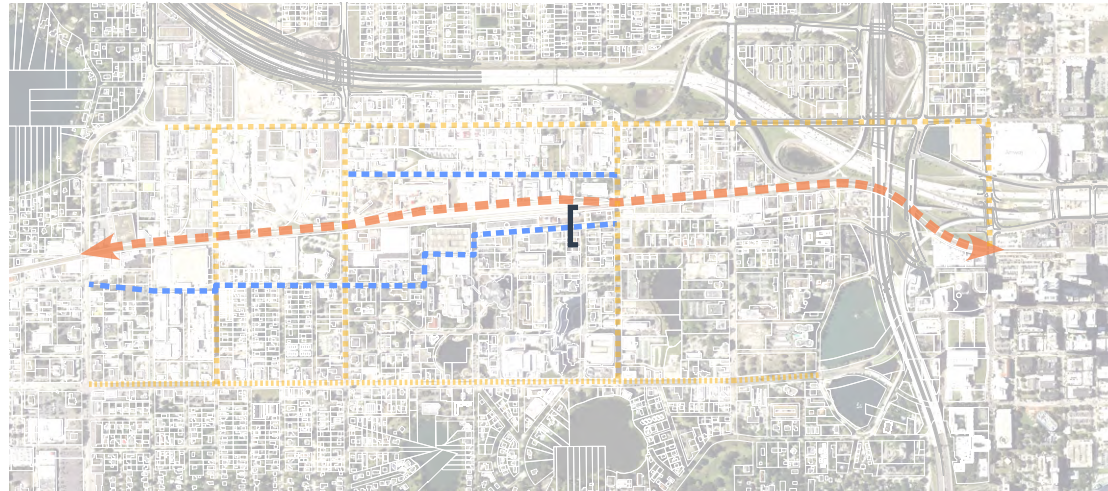
### PROPOSED DESIGN

Due to the ample right-of-way width in this area, we are able to include a 10' multi-use path along the east side of the road corridor. Both sides of the street also contain a lawn strip containing street trees along the length of the corridor. The west side of the street also includes a 5' pedestrian sidewalk to improve connectivity.



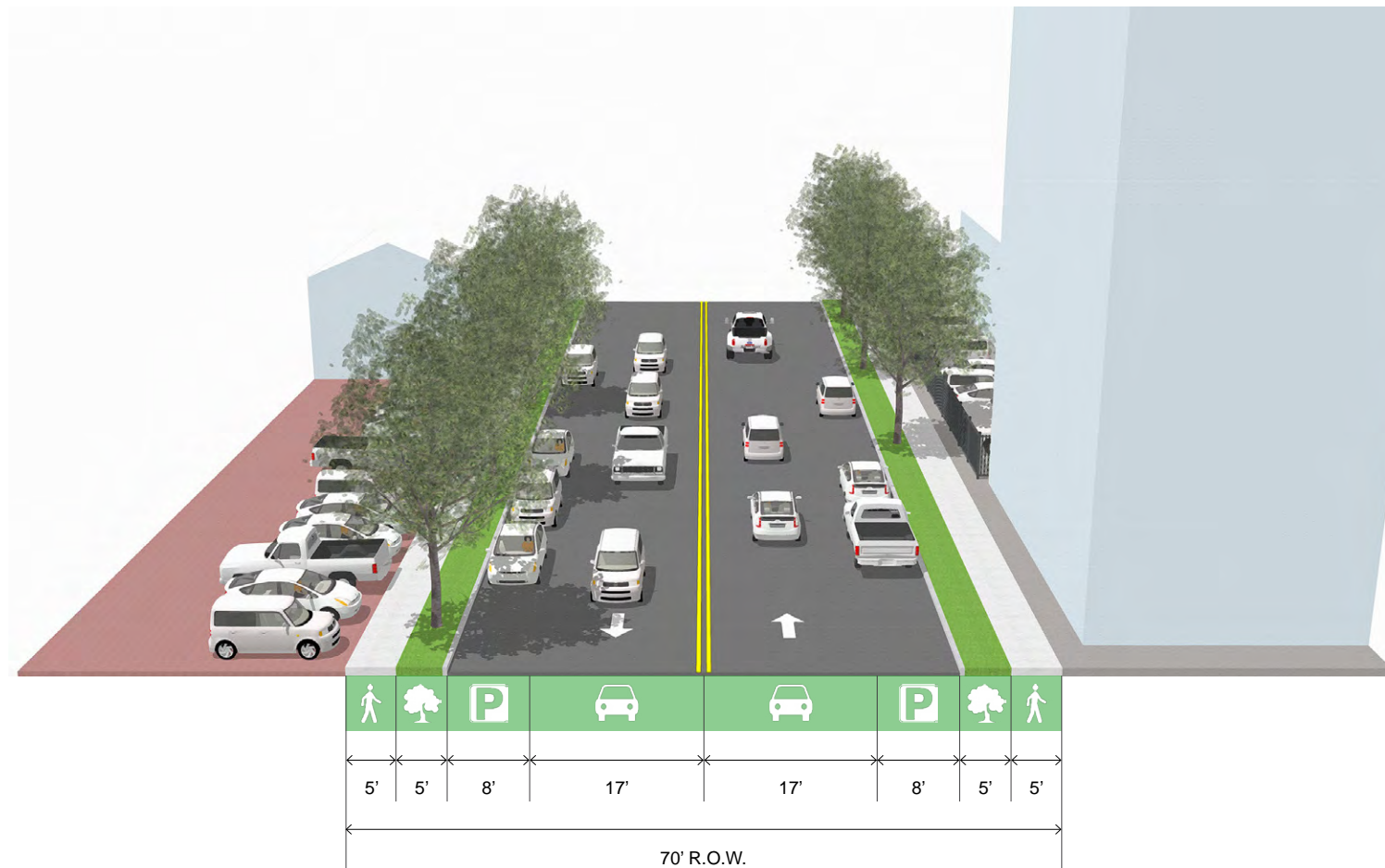


# SLIGH BLVD. PROPOSED SECTION



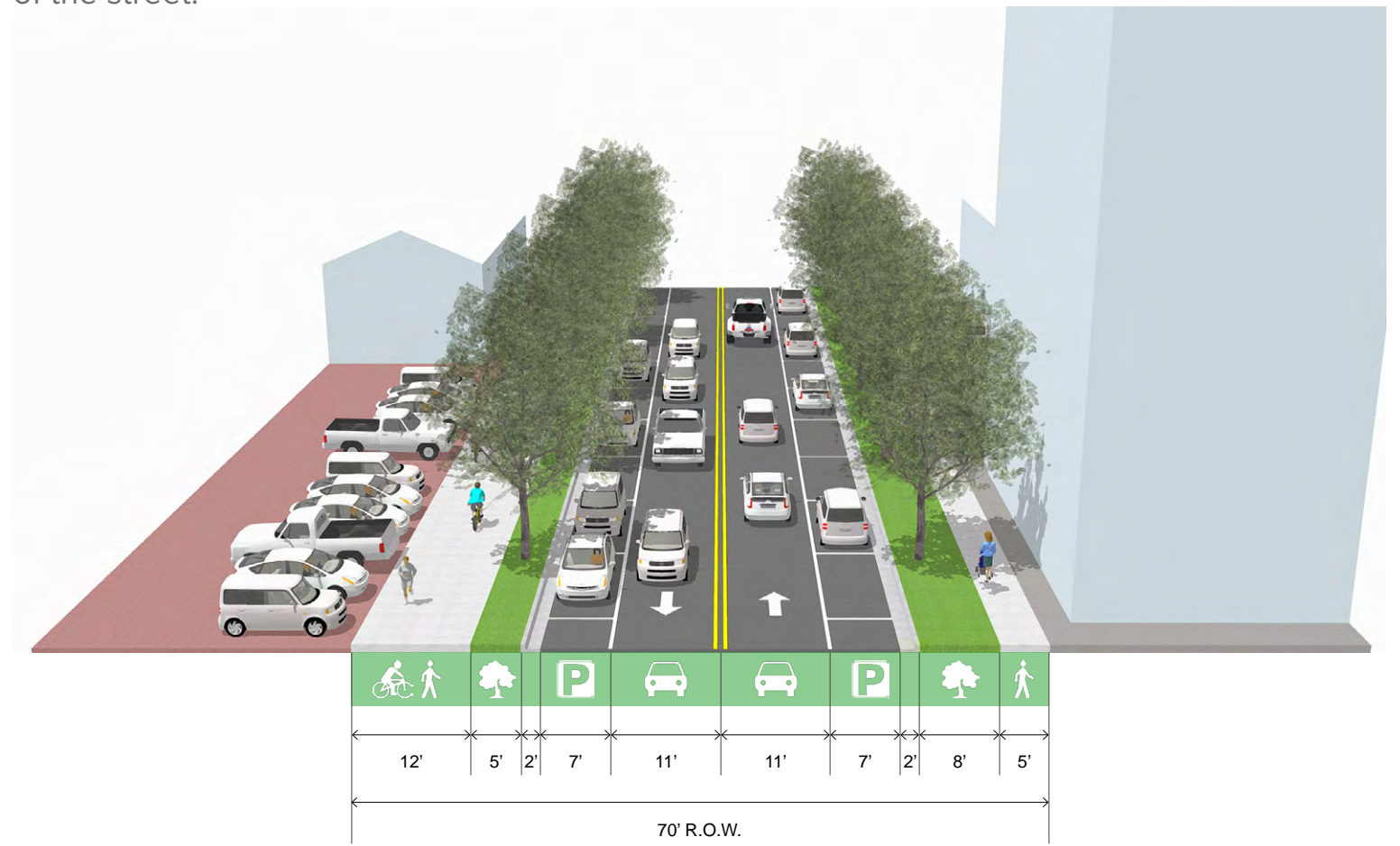
## EXISTING CONDITION

The existing condition at Sligh Blvd. consists of two over-sized traffic lanes with on-street parking on both sides.



## PROPOSED DESIGN

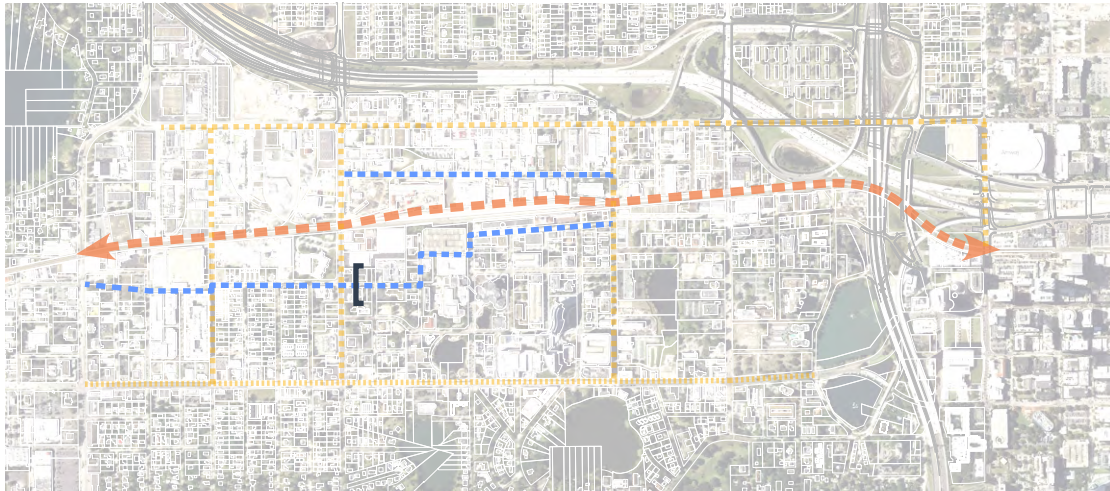
By narrowing the over-sized traffic lanes, we are able to include a 12' multi-use path along the west side of the road corridor. Both sides of the street also contain a lawn strip with street trees along the length of the corridor. On-street parking is also shown on both sides of the street.





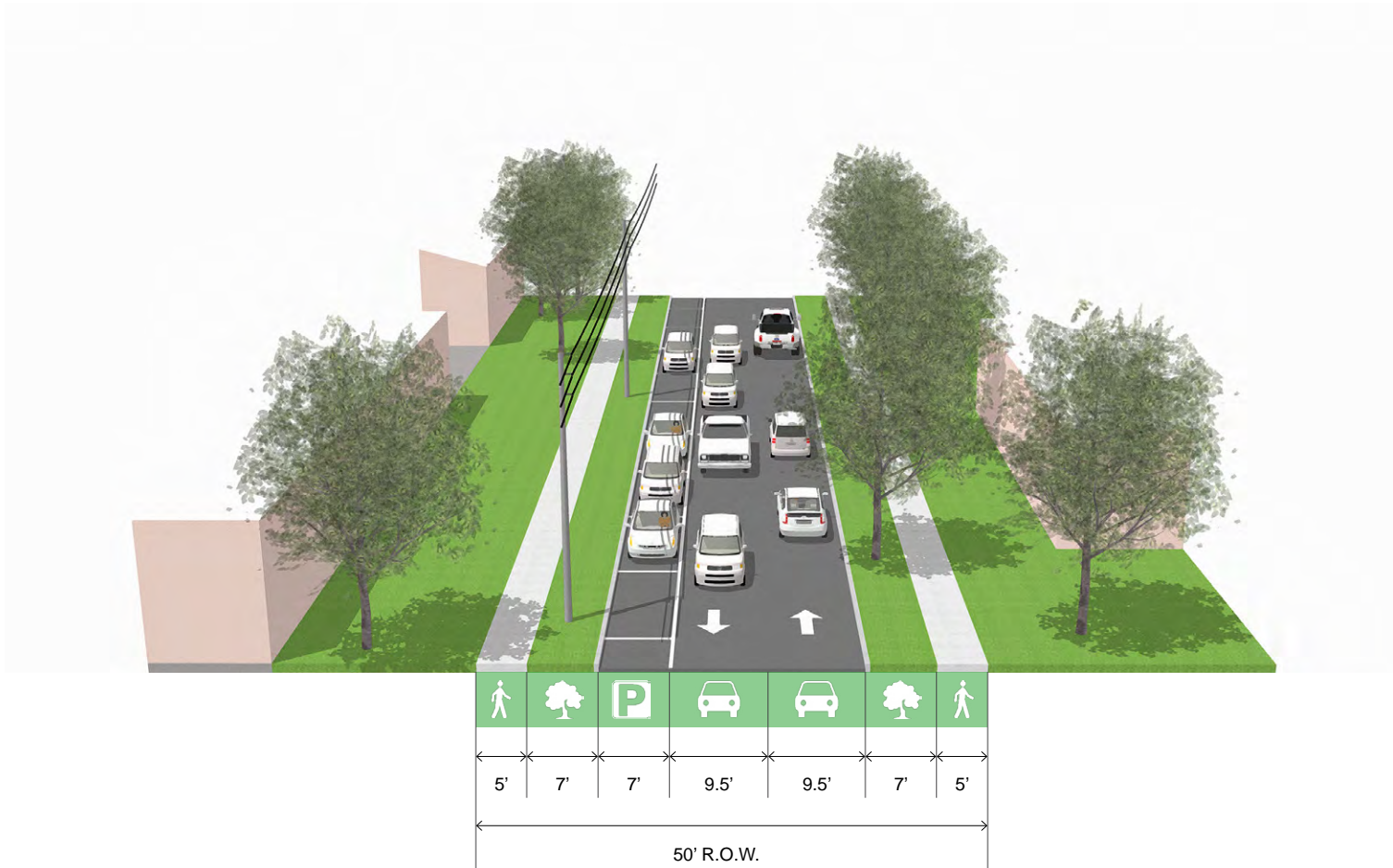
# LUCERNE TERRACE - NORTH

## FROM BONNIE LOCH CT. TO W. KALEY ST.



### EXISTING CONDITION

The existing condition at the north portion of Lucerne Terrace consists of two traffic lanes with on-street parking on the west side of the street.



