

International Drive Pedestrian Overpass  
Analysis and Overpass Conceptual Design Study

Project Advisory Group Meeting #3



# Project Advisory Group

## Meeting Objectives

### Meeting Number Three

- Presentation of Preliminary Bridge Concepts
- Comparison of Aesthetics for Each Concept
- Comments from Group Members

### Meeting Number One

Introduction of Participants  
General Overview of Project  
Initial Comments from Group Members

### Meeting Number Two

Presentation on Findings of Existing Conditions  
Discussion of General Bridge Features; Ramps, Stairs  
Elevators, etc.  
Discussion of Right-of-Way and Access impacts  
Discussion of Utility Impacts  
Comments from Group Members

### Meeting Number Three

Presentation of Preliminary Bridge Concepts  
Comparison of Aesthetics for Each Concept  
Comments from Group Members

### Meeting Number Four

Presentation of Refined Bridge Concepts  
Discussion of Refined Aesthetics  
Further Discussion of Right-of-Way and Access Impacts  
Further Discussion of Utility Impacts  
Final Comments from Group Members

### Meeting Number Five

Presentation of Final Concept Plans for 3 Alternatives  
Presentation on Evaluation Method and Rankings  
Discuss Rankings and Determination of Preferred  
Alternative





**Jerry L. Demings**  
Orange County Mayor



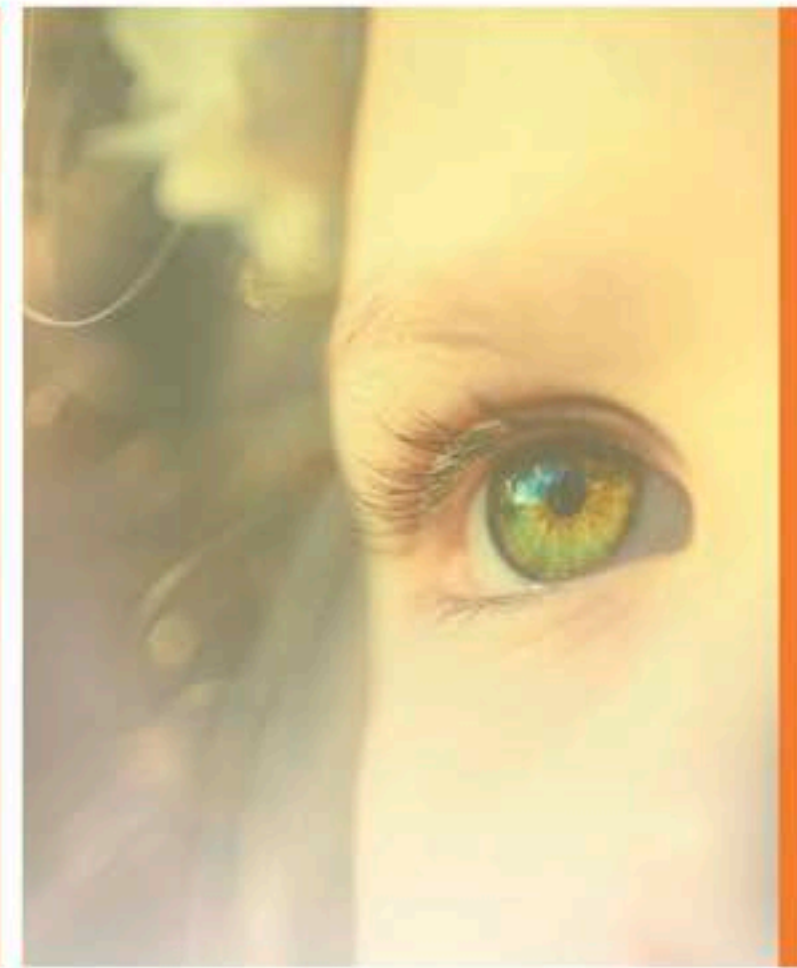
**Victoria P. Siplin**  
District 6 Commissioner



## Results of PAG meeting 1 & 2

1. Include barrier at intersections to prevent on grade crossing.
2. Utilize Stair and Elevator at each intersection (best option for each corner)
3. Minimize impact on existing utilities and on adjacent property owners.
4. Create an Iconic Gateway to the Convention and Entertainment District
5. Consider potential bridge connections to adjacent properties (both elevated and on grade).
6. Consider experience of those traveling under the bridge as well as those experiencing the bridge by crossing it.
7. Bridge design should consider pedestrians, strollers, and bicycles.
8. ADA accessibility is critical at all intersections.