### PROPOSED DESIGN

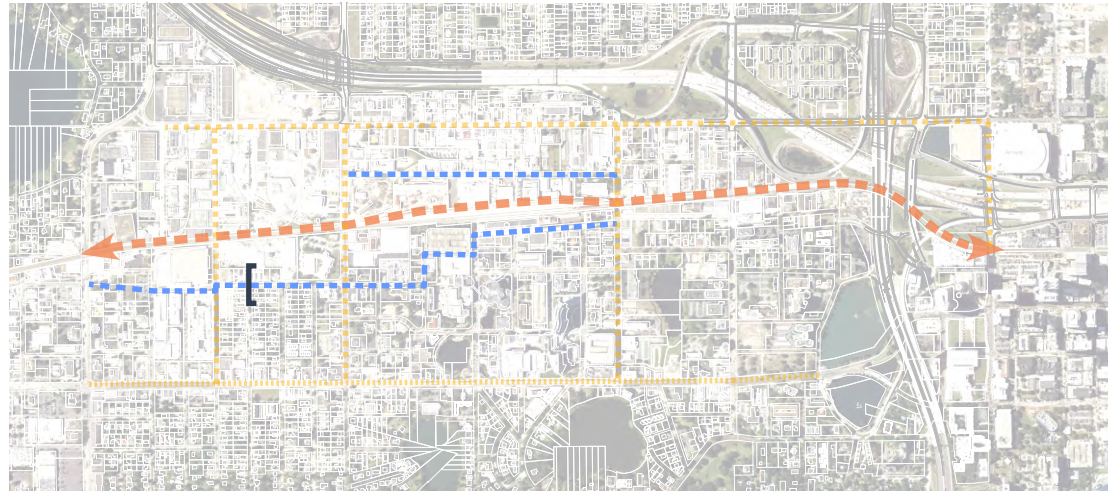
By eliminating on-street parking on one side of the street, we are able to include a 10' multi-use path along the west side of the road corridor. Both sides of the street also contain a lawn strip with street trees along the length of the corridor.





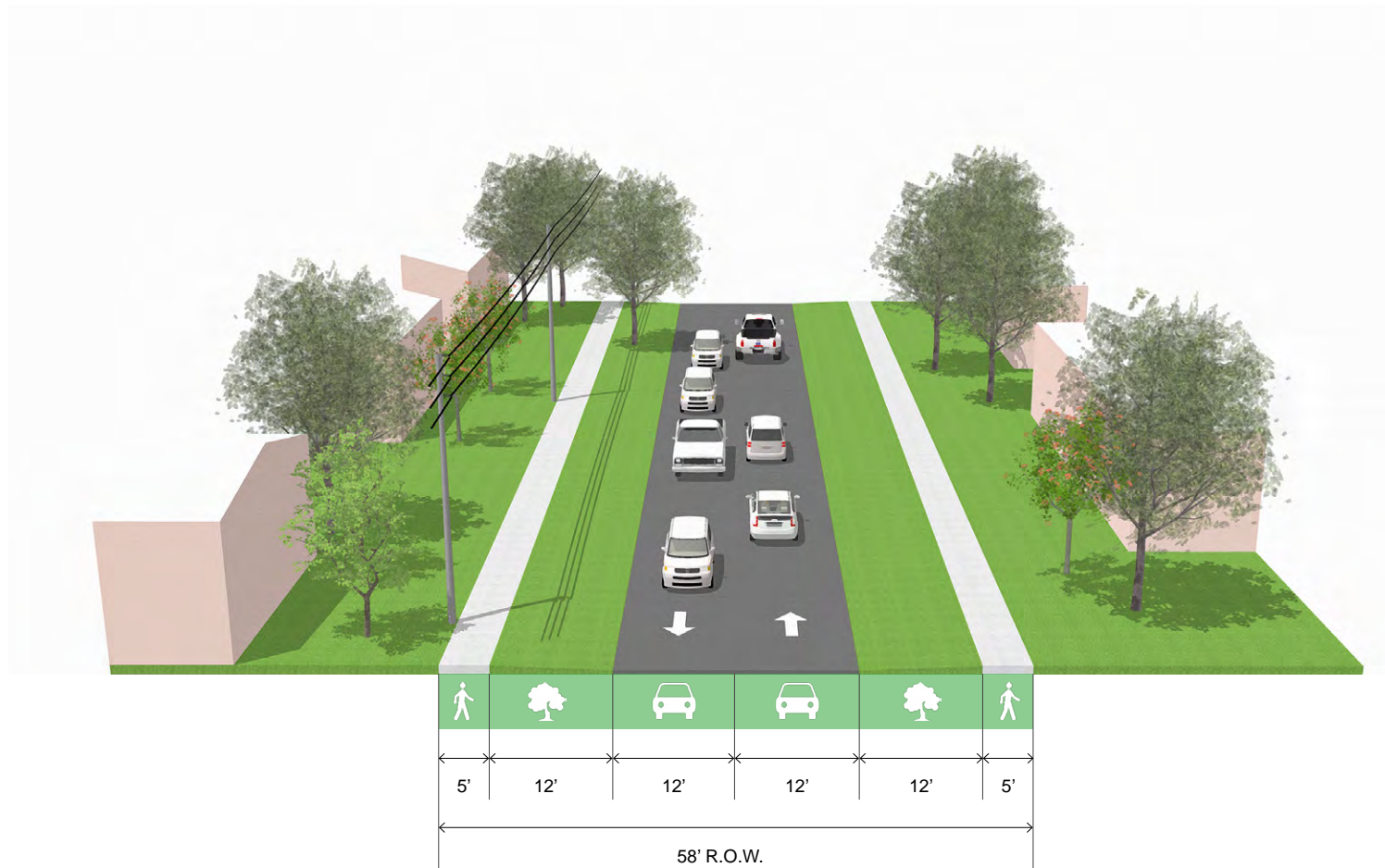
# LUCERNE TERRACE - SOUTH

## FROM W. KALEY ST. TO W. GRANT ST.



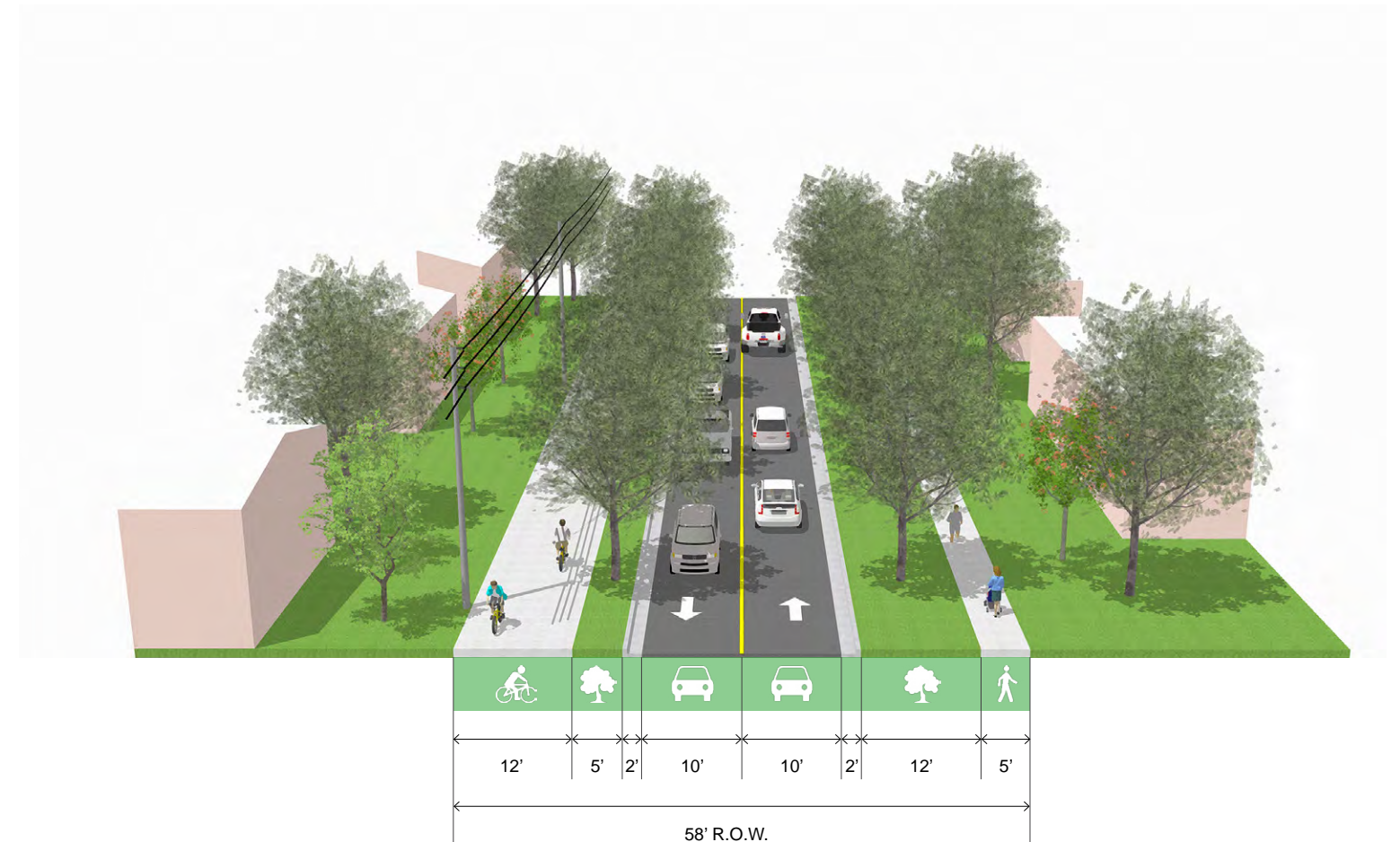
### EXISTING CONDITION

The existing condition at the south portion of Lucerne Terrace consists of two traffic lanes with no on-street parking.



### PROPOSED DESIGN

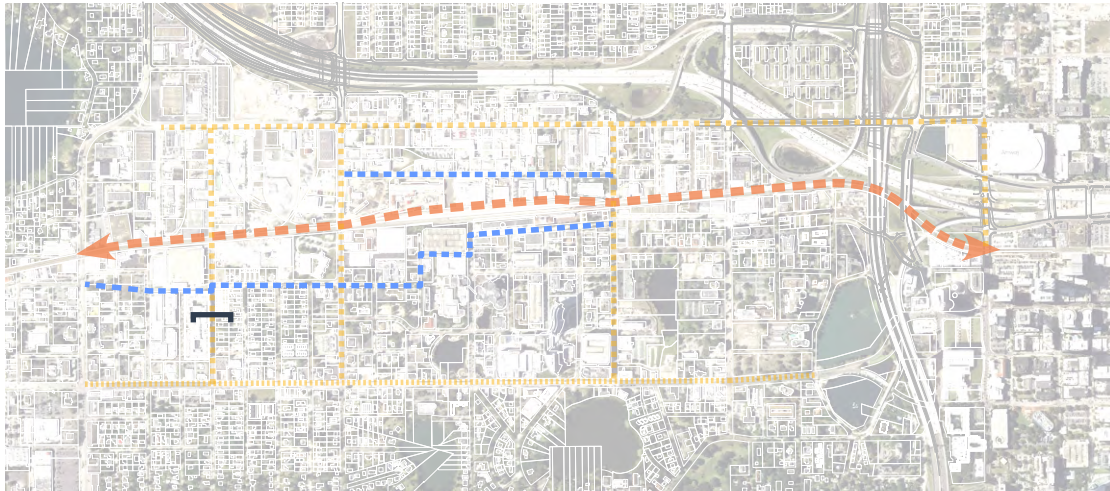
By narrowing the traffic lanes slightly, we are able to include a 12' multi-use path along the west side of the road corridor. Both sides of the street also contain a lawns strip with street trees along the length of the corridor.





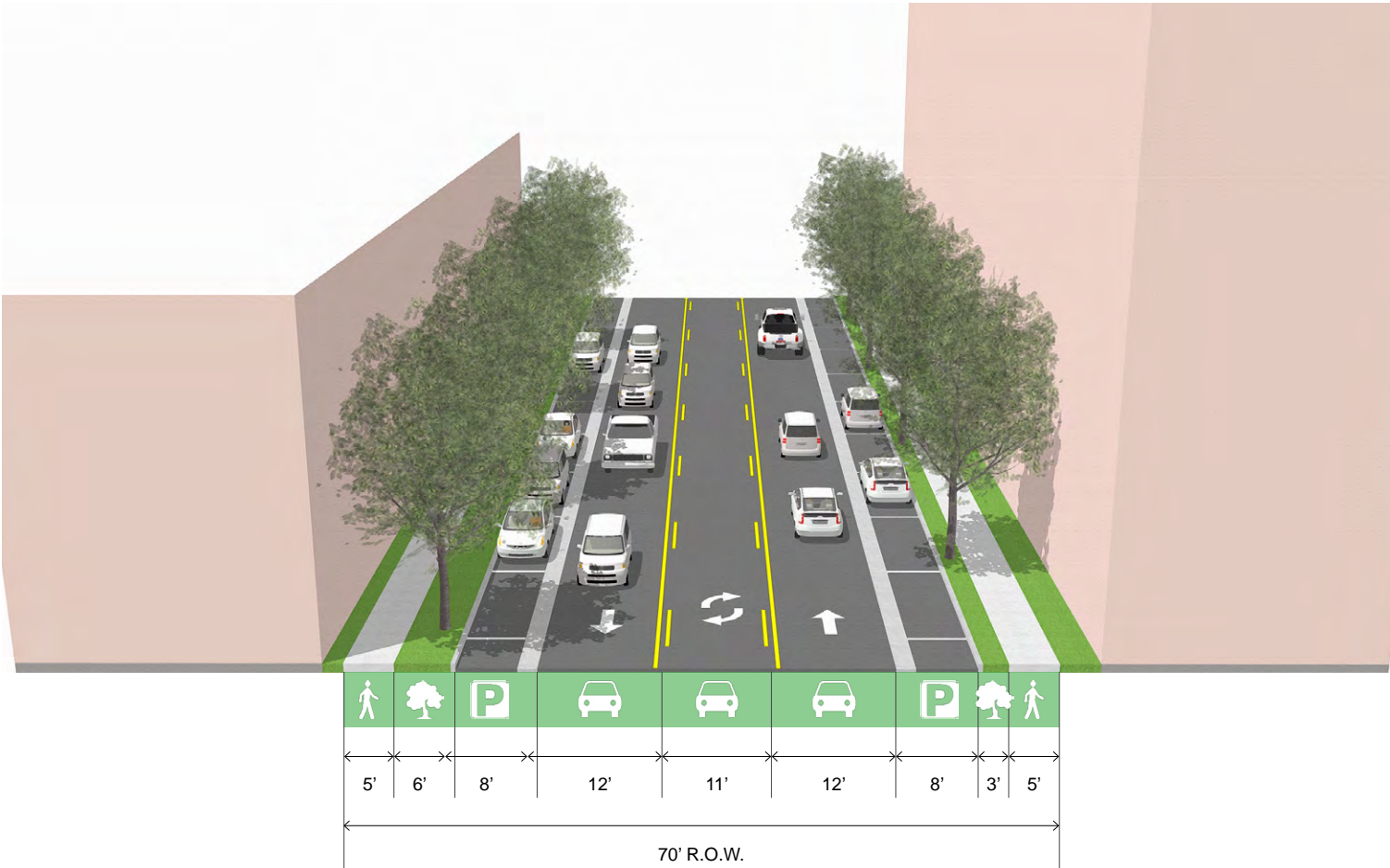
# W. GRANT ST. - EAST

## EAST OF RAILROAD



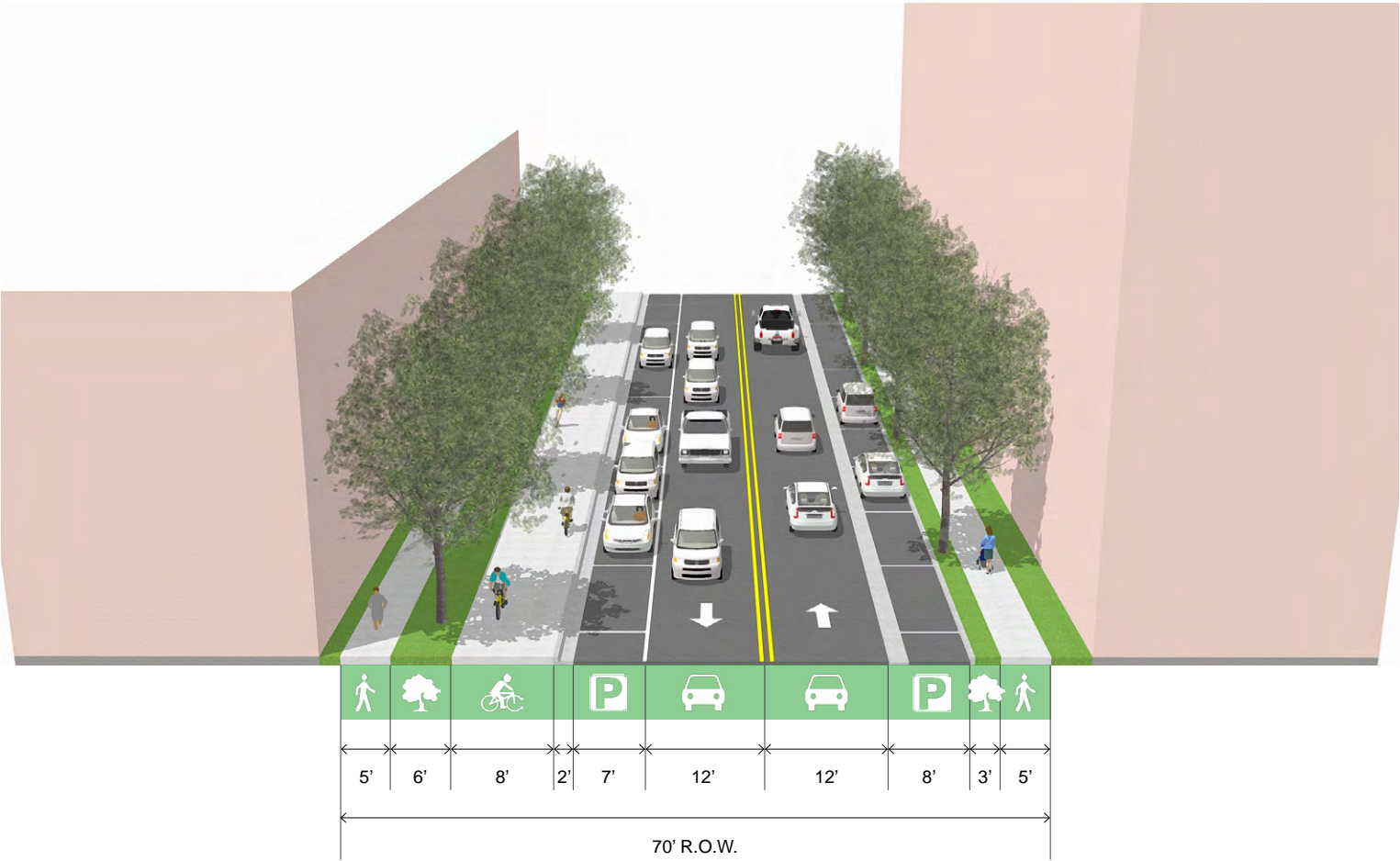
### EXISTING CONDITION

The existing condition at the east portion of W. Grant St. consists of two traffic lanes with a center turn lane as well as on-street parking on both sides.



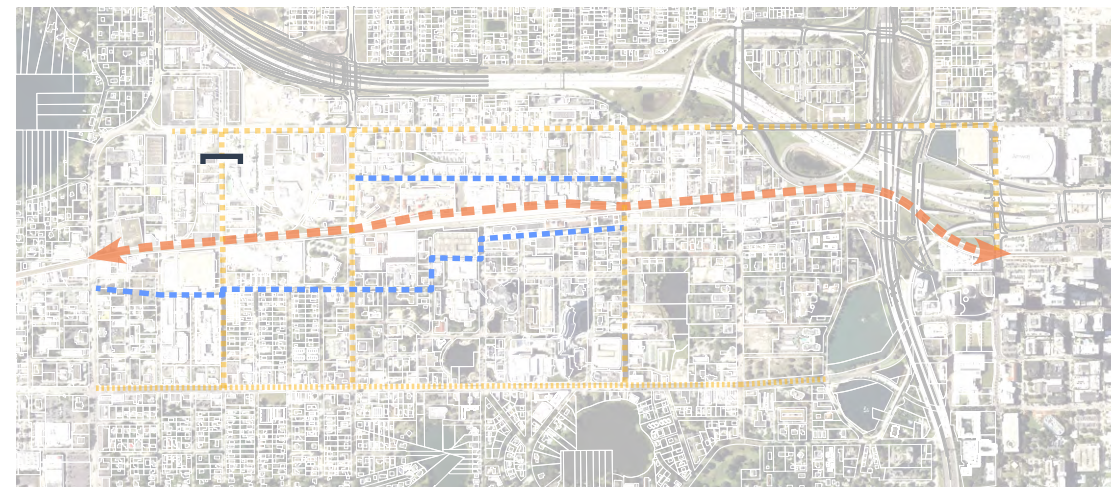
### PROPOSED DESIGN

By eliminating the center turn lane, we are able to include an 8' multi-use path along the north side of the road corridor. Both sides of the street also contain a lawn strip with street trees along the length of the corridor.