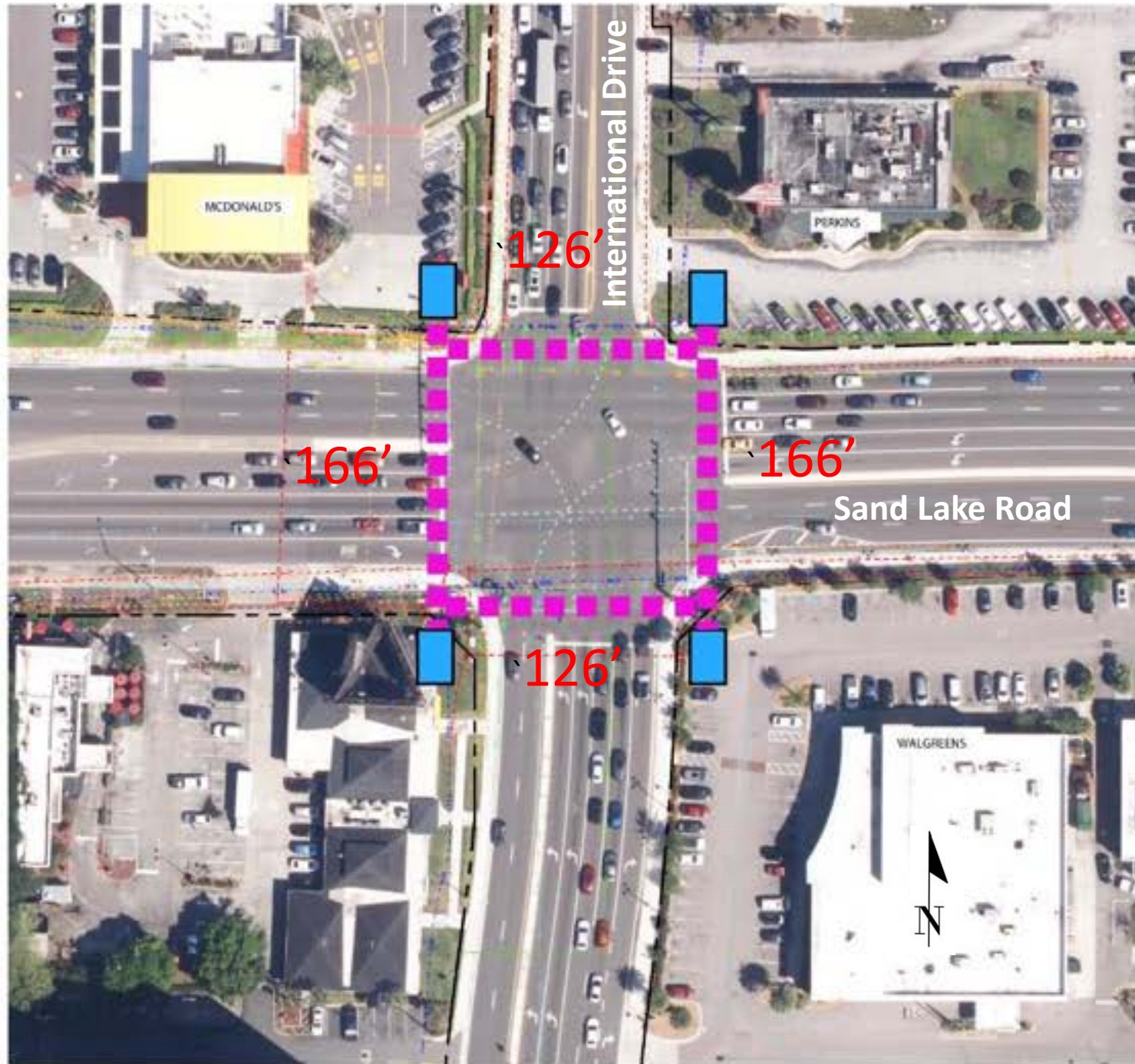
## Meeting Number Three

# Preliminary Bridge Concepts



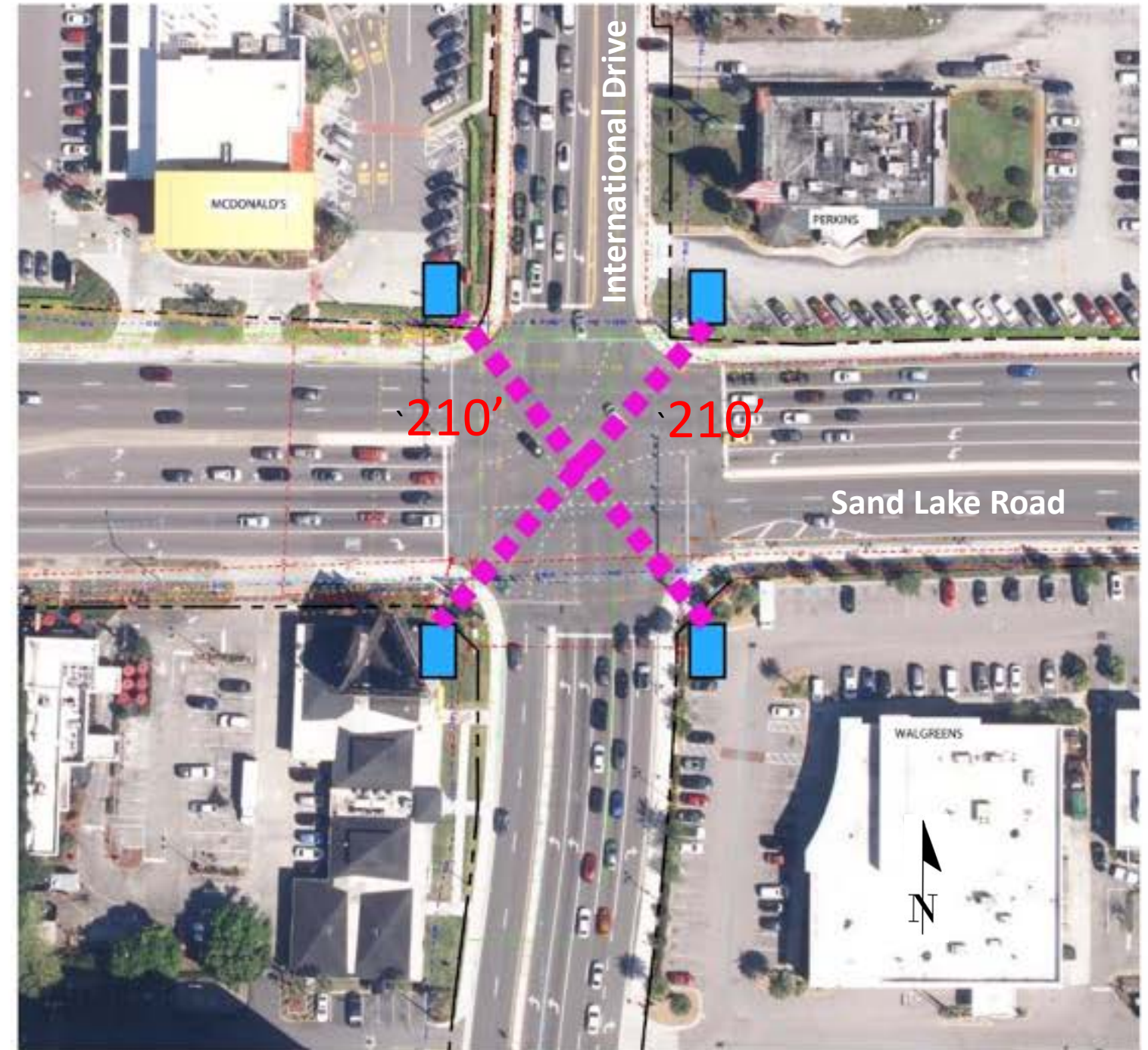
**HHCP&AVCON**  
A JOINT VENTURE

# Bridge Configurations





## Option 1 Square Configuration

Simple configuration utilizes straight prefabricated bridge sections. Users must travel either right or left to the final destination. If the destination is diagonal, you will have to travel two segments of the bridge.