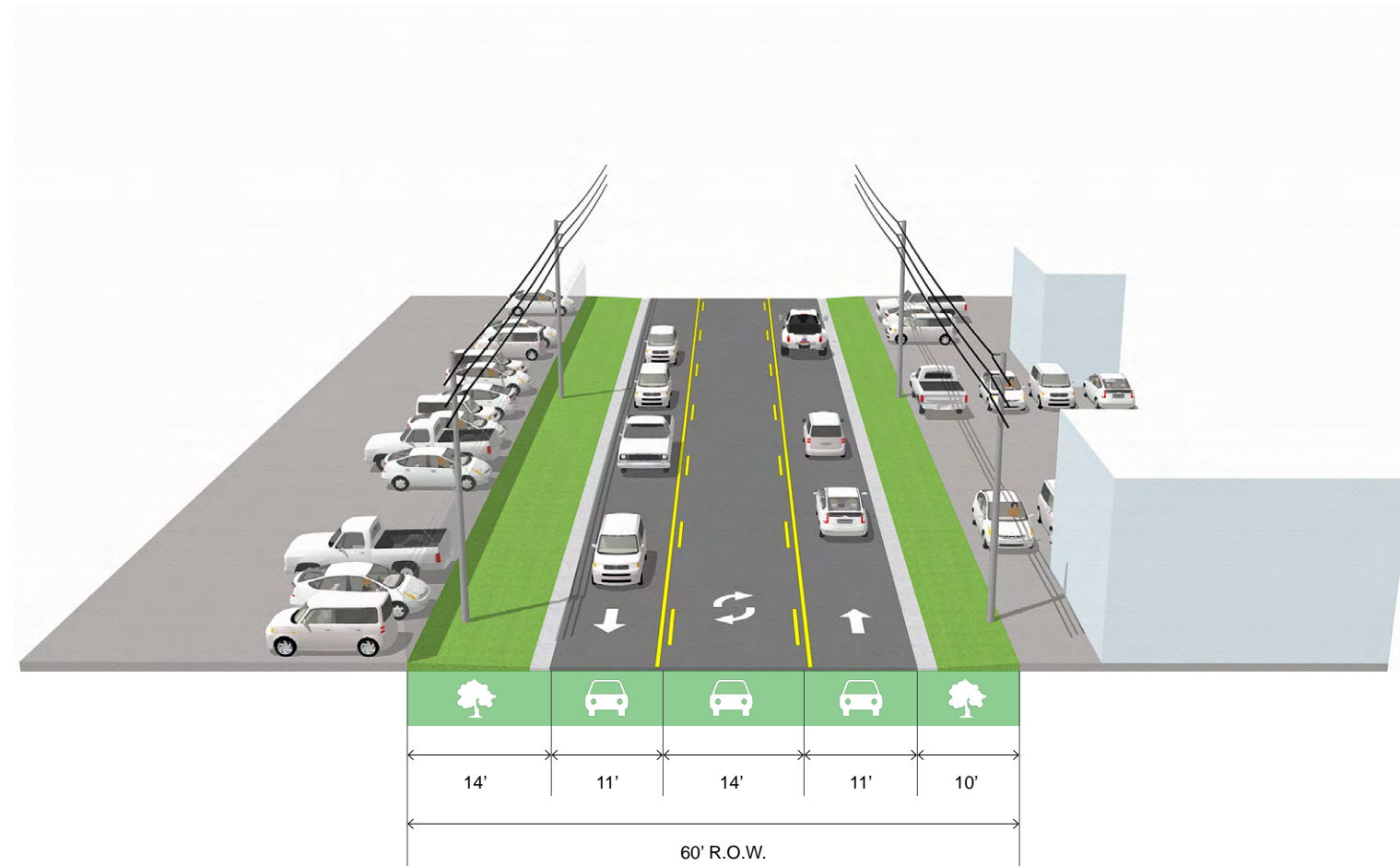


# W. GRANT ST.- WEST WEST OF RAILROAD



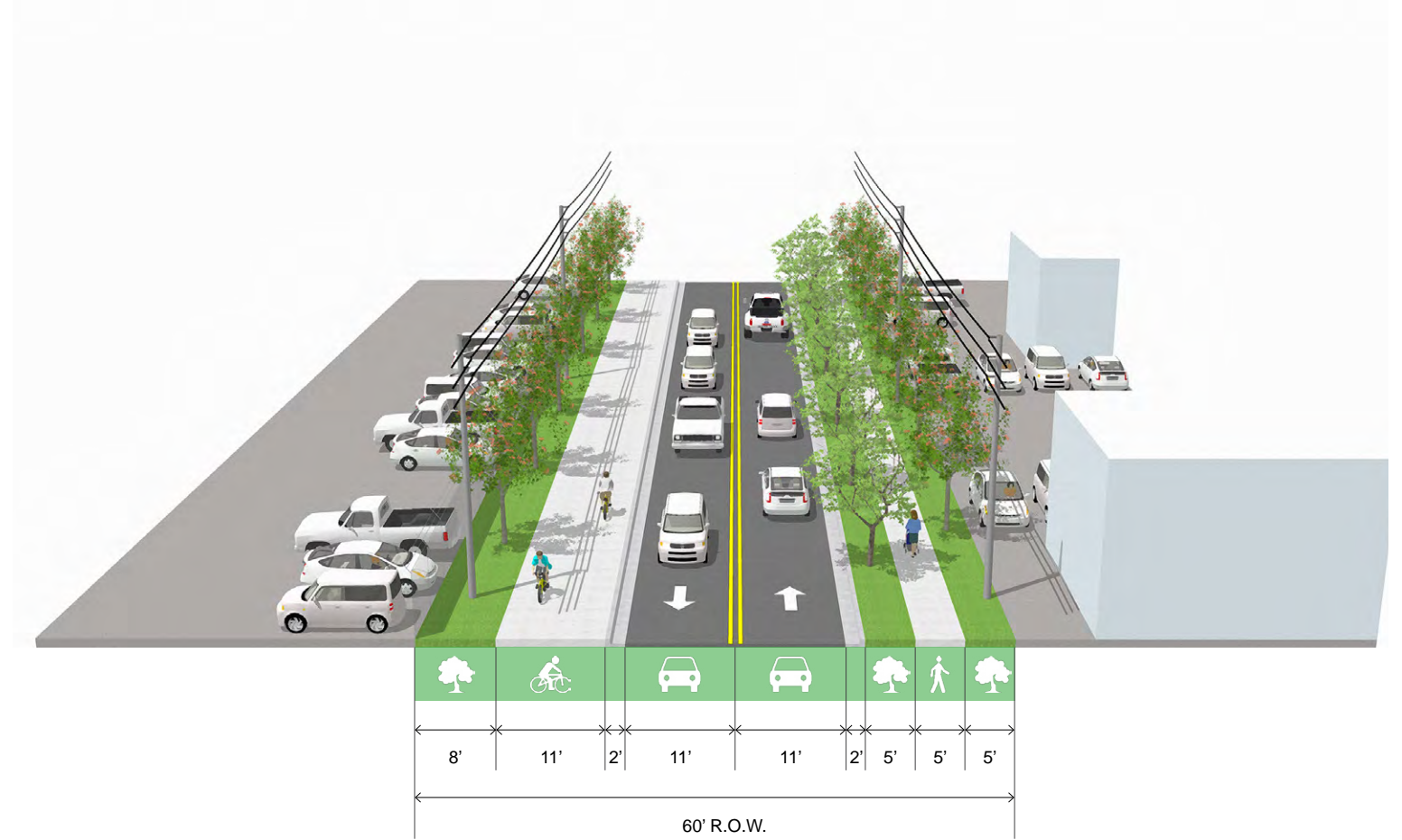
## EXISTING CONDITION

The existing condition at the west portion of W. Grant St. consists of two traffic lanes with an over-sized center turn lane. No sidewalks are present along this portion of the corridor.



## PROPOSED DESIGN

By eliminating the over-sized center turn lane, we are able to include an 11' multi-use path along the north side of the road corridor. Both sides of the street also contains a lawn strip with street trees along the length of the corridor. A pedestrian walkway is also provided on the south side of the street to increase connectivity.





# DESIGN STANDARDS



# HARDSCAPE

## PEDESTRIAN PAVEMENT



### Color Palette



The Amway Center is a great example for pedestrian paving in an urban space. Accent pavement is recommended at intersections and for wayfinding purpose.

## BIKE TRAIL PAVEMENT

Asphalt paving is recommended to create a comfortable riding experience along bike trail.





# SITE FURNISHING

## BENCH

Benches along O-Line provide corridor provide seating and facilitate small group interaction. The bench selection should reflect the District character. Concrete benches and gabion benches are intended to be an edge treatment for rain gardens. Stainless steel benches will be additional seating.

### MATERIAL

- Gabion
- Concrete
- Steel

### COLOR

- Natural
- Industrial

### FORM

- Geometric lines
- with soft curves



Bevel, by FORMS+SURFACES



Balance, by FORMS+SURFACES



Gabion bench, by OMEGA

GABION BENCHES



Gabion bench, by OMEGA



Bevel, by FORMS+SURFACES

CONCRETE BENCHES



Lily, by Victor Stanley

STAINLESS STEEL BENCHES



# LIGHTING

To maintain consistency in the SODO District, the O-Line lighting fixtures will be selected from the same product family as the lighting being utilized for the Orange Ave. corridor.



SoleCity LED Vertical Straight Light Post, by Lumec



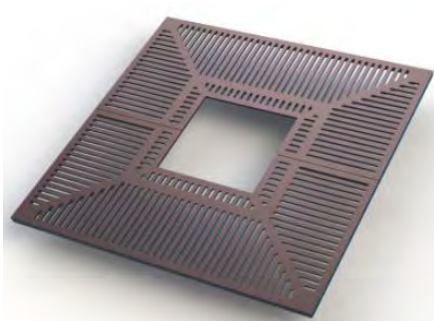
SoleCity LED Bollard, by Lumec



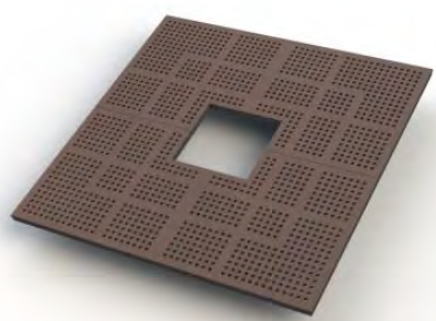
SoleCity Gobo, by Lumec

# TREE GRATE

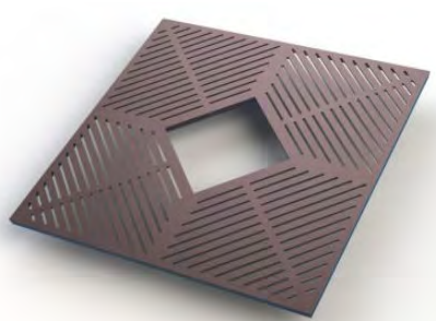
Tree grates are suggested to be used under restricted conditions where there is limited width along the corridor.



ADA, by IRONSMITH



Market Street, by IRONSMITH



Palm, by IRONSMITH

# BIKE RACK

Providing accessible locations where bicycles can be safely secured will encourage bicycle use throughout the O-Line corridor. Bike racks should be installed in groups of three or more at convenient



Olympia, by FORMS+SURFACES



Trio, by FORMS+SURFACES



# BOLLARD

To maintain consistency in the SODO District, the O-Line lighting fixtures will be selected from the same product family as the lighting being utilized for the Orange Ave. corridor.



Helio M30/K4, by FORMS+SURFACES



New York Bollard, by Canterbury Designs

Litter and Recycling receptacles have been selected to be unobtrusive and to fit into the overall project design aesthetic.



Bevel,  
by FORMS+SURFACES



Radium,  
by MMCITE



Crystal,  
by MMCITE

# LITTER RECEPTACLES



# PLANT PALETTE

The following landscape materials are included in SODO Complete Street Standards. They have been selected based on their water efficiency, form, and their ability to provide a unified and dependable plant palette for the District. This list includes native and Florida friendly plants and should be arranged in groupings with similar maintenance needs.

## PALM TREES



Cabbage Palm



Sylvester Date Palm



Medjool Date Palm

## CANOPY STREET TREES



Live Oak Cultivar  
'Cathedral'/'Sky Climber'



Allee/ Bosque Elm



Shumard Oak

## UNDERSTORY TREES



'Natchez' Crape Myrtle  
Single Trunk



'Muskogee' Crape Myrtle  
Single Trunk

## SHRUBS & GROUNDCOVERS



Coontie



Muhly Grass



Dwarf Fakahatchee Grass



Dwarf Yaupon Holly



Plumbago



Beach Sunflower



Mimosa



Perennial Peanut



Juniper



# SURVEY SUMMARY



# SURVEY SUMMARY

As part of the public involvement and outreach component to this project, we assembled and published an online public survey in coordination with our Virtual Public Meeting for the O-Line which was held on August 19th, 2020. The corresponding online survey was available August 19th through August 31st. A flyer with the survey link was provided as part of the Public Meeting presentation. The design team were very pleased to have received 99 responses from the public with over 80% of the respondents identifying as living in or adjacent



## SHARE YOUR OPINION TODAY! O-LINE

A 'green spine' that will provide an oasis extending through the urban and industrial area of South Orlando.

Survey available from:

WEDNESDAY

AUGUST  
19<sup>th</sup>

MONDAY

AUGUST  
31<sup>st</sup>



Complete the brief survey by scanning the QR Code above or click the url here: <https://www.surveymonkey.com/r/Q898J33>

In coordination with the O-Line Public meeting held on August 19th, we are providing an online survey to provide comments and suggestions for the proposed conceptual design for Phase One of the project. Please complete the survey by Monday, August 31st. Comments and input will be used by the design team as we finalize the design for this important project in the SoDo District.



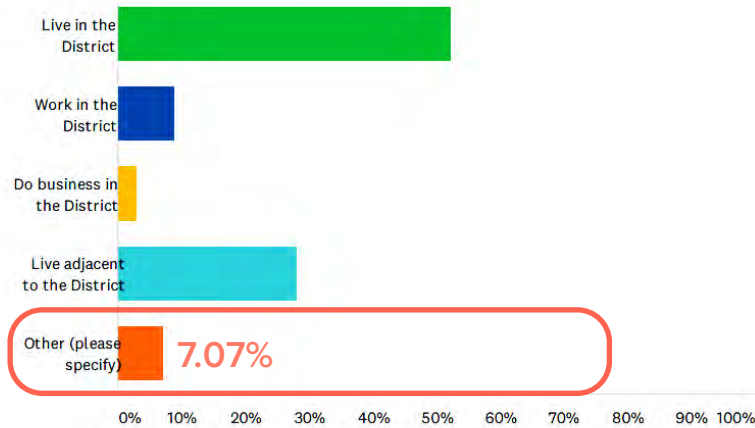
IF YOU HAVE ANY QUESTIONS PLEASE FEEL FREE TO CALL:  
Martin Hudson @ 407.246.3242 or email [martin.hudson@orlando.gov](mailto:martin.hudson@orlando.gov)



# SURVEY SUMMARY

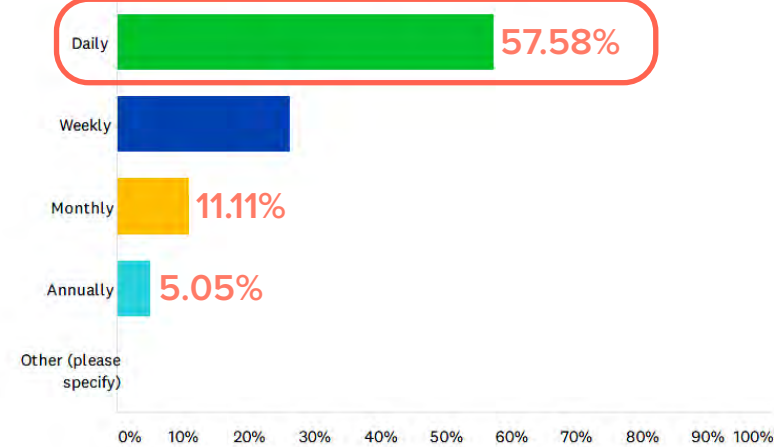
## Q1 What is your interest in the SODO district?

Answered: 99 Skipped: 0



## Q2 How often do you visit the SODO District?

Answered: 99 Skipped: 0



## Q3 In looking at the following images, which do you like best as it pertains to the user experience that may be proposed for the O-Line?

Answered: 99 Skipped: 0



Image 1



Image 2

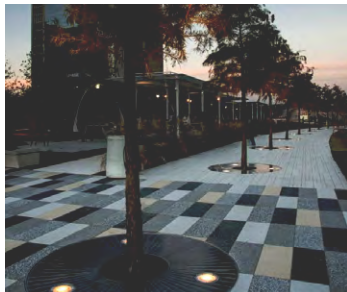


Image 3



Image 4



Image 5

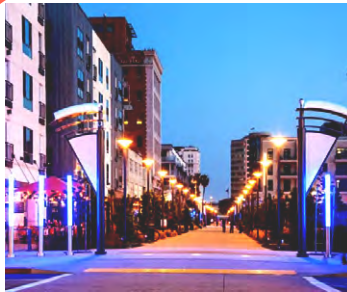
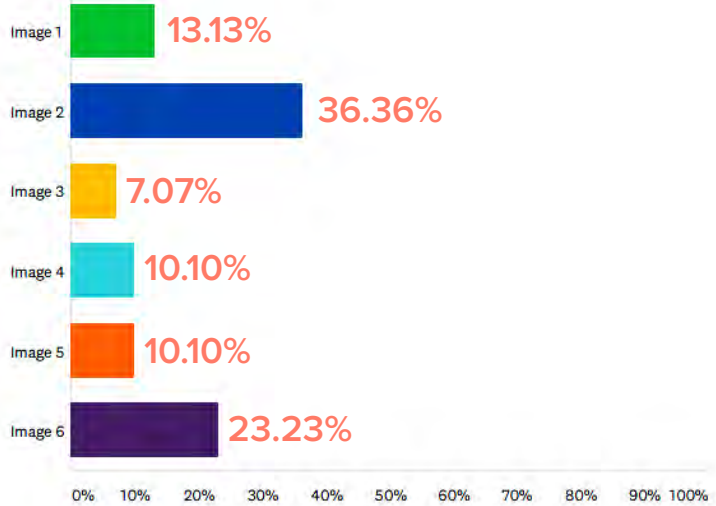


Image 6



## Q4 In looking at the following images, which do you like best as it pertains to the artistic design elements that may be proposed for the O-Line? (check all that apply)

Answered: 98 Skipped: 1



Image 1



Image 2

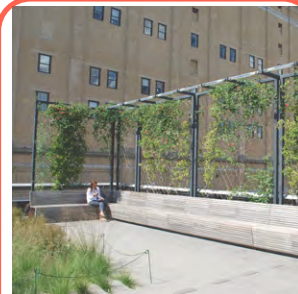


Image 3



Image 4



Image 5

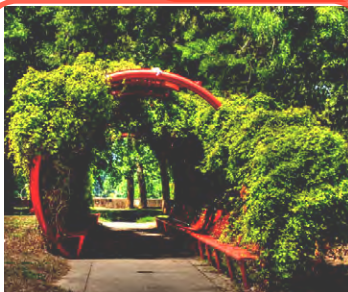
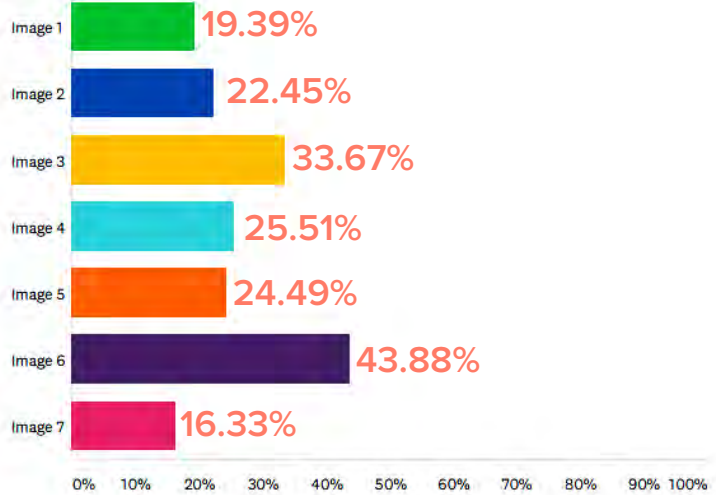


Image 6



Image 7





# SURVEY SUMMARY

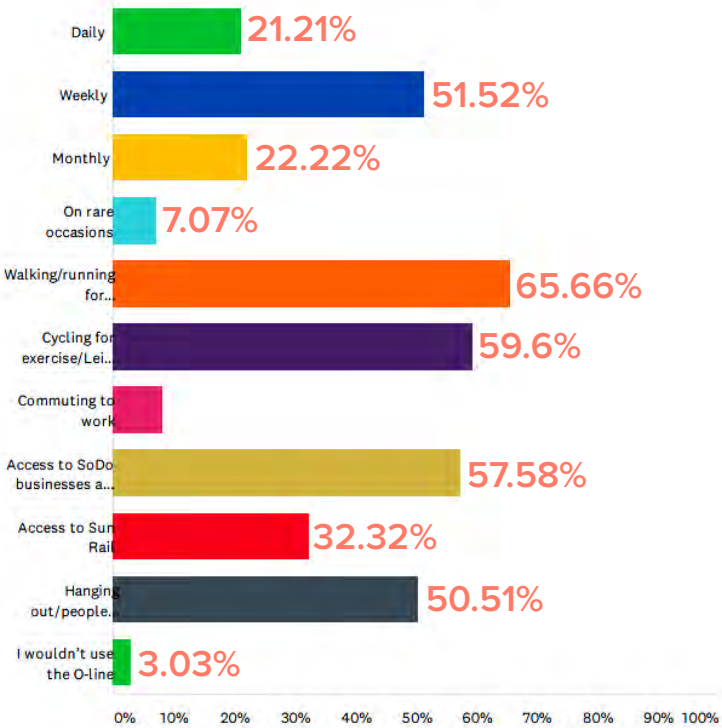
Q5 Please describe why you chose the above images for the two previous questions.

Answered: 89 Skipped: 10

- Urban, modern, **green**, open
- Separate** identified biking/ walking path beneficial (Q3)
- Greenery/ occasional **shade** spots with art that blends in (Q4)
- Lighting, interesting textures, blending of natural elements with user-friendly features
- Separating the bike lanes** from the pedestrian lanes is important, and I like vines
- Colorful. Fun. Provide **shade**.
- These look like it will make for an interesting ride.
- There are **trees**!
- I would like to see a lot of **shade** since it is so hot so much of the time.
- Art and **trees**!!
- Trees/ foliage** are important and I think incorporating both those and some artistic elements to create some shade would be ideal.
- I think there should be lots of **foliage and trees** so it feels organic.
- Should be good for pedestrians and bikes. Lots of **vegetation, trees**.
- Modern and provide for both pedestrian and bicycle multi use
- I like the openness and that it isn't too overbearing
- Visually appealing
- We need **shade**!
- We need **shade and natural scenery** to beat the heat and reintroduce nature.
- Mix of **greenery** and pedestrian along within the urban area
- Large Art Pieces and **Shade**
- The most organic integration of natural and deliberate elements, along with a cozy feel for the user.
- I like the use of **plants and green stuff** to break up all the concrete in the area.

Q6 If the O-Line is built, how often would you use it and what activities would you be interested in? (check all that apply)

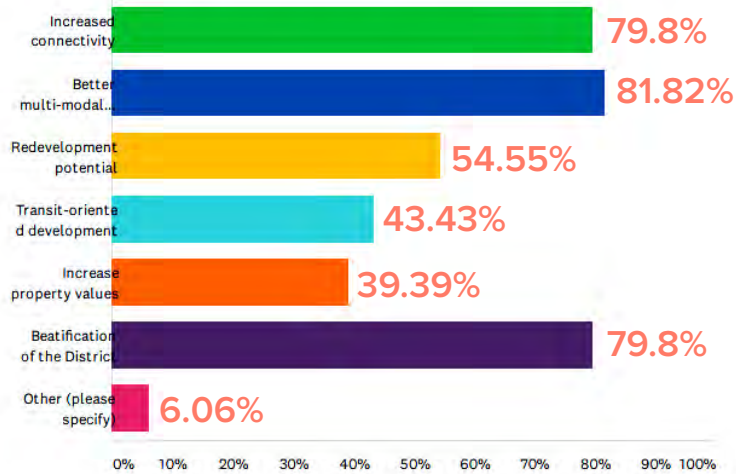
Answered: 99 Skipped: 0



ANSWER CHOICES	RESPONSES	
Daily	21.21%	21
Weekly	51.52%	51
Monthly	22.22%	22
On rare occasions	7.07%	7
Walking/running for exercise/leisure	65.66%	65
Cycling for exercise/Leisure	59.60%	59
Commuting to work	8.08%	8
Access to SoDo businesses and amenities	57.58%	57
Access to Sun Rail	32.32%	32
Hanging out/people watching	50.51%	50
I wouldn't use the O-line	3.03%	3
Total Respondents: 99		

Q7 What do you think are the greatest opportunities for the O-Line Multi-use Trail project? (check all that apply)

Answered: 99 Skipped: 0



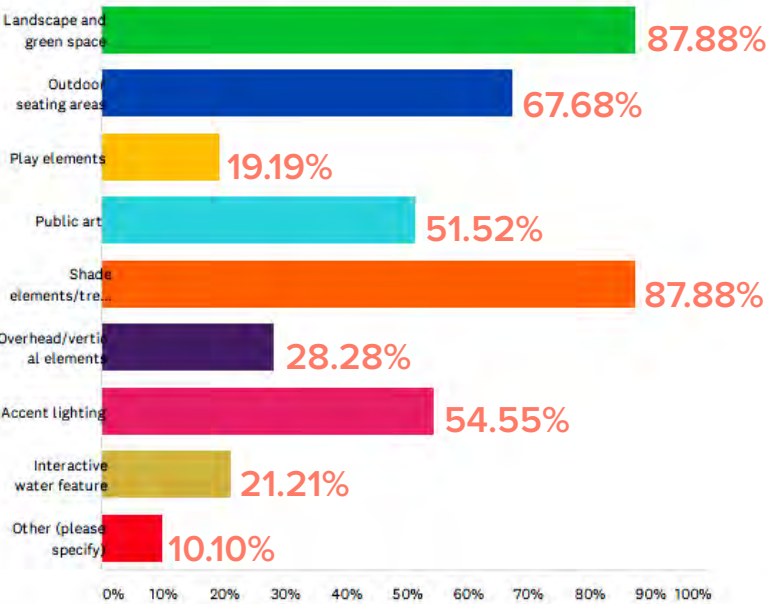
ANSWER CHOICES	RESPONSES	
Increased connectivity	79.80%	79
Better multi-modal transportation for biking and walking	81.82%	81
Redevelopment potential	54.55%	54
Transit-oriented development	43.43%	43
Increase property values	39.39%	39
Beatification of the District	79.80%	79
Other (please specify)	6.06%	6
Total Respondents: 99		



# SURVEY SUMMARY

## Q8 What elements would you most like to see incorporated into the O-Line Multi-use Trail project? (check all that apply)

Answered: 99 Skipped: 0



ANSWER CHOICES	RESPONSES	
Landscape and green space	87.88%	87
Outdoor seating areas	67.68%	67
Play elements	19.19%	19
Public art	51.52%	51
Shade elements/tree canopy	87.88%	87
Overhead/vertical elements	28.28%	28
Accent lighting	54.55%	54
Interactive water feature	21.21%	21
Other (please specify)	10.10%	10
Total Respondents: 99		

## Q9 Do you have any general comments regarding the O-Line Multi-use Trail project? If you are not familiar with the project, please enter 'I don't know about the project'.

Answered: 53 Skipped: 46

"As much **shade** as can possibly be created is essential for this to succeed. The pavement will be hot. The environment is hot, Florida is just hot, hot, hot. Shade generously offered everywhere will be welcomed and it'll make

"This is the first I've heard of this project. I will be looking into it further. Orlando desperately needs

"Hope to see it happen. Orlando definitely needs more **green, walkable spaces**. Whenever we have visitors from out of town, we always take them to Park Ave. in Winter Park because it's the most walkable and scenic

"Important to have **unobstructed 2-way bike path** to minimize accidents with pedestrians. Lots of **bikers** will use the O-Line to connect to urban trail and

"Build it as quick as possible! This quarter has a lot of potential for homeless activity, so make sure that is

- "I would just like to reemphasize the importance of **separating the "wheels from heels"** where possible. From my experience commuting via bicycle on other shared use paths pedestrians (especially dog walkers!) can be a major hazard to cyclists. Other than that I really like the concepts and the momentum behind getting this project built."
- "It would be awesome to have **shaded rest areas with water fountains**."
- "Please plant beautiful **shade trees**."
- "Again will stress the need to keep Orlando green. Lots of **trees, shade, and grass** along with some brier area for urban wildlife."
- "Love the idea and it is long overdue"
- "We need **safe access** to cross Orange/ Michigan and Orange/ Kaley. This is useless if I don't feel safe crossing these insane intersections on my bicycle-- I can't get to the O-Line."
- "I live downtown and it would be **a great way for me to exercise** and hopefully have easy **access** to the Super Target eventually."
- "**Connection to other trails** and realistic expansion plans are important. It has a lot of potential accessed primarily on foot, bike, or scooter, but only if those connecting routes exist."
- "I love using the Urban Trail and would love to have something like that or better yet a trail that links to it in my neighborhood."
- "Provide ample **shade** for the day and **lighting** for the night. Provide as much space for people to



# PHASE 1 COST ESTIMATE



# OPINIONS OF PROBABLE COST

Item No.	Item	Quantity	Unit	Price	Subtotal	Description
SITE WORK						
1	Asphalt Milling (Avg depth of 2")	6000	SY	\$3.00	\$18,000.0	
2	Removal of Exist Concrete (Curb)	1500	SY	\$21.00	\$31,500.0	
3	Reg Excavation Road Base Removal	2500	CY	\$8.00	\$20,000.0	
4	Additional Site Prep/ Demo	1	AL	\$75,000.00	\$75,000.0	including mobilization
5	Utility Demo / Relocation	1	LS	\$25,000.00	\$25,000.0	
	Subtotal				\$169,500.0	
HARDSCAPE						
1	Bike Trail	12,568	SF	\$10	\$125,680.0	Asphalt
2	Pedestrian Trail	12,110	SF	\$15	\$181,650.0	Concrete unit paver
3	Crosswalk Striping	3	EA	\$15,000.0	\$45,000.0	DuraTherm Treatment; includes ped./ bike crosswalk
	Subtotal				\$352,330.0	
LIGHTING/ELECTRICAL*						
1	Pedestrian Lighting	31	EA	\$3,500	\$108,500.0	fixture and footer
2	Arch Accent Lighting	20	EA	\$1,000	\$20,000.0	
3	Tree/Panel Uplight	40	EA	\$500	\$20,000.0	Palm Tree & Canopy Trees
4	Site Electrical Service	1	LS	\$100,000	\$100,000.0	
5	Event Power	1	AL	\$50,000	\$50,000.0	
	Subtotal				\$298,500.0	
SITE FURNISHING						
1	Fence Along Trail	1,114	LF	\$100	\$111,400.0	8' -10' HT. Omega Eco Fence
2	Fence Art Panel	10	EA	\$6,000	\$60,000.0	10' Wide Panel (Waterjet)
3	Trash Receptacle	4	EA	\$1,300	\$5,200.0	
4	Gabion Bench	10	EA	\$3,000	\$30,000.0	6' Gabion benches
5	Bench	4	EA	\$1,600	\$6,400.0	
6	Bike Rack	12	EA	\$500	\$6,000.0	
7	Trellis Swing	4	EA	\$15,000	\$60,000.0	
8	Tree Grates	11	EA	\$1,000	\$11,000.0	