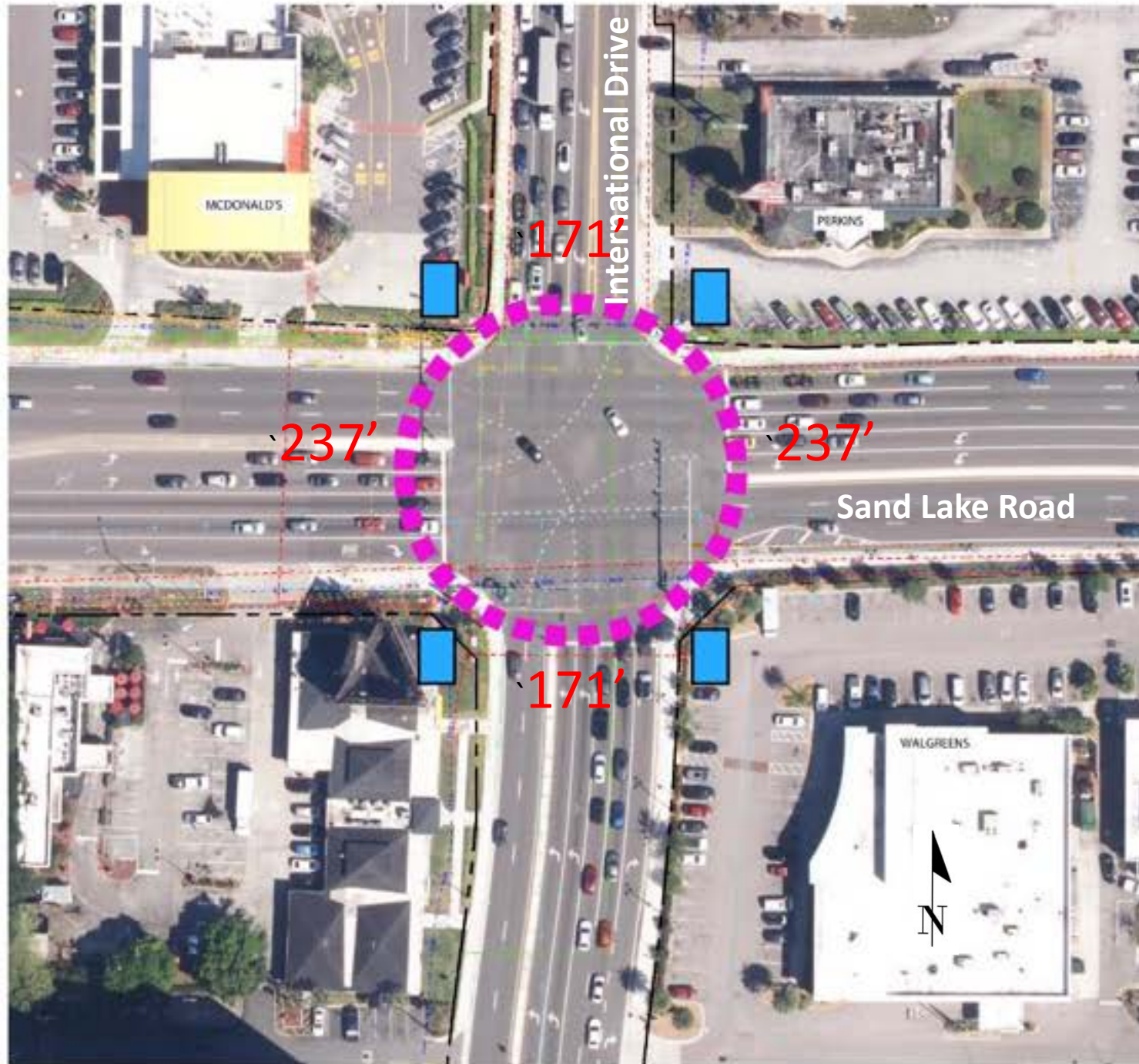
## Option 2 "X" Configuration

The "X" configuration utilizes prefabricated bridge sections and includes a shorter total bridge length than Option 1. Users travel approximately the same distance to any destination. That distance is slightly longer than a single span in Option 1.