9	Removable Bollards	12	EA	\$1,000	\$12,000.0	
10	Planter Pots	16	EA	\$1,000	\$16,000.0	
11	Overhead Arch w/ Vine Frame	5	EA	\$28,000	\$140,000.0	Large (Approx. 46' Span x 20 Ht., 14" x 6" Extrusion)
12	Overhead Arch w/ Vine Frame	5	EA	\$21,000	\$105,000.0	Small (Approx. 24' Span x 20 Ht., 14" x 6" Extrusion)
	Subtotal				\$563,000.0	
	LANDSCAPE & IRRIGATION					
1	Canopy Trees	36	EA	\$1,500	\$54,000.0	
2	Sabal Palms	40	EA	\$250	\$10,000.0	
3	Date Palms	20	EA	\$3,500	\$70,000.0	
4	Understory Trees	48	EA	\$350	\$16,800.0	
5	Shrubs & Groundcovers	20,000	SF	\$3.50	\$70,000.0	
6	Vine on Fence	1,114	LF	\$2	\$2,228.0	1 Gal./3 ft
7	Vine on Arch	14	EA	\$30	\$420.0	
8	Open Lawn	952	SF	\$1.00	\$952.0	Zoysia sod
9	Irrigation (Shrub & Groundcover)	20,000	SF	\$2.00	\$40,000.0	
10	Irrigation (Tree)	36	EA	\$100.00	\$3,600.0	None on palms or trees 30 gal. or smaller
11	Planting Soil	20,000	SF	\$5.00	\$100,000.0	
	Subtotal				\$368,000.0	
	SITE CIVIL/ INFRASTRUCTURE					
1	Regular Excavation for Bio-swale	275	CY	\$10.00	\$2,750.0	3,708 SF of area at avg depth of 24"
2	Storm Pipe (Exfiltration)	1,114	LF	\$85.00	\$94,690.0	15" perforated pipe with 12" rock around it
3	Road Cul-de-sac (concrete apron)	1	AL	\$100,000.00	\$100,000.0	curb; conc. apron; asphalt and base at Raleigh and Piedmont St.
	Subtotal				\$197,440.0	
	Total				\$1,948,770.0	
	Full Site Survey				35,000.0	boundary and topo survey for final design and engineering
	12% General Conditions				\$233,852.4	
	15% Design Fees & Permitting				\$292,315.5	
	20% Contingency				\$389,754.0	
	Grand Total				\$2,899,691.9	
	* Does Not Include Undergrounding of Existing Overhead Utilities (+/-1,000,000)					



# APPENDIX



Figure 1. Survey Questions

O-Line (SoDo) Survey: Public Input/Feedback

Project Description:

The O-Line is a pedestrian and bicycle multi-use trail facility that will parallel the CSX/SunRail corridor that runs from downtown Orlando south through the SoDo district.

Phase One of the project will run along the west side of the rail corridor from W. Gore Street south to Columbia Street where it will tie into the Orlando Urban Trail Extension, the existing SunRail Station and the Historic AMTRAK station.



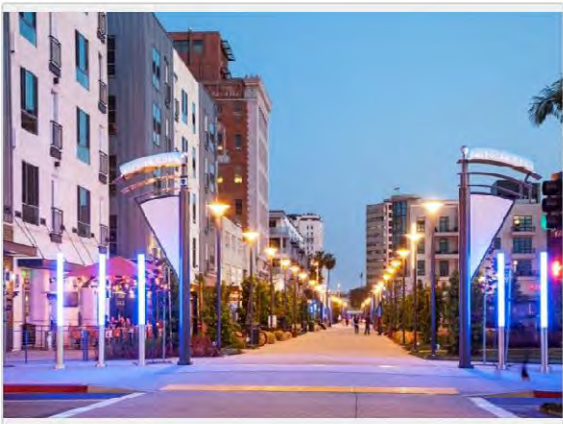
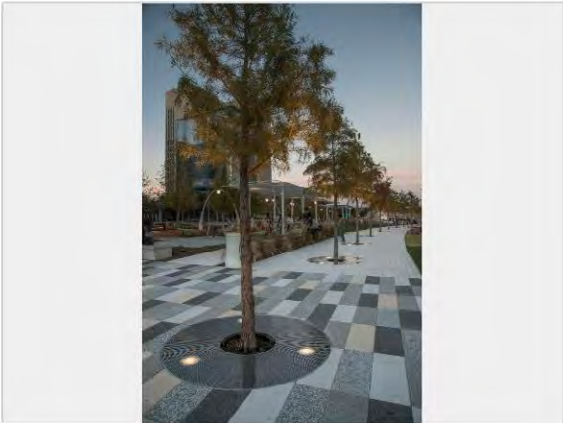
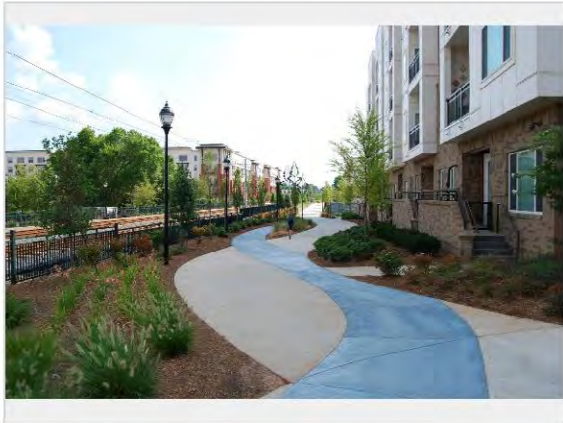
1. What is your interest in the SODO district?

- ☐ Live in the District
- ☐ Work in the District
- ☐ Do business in the District
- ☐ Live adjacent to the District
- ☐ Other (please specify)

2. How often do you visit the SODO District?

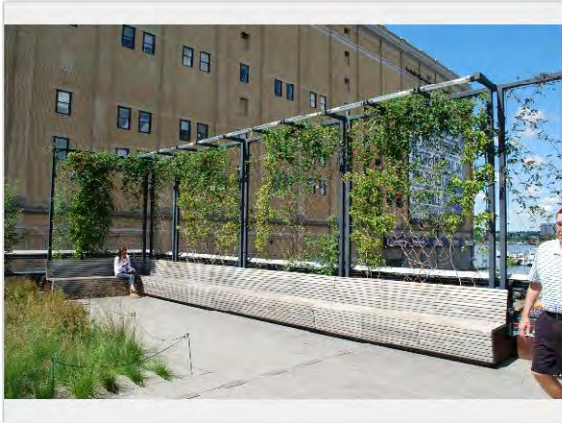
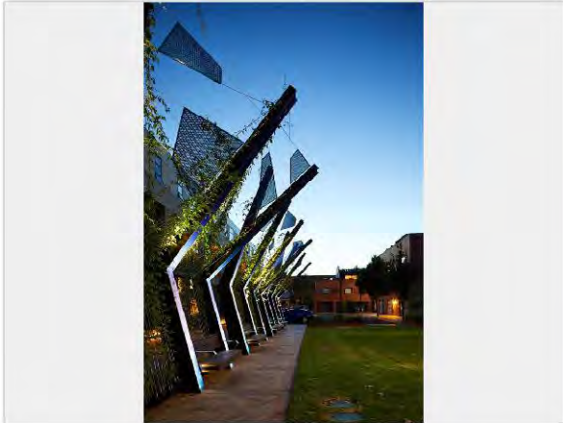
- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Annually
- ☐ Other (please specify)

3. In looking at the following images, which do you like best as it pertains to the *user experience* that may be proposed for the O-Line?





4. In looking at the following images, which do you like best as it pertains to the **artistic** design elements that may be proposed for the O-Line? (check all that apply)



5. Please describe why you chose the above images for the two previous questions.

6. If the O-Line is built, how often would you use it and what activities would you be interested in? (check all that apply)

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ On rare occasions
- ☐ Walking/running for exercise/leisure
- ☐ Cycling for exercise/Leisure
- ☐ Commuting to work
- ☐ Access to SoDo businesses and amenities
- ☐ Access to Sun Rail
- ☐ Hanging out/people watching
- ☐ I wouldn't use the O-line

7. What do you think are the greatest opportunities for the O-Line Multi-use Trail project? (check all that apply)

- ☐ Increased connectivity
- ☐ Better multi-modal transportation for biking and walking
- ☐ Redevelopment potential
- ☐ Transit-oriented development
- ☐ Increase property values
- ☐ Beatification of the District
- ☐ Other (please specify)



8. What elements would you most like to see incorporated into the O-Line Multi-use Trail project? (check all that apply)

- ☐ Landscape and green space
- ☐ Outdoor seating areas
- ☐ Play elements
- ☐ Public art
- ☐ Shade elements/tree canopy
- ☐ Overhead/vertical elements
- ☐ Accent lighting
- ☐ Interactive water feature
- ☐ Other (please specify)

9. Do you have any general comments regarding the O-Line Multi-use Trail project  
If you are not familiar with the project, please enter ‘I don’t know about the project’.

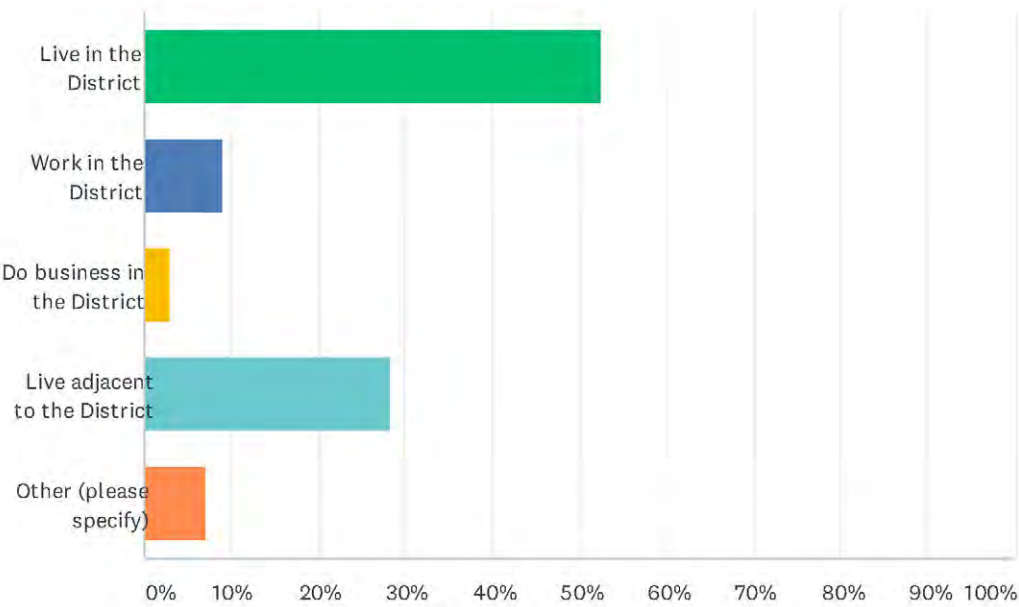


Figure 2. Survey Responses

O-Line (SoDo) Survey: Public Input/Feedback

Q1 What is your interest in the SODO district?

Answered: 99 Skipped: 0

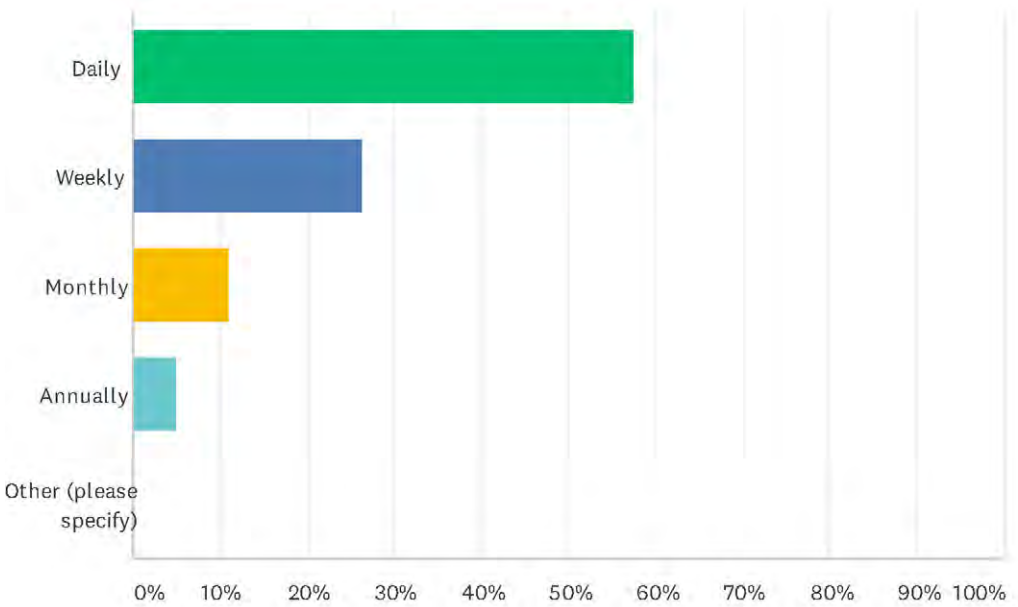


ANSWER CHOICES	RESPONSES	
Live in the District	52.53%	52
Work in the District	9.09%	9
Do business in the District	3.03%	3
Live adjacent to the District	28.28%	28
Other (please specify)	7.07%	7
TOTAL		99

O-Line (SoDo) Survey: Public Input/Feedback

Q2 How often do you visit the SODO District?

Answered: 99 Skipped: 0



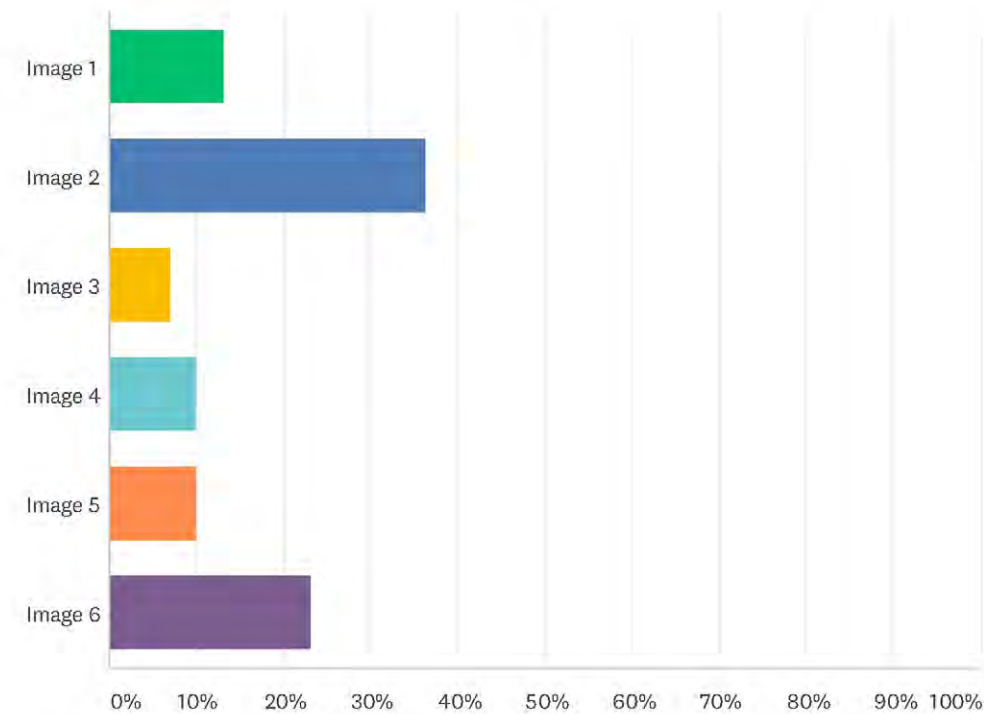
ANSWER CHOICES	RESPONSES	
Daily	57.58%	57
Weekly	26.26%	26
Monthly	11.11%	11
Annually	5.05%	5
Other (please specify)	0.00%	0
TOTAL		99



O-Line (SoDo) Survey: Public Input/Feedback

Q3 In looking at the following images, which do you like best as it pertains to the user experience that may be proposed for the O-Line?

Answered: 99 Skipped: 0

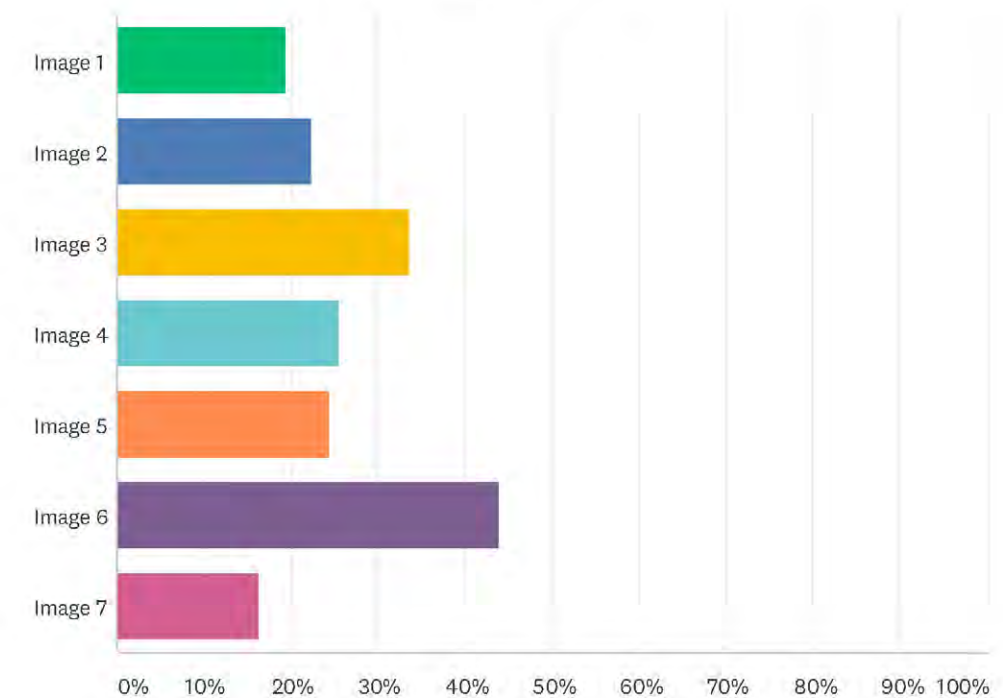


ANSWER CHOICES	RESPONSES	
Image 1	13.13%	13
Image 2	36.36%	36
Image 3	7.07%	7
Image 4	10.10%	10
Image 5	10.10%	10
Image 6	23.23%	23
TOTAL		99

O-Line (SoDo) Survey: Public Input/Feedback

Q4 In looking at the following images, which do you like best as it pertains to the artistic design elements that may be proposed for the O-Line?  
(check all that apply)

Answered: 98 Skipped: 1



ANSWER CHOICES	RESPONSES	
Image 1	19.39%	19
Image 2	22.45%	22
Image 3	33.67%	33
Image 4	25.51%	25
Image 5	24.49%	24
Image 6	43.88%	43
Image 7	16.33%	16
Total Respondents: 98		



## Q5 Please describe why you chose the above images for the two previous questions.

Answered: 89   Skipped: 10

- For Question #3, I like the wide clear space and the lighting. For Question #4, I like the colors and design. (Q3: #6; Q4
- Urban, modern, green, open
- Separate identified biking/walking path beneficial (Q3)
- Greenery/occasional shade spots with art that blends in (Q4)
- Lighting, interesting textures, blending of natural elements with user-friendly features
- Regarding user experience I chose the image that featured separated bicycling and pedestrian paths as I believe that is critical to providing comfortable and safe use. As for the artistic elements I liked the industrial aesthetic of the image I chose. I believe designs like that will complement the current uses of the neighborhood and feel less at odds with its surroundings. I like the verticality of this design as well. It makes the path feel more comfortable and interesting.
- Separating the bike lanes from the pedestrian lanes is important, and I like vines
- Colorful. Fun. Provide shade.
- These look like it will make for an interesting ride.
- There are trees!
- I would like to see a lot of shade since it is so hot so much of the time.
- Art and trees!!
- Trees/foilage are important and I think incorporating both those and some artistic elements to create some shade would be ideal.
- Straight walking and biking paths are safer and more practical. As to aesthetics, the greener and more natural the better. Green spaces in inner cities contribute to both mental and physical health.
- I think there should be lots of foliage and trees so it feels organic.
- It needs to be something people want to use
- I like lots of trees and natural native beauty that moves with the pathway. The trail should feel organic with its surroundings. The art and statues add to the visual invitation of the experience while using the trail. This trail is a fabulous idea. I hope you incorporate Florida's native plants and beauty so that the pathway is a working part of the surrounding ecosystem and not an invasive piece of construction. Portland, Oregon has perfected stuff like this, it's a great reference if you need one.
- Should be good for pedestrians and bikes. Lots of vegetation, trees.
- Modern and provide for both pedestrian and bicycle multi use
- I like the openness and that it isn't too overbearing
- Visually appealing
- We need shade!
- We need shade and natural scenery to beat the heat and reintroduce nature.
- Mix of greenery and pedestrian along within the urban area
- Large Art Pieces and Shade
- The most organic integration of natural and deliberate elements, along with a cozy feel for the user.
- I liked the openness
- I like the use of plants and green stuff to break up all the concrete in the area.
- They are creative and inviting
- I'd want a place to rest on the journey, not just pretty things on the trail. And I think the flavor should look like a linear park rather than a "trail".
- Simple, natural
- Please g looks and safety of walkers and bikers.
- Lots of greenery
- Simple
- Green
- The two that best represented "art" rather than architecture or structures on which to grow vines.
- I like the separation between running/cycling and walking. It's nice not to have to veer into the grass to get around strollers and dog walkers. I like the artistic elements that include shade, seating, art and nature (foliage).
- Separated bicycle/pedestrian lanes. Lot's of green and shade trees. Integrated amenities such as benches and service along with artistic elements. Natural feeling.
- Blend in with nature.
- Modern active
- Visually interesting
- Shade structures, timeless design, combo of rectilinear and softer curved lines.
- For user experience, a big open path is I think a nice way to have room for lots of pedestrians but also giving bicyclists enough room to pass the pedestrians. For artistic, I chose those images because the pathway needs greenery. It is too hot to have a path with no shade. Integrating the art and greenery together will be attractive and we will not have to wait for newly planted trees to grow large enough to give shade.
- They all look good so it's simply the image that appeals to me most.
- Florida is hot and we need all the shade we can get. I like the industrial look of some of the architecture in the pictures because that area is very industrial. I think we should incorporate greenery whenever possible to soften the space a bit, but as long as there is money dedicated to maintain it so it looks nice . . . not like the typical unmanicured medians.
- Beauty
- Images to show use of walk & bike areas. Sculpture art.
- I would like the most natural environment that reflects Florida; i.e native plants like saw palmetto, palms, live oaks, lantana, plumbago, etc. Very green and lush, non metallic. Even some water features....
- Looks more natural, less urban and includes live plants
- like them



- I like places to sit and rest. And it looks more safe with less obstacles to block the view of predators.
- I prefer the lighted path with businesses located on it in image 1- although I would also prefer the walk and bike paths be separated. In image 2 I think some type fencing with plant covering will be safer and quieter. I also like the benches.
- Aesthetics and greenery
- An overall artsy look and it's easy to use. Not alot of obstructions for bicycles to run into.
- Prefer medians to separate pedestrians from cyclists. Orlando is hot, so trees, shade, and green spaces are better than concrete upon concrete.
- Functionality with designated lanes and design consistent with the modern feel of SODO's latest developments
- Looks more natural
- Shade and greenery
- most appealing
- Shade
- Having a separated bicycle track and pedestrian lane are important. Providing shade along the entire route is essential.
- Defined lanes of bike and foot traffic. Artist Fencing/boundaries will keep traffic on the path and out of the landscaping allowing for long term beauty.
- First and foremost our community is in desperate need of this project. My concern is the designated area is off the beaten path through low visibility industrial properties. It's a bit out of the way for anyone east of orange to use. A path near orange Ave through the heart of SoDo and downtown would encourage both recreational and commuter use.
- Thoughts on design: Some shade elements along the path that are artistic, functional, safe and low maintenance are a priority. I'd rather spend the most money on functionality then phase in art pieces in over time.
- Fresh flowers Green creative
- They look nice. Lighting is important because it acts as a demarkation.
- This area is pretty industrial so to me it makes sense to lean into that aesthetic, provided it's done in a way that's stylish and doesn't feel too institutional or unsafe.
- the trail should be well lit at night and provide shade during the day
- Plants and people in picture
- The look is safe and inviting.
- pretty
- Easy to maintain and opportunity to include native foliage.
- Modern
- #1 had people and showed both biking and walking options. Number two showed greenery. Including natural elements would be key for me. I really wanted to bike through that red tunnel.
- They showcase the artistic side of SoDo and capture the night view of it.
- Exciting and energetic
- Clean design with nature added and lots of trees. Art in shade structures or vertical identification elements.
- Separate bicycle and pedestrian infrastructure. Shade trees. Art that will withstand Florida climate while creating outdoor "rooms."

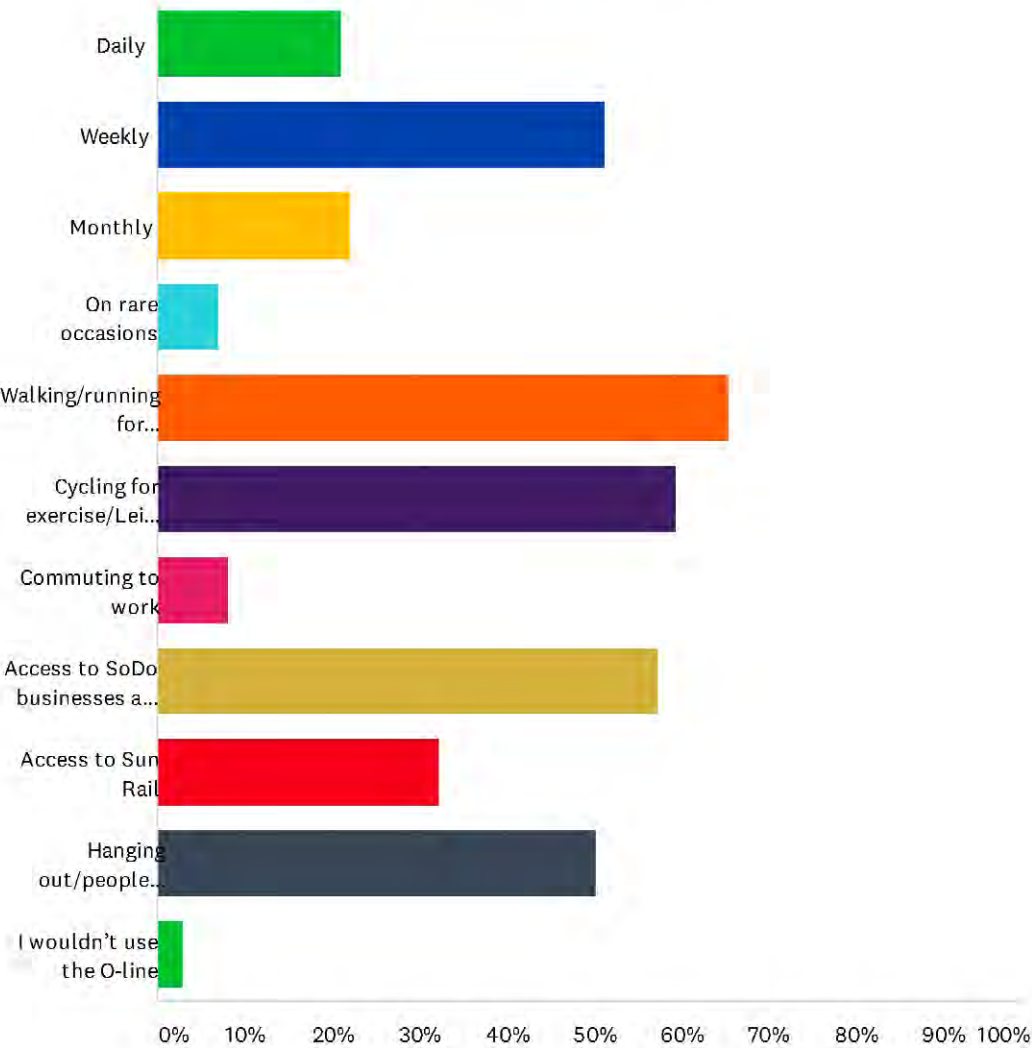
- Modern with defined usages and plenty of trees and landscaping
- > Separated bike and pedestrian paths
- > Integrated nature - would like to see more **BIG SHADY TREES**
- High Line reference!
- Fit with the general aesthetic of the area
- Functional and green
- Functional & Green.
- Spacious walkways, separation from cars, greenery
- I think the area should be maintenance free and avoid objects that might create visibility barriers. Be open, have art work, nothing to create and unsafe environment.
- Consistent with other elements of OH campus and transitioning industrial area
- Clarity for users and shade
- Clean, safe, well lit. I like how some of the retail and restaurants open to the pathway. I like the landscape without a bunch of palm trees. Too many palm trees on things like this.
- Shade and comfort for walkers and bikers.
- Functionality and resourceful creativity. Both pictures frame the area of interactivity and create a more secure presence at all times.
- For question 3 - it shows the utility of the O-line and its intended use, especially in how there is a designated path for walking and separate path for bicycles. For question 4 - it shows the most artistic characteristics in being colorful, high contrast, yet not overwhelming or bland.
- separate bike and path lanes will avoid conflict and provide better flow; the artistic aesthetic chosen is modern and will last for years to come