-  Vertical Circulation Tower
-  Elevated Bridge

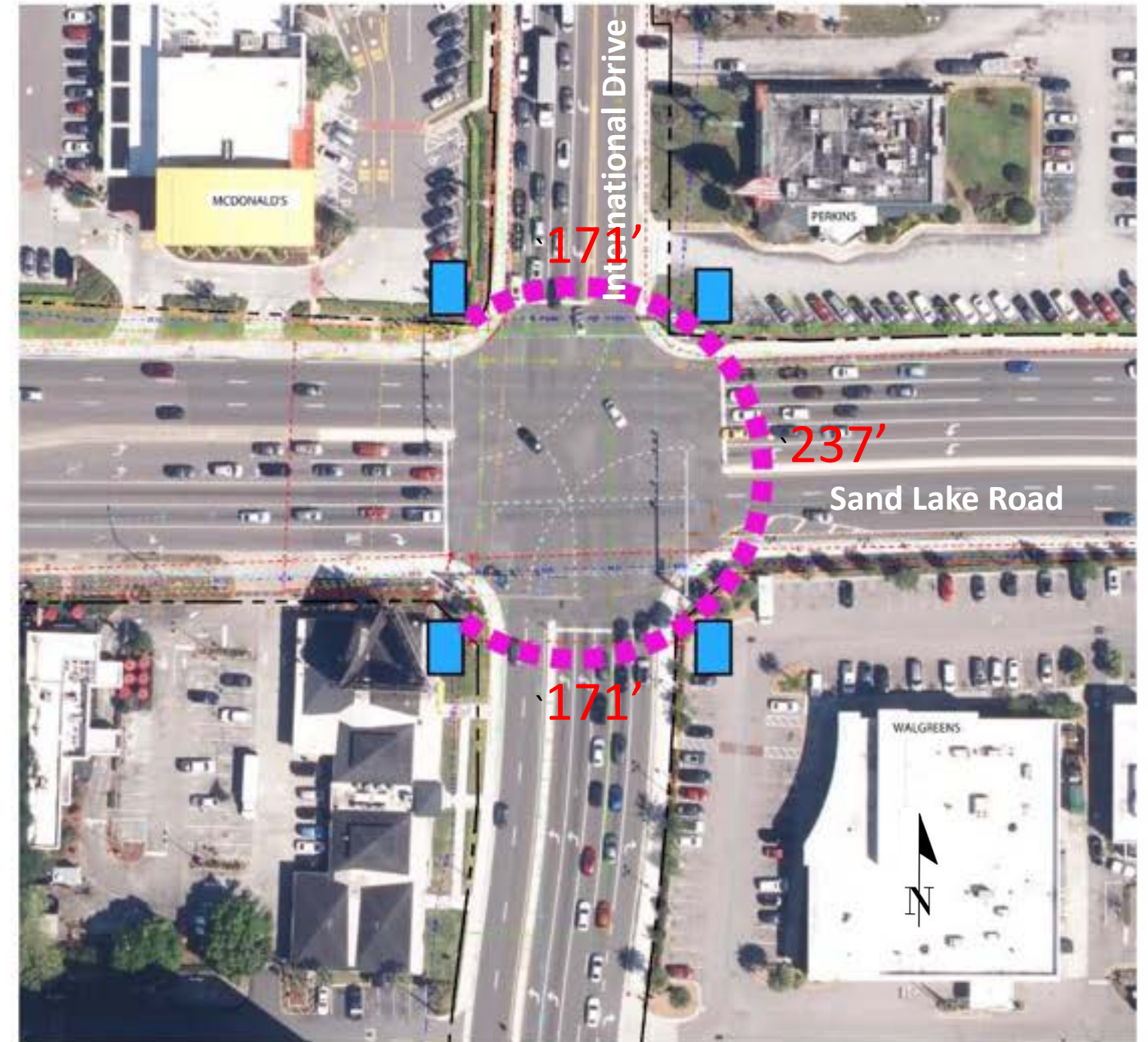


# Bridge Configurations





### Option 3 Circular Configuration

Operationally similar to the Square configuration, the Circular bridge eliminates 90 degree intersections and allows smooth flow around bridge in either direction. By walking in a continuous curve the appearance of the distance to the destination is reduced. This configuration can be assembled from Pre-fabricated bridge sections.

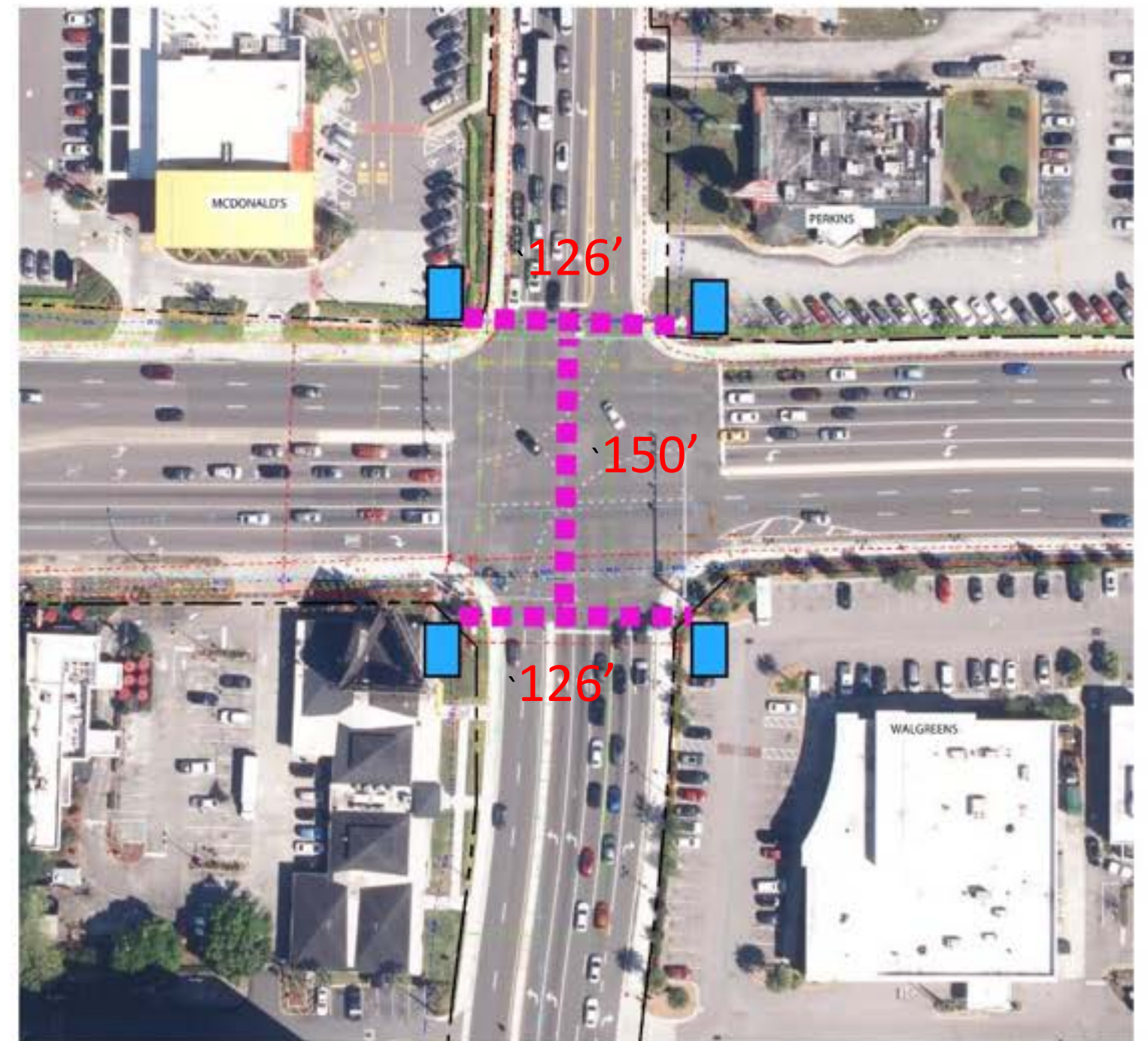
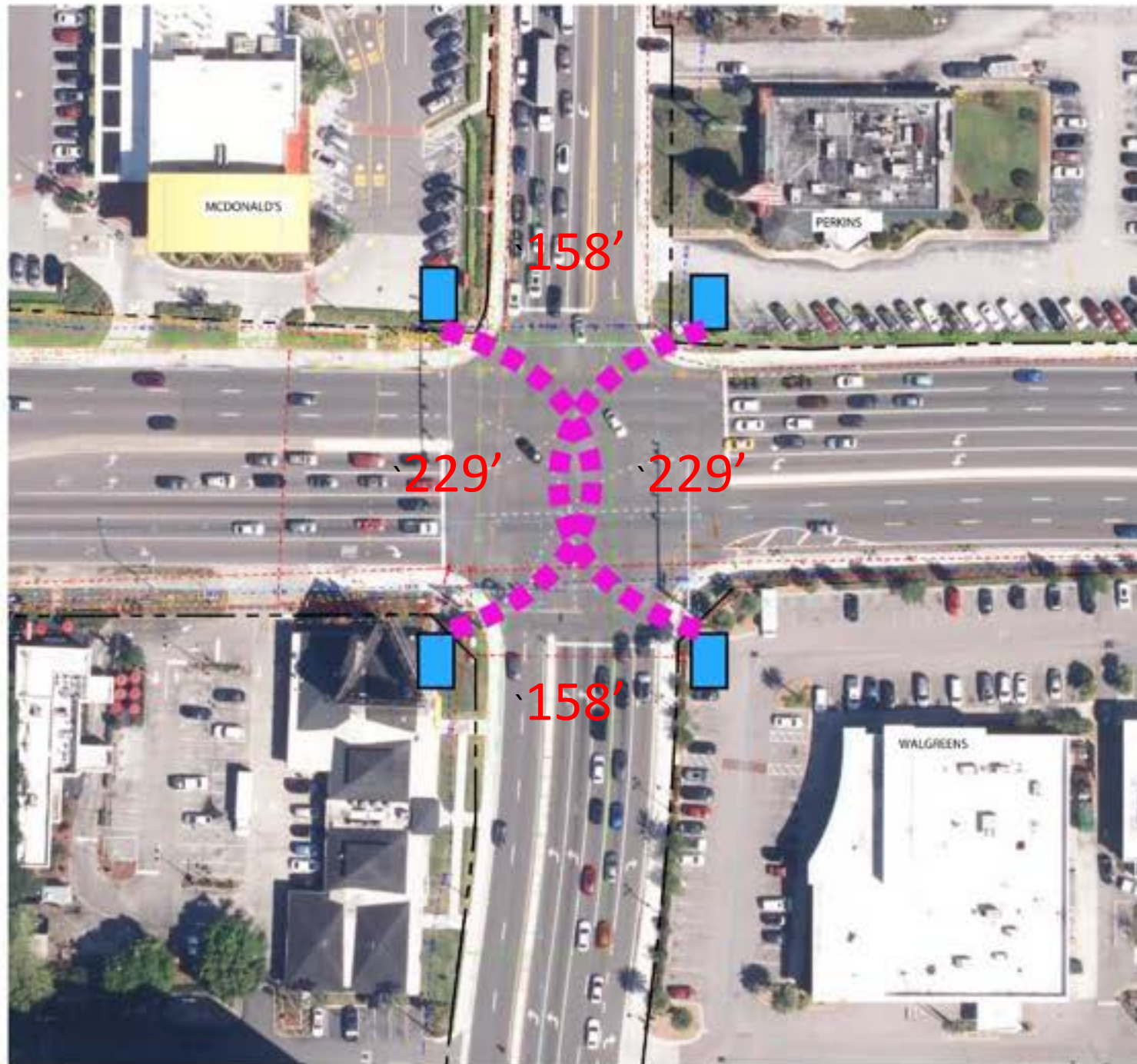


### Option 4 "C" Configuration

The "C" configuration utilizes prefabricated bridge sections and includes a shorter total bridge length than Option 3. This configuration only increases the travel distance between the NW and SW corners. This configuration creates a unique gateway for automobiles coming from the I-4 interchange.

-  Vertical Circulation Tower
-  Elevated Bridge






**Option 5**  
Chanel Logo Configuration



Operationally similar to the "X" configuration, this bridge consists of two curved bridge sections that touch and connect in the middle. More dynamic than the "X" configuration, this configuration eliminates long straight views and can accommodate a transition area in the center of the intersection. This configuration can be assembled from Pre-fabricated bridge sections.

**Option 6**  
"I" Configuration

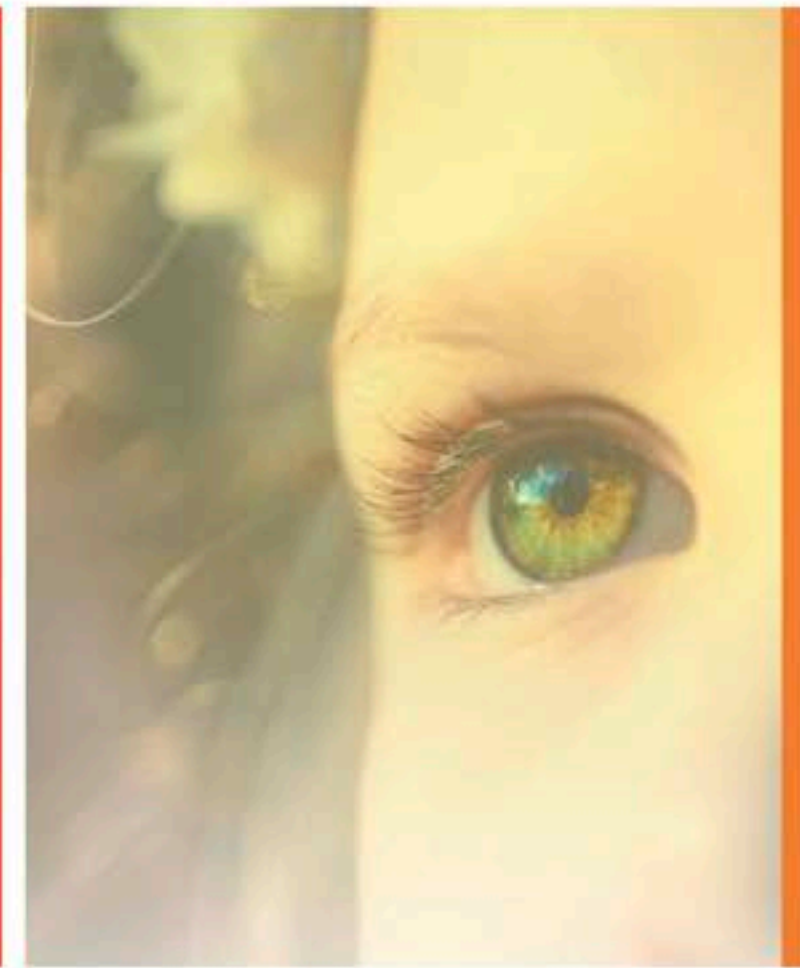
The "I" configuration utilizes prefabricated bridge sections and includes a shorter total bridge length than Option 3. This configuration is made up of simple straight bridge sections and creates a unique gateway for automobiles coming from the I-4 interchange. Similar to Option 5, this configuration provides shorter travel distances crossing east and west.

 Vertical Circulation Tower

 Elevated Bridge







## Meeting Number Three

# Selected Bridge Tower Configurations



**HHCP&AVCON**  
A JOINT VENTURE



## Bridge Tower Option 2

### Description

A very inviting stair traversing 24'-0" in height. Each stair run is 6' rise. The treads are 12" and the risers are 6" for easy climbing.

The Elevator is 3500# capacity and is stretcher compliant

The overall site area required for this configuration is 35' x 40'

Crosswalks have been removed.

### Summary

Ground Floor Platform	221sf
Stair Width	6' Wide
Elevator Shaft	10' x 8'-4"
Elevator Cab Size	6'-8" x 5'-5"
Total Ground Level Footprint	531sf
Bridge Width	10'-0"



# Bridge Tower Option 1

## Description

A very inviting stair traversing 24'-0" in height. Each stair run is 4' rise. The treads are 12" and the risers are 6" for easy climbing.

The Elevator is 3500# capacity and is stretcher compliant

The overall site area required for this configuration is 22' x 24'

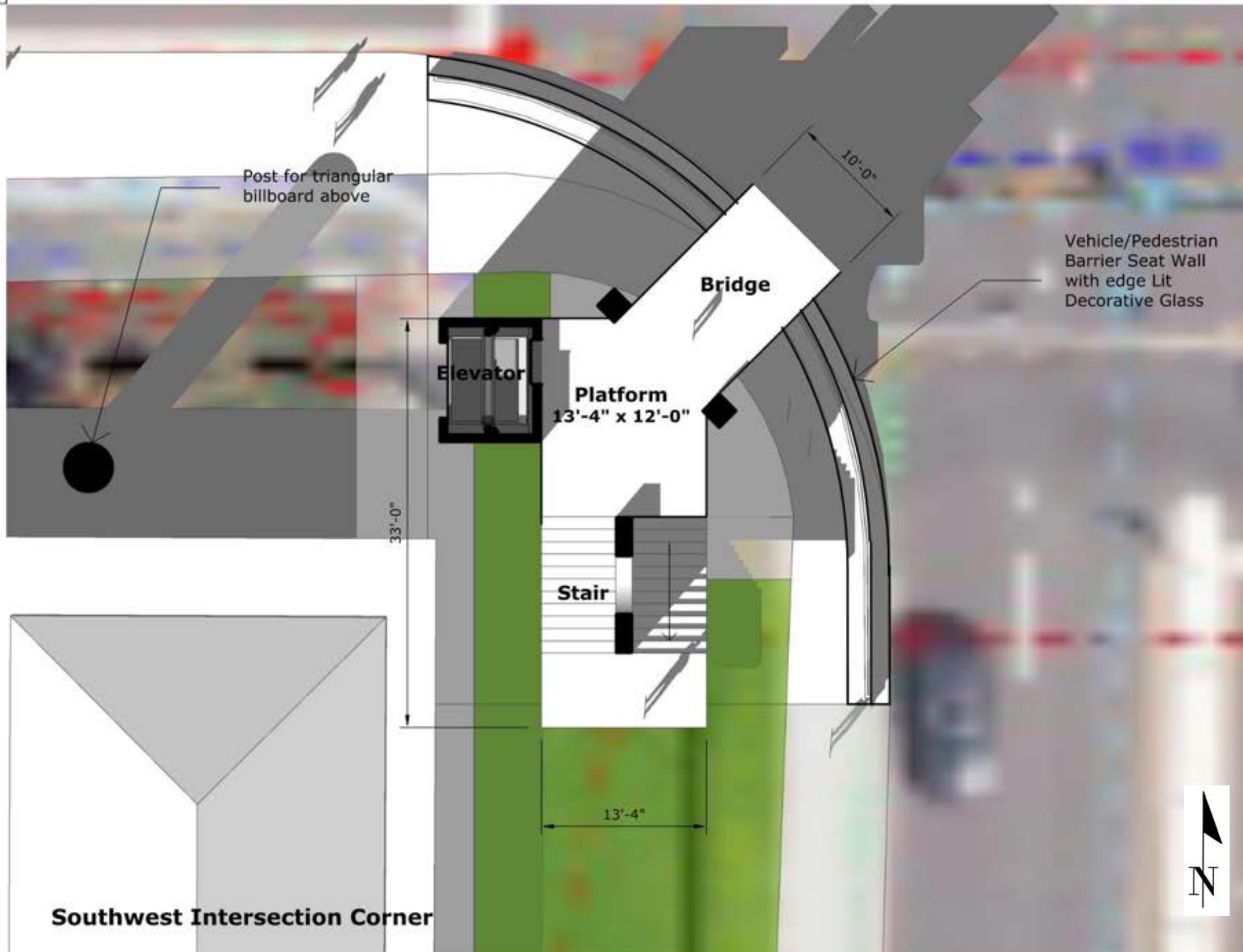
Glass Back Elevator provides additional Safety and creates a visual feature

Seat bench barrier and protective screen wall protects pedestrians and prevents on grade crossing.

Crosswalks have been removed.

## Summary

Ground Floor Platform	192sf
Stair Width	6' Wide
Elevator Shaft	10' x 8'-4"
Elevator Cab Size	6'-8" x 5'-5"
Total Ground Level Footprint	506sf
Bridge Width	10'-0"



Southwest Intersection Corner



## Bridge Tower Option 3

### Description

A very inviting stair traversing 24'-0" in height. Each stair run is 4' rise. The treads are 12" and the risers are 6" for easy climbing.

The Elevator is 3500# capacity and is stretcher compliant

The overall site area required for this configuration is 22' x 24'

Glass Back Elevator provides additional Safety and creates a visual feature

Seat bench barrier