O-Line (SoDo) Survey: Public Input/Feedback

Q6 If the O-Line is built, how often would you use it and what activities would you be interested in? (check all that apply)

Answered: 99 Skipped: 0



O-Line (SoDo) Survey: Public Input/Feedback

ANSWER CHOICES	RESPONSES	
Daily	21.21%	21
Weekly	51.52%	51
Monthly	22.22%	22
On rare occasions	7.07%	7
Walking/running for exercise/leisure	65.66%	65
Cycling for exercise/Leisure	59.60%	59
Commuting to work	8.08%	8
Access to SoDo businesses and amenities	57.58%	57
Access to Sun Rail	32.32%	32
Hanging out/people watching	50.51%	50
I wouldn't use the O-line	3.03%	3
Total Respondents: 99		



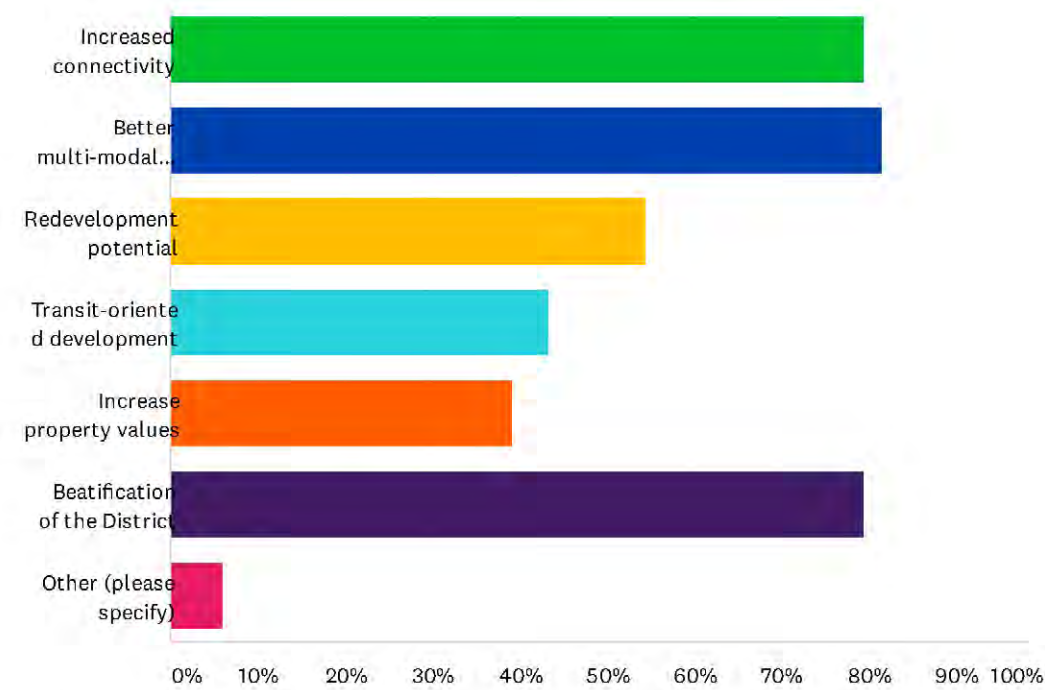
O-Line (SoDo) Survey: Public Input/Feedback

Other (please specify):

- Emphasize natural surroundings and green spaces, for the health and wellbeing of the community
- Mix urban and natural areas
- Improved health outcomes, better community building
- Giving locals safer access to downtown. I would like to see it extended far south of Columbia Street, since I live south of Pineloch.
- economic development

Q7 What do you think are the greatest opportunities for the O-Line Multi-use Trail project? (check all that apply)

Answered: 99 Skipped: 0



ANSWER CHOICES

Increased connectivity

Better multi-modal transportation for biking and walking

Redevelopment potential

Transit-oriented development

Increase property values

Beatification of the District

Other (please specify)

Total Respondents: 99

RESPONSES

79.80% 79

81.82% 81

54.55% 54

43.43% 43

39.39% 39

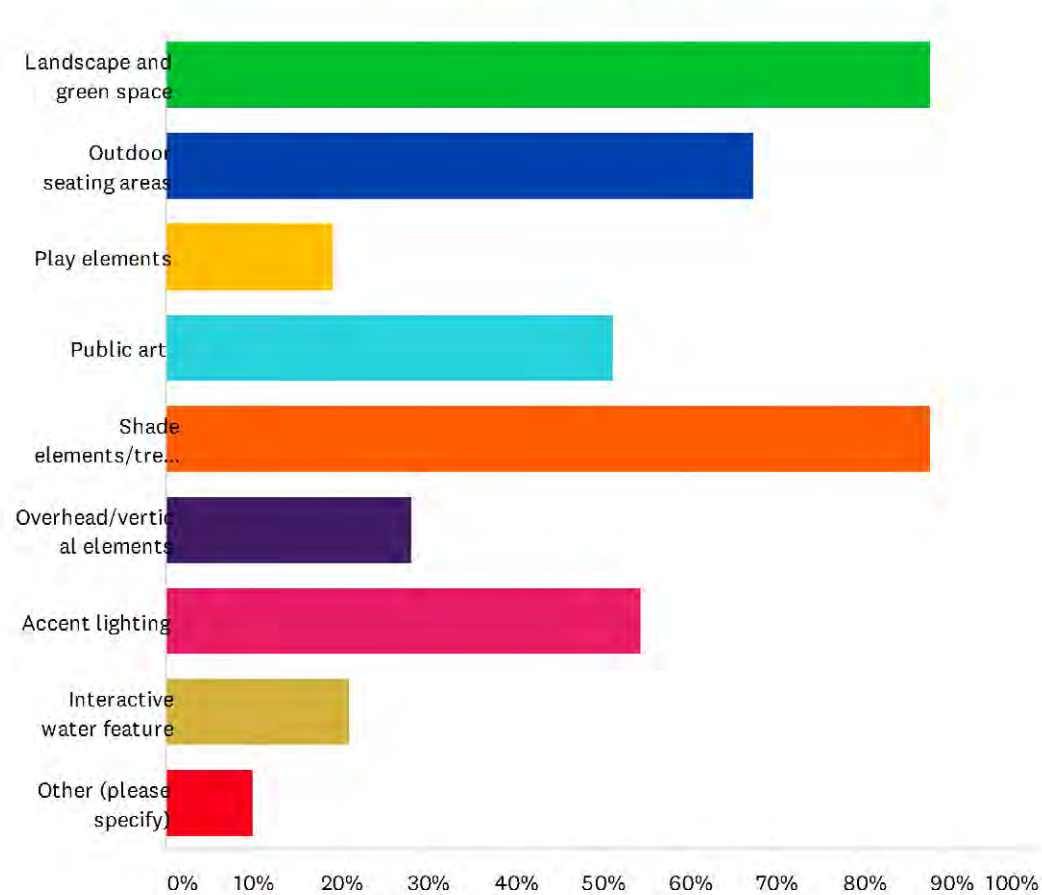
79.80% 79

6.06% 6



Q8 What elements would you most like to see incorporated into the O-Line Multi-use Trail project? (check all that apply)

Answered: 99 Skipped: 0



ANSWER CHOICES	RESPONSES	
Landscape and green space	87.88%	87
Outdoor seating areas	67.68%	67
Play elements	19.19%	19
Public art	51.52%	51
Shade elements/tree canopy	87.88%	87
Overhead/vertical elements	28.28%	28
Accent lighting	54.55%	54
Interactive water feature	21.21%	21
Other (please specify)	10.10%	10
Total Respondents: 99		

Other (please specify):

- Smooth and safe and wide, unobstructed trail. Links/Ties to orange Ave and other retail, restaurant, businesses.
- Dog park
- All of the above would be welcome, but with budget limitations I most want green space, shade, benches and well lit.
- Public art can be controversial, but everyone loves trees, shade, and playgrounds.
- Safety is a big concern
- Adequate bicycle parking to allow patronage of nearby businesses
- safe lighting for night time
- I hate to say this, but I would worry about outdoor seating being attractive to homeless population.
- Water/bike repair stations. Secure parking at businesses/Sunrail



# Q9 Do you have any general comments regarding the O-Line Multi-use Trail project? If you are not familiar with the project, please enter ‘I don’t know about the project’.

Answered: 53    Skipped: 46

- Build it as quickly as possible! This quarter has a lot of potential for homeless activity, so make sure that is accounted for in design and staffing.
- Important to have unobstructed 2 way bike path to minimize accidents with pedestrians. Lots of bikers will use the Oline to connect to urban trail and further north, and vice versa.
- Make it look like a compliment to nature, not too artificial
- Regarding the bike trail along Division Avenue, please DO NOT reduce traffic lanes and traffic capacity on Division. Even when I-4 is finally completed (one day), Division is the primary relief artery for Orange Avenue. It will be needed to accommodate future growth (10, 20, 30 years from now).
- I would just like to reemphasize the importance of separating the “wheels from the heels” where possible. From my experience commuting via bicycle on other shared use paths pedestrians (especially dog walkers!) can be a major hazard to cyclists. Other than that I really like the concepts and the momentum behind getting this project built.
- As much shade as can possibly be created is essential for this to succeed. The pavement will be hot. The environment is hot. Florida is just hot, hot, hot. Shade generously offered everywhere will be welcomed and will make this project a true joy and comfortable destination.
- It would be awesome to have shaded rest areas with water fountains.
- Please plant beautiful shade trees!
- Trees. water fountains which can fill up water bottles. recycle bins. Safety and security measures so people feel safe.
- Again will stress the need to keep Orlando green. Lots of trees, shade and grass along with some brier area for urban wildlife.
- Don’t know about this project
- This is the first I’ve heard of the project. I will be looking into it further. Orlando desperately needs a trail like this.
- It has great potential!
- I don’t know enough
- Love the idea and it is long overdue
- We need safe access to cross Orange/Michigan and Orange/Kaley. This is useless if I don’t feel safe crossing these insane intersections on my bicycle - I can’t get to the O-Line.
- Must consider how to manage and address homeless challenges.
- I don’t know about the project.
- I live downtown and it would be a great way for me to exercise and hopefully have easy access to the Super Target eventually.
- I was not aware of the project
- I don’t know about the project.
- Connection to other trails and realistic expansion plans are important. It has a lot of potential as a

- destination accessed primarily on foot, bike or scooter, but only if those connecting routes exist.
- I love using the Urban Trail and would love to have something like that or better yet a trail that links to it in my neighborhood.
- Signage on Orange Avenue at every stop light.
- No
- I don’t know about the project
- glad to see the investment in the area.
- I don’t know about the project
- Just hope it is done properly and beautifully!
- Get it done.
- We just moved to SODO and would very much like this project to happen
- Hope to see it happen. Orlando definitely needs more green, walkable spaces. Whenever we have visitors from out of town, we always take them to Park Ave in Winter Park because it’s the most walkable and scenic area in Central Florida. Would be wonderful to have that aesthetic in SoDo.
- did not here about till now sounds good
- Connectivity is of great importance.
- Excited to watch the project grow!
- Please improve via plants art and water
- Do it.
- N/A
- I think this trail is a great idea
- I don’t know about the project
- Great idea. Feels very European/big city.
- This is a great initiative and should receive funding
- Great project! I cant wait to see it happen.
- Allow businesses adjacent to the trail to tie into it so that it doesn’t feel surrounded by wall, like the OUT from Colonial to Amelia
- Great to hear that this is moving forward. Hopefully it will be directly connected to Gertrude’s Walk and the Urban Bike Trail
- Provide ample shade for the day and lighting for the night. Provide as much space for people to walk and bike safely. Provide clear wayfinding to local business and destinations.
- I think we should locate the site of Aaron Jernigan’s home, & make it a park.
- Fewer cars, more other modes of transportation
- Maintenance - plan in ownership element
- I don’t know much about the project
- How does it connect to downtown? It seems like its own little town with walking and biking but would need a connector to the downtown trails for walking and biking.
- It is a great way to allow semi-tranquil activity without loud noise from traffic and other distractions found in a commercial environment.
- I don’t know much about the project



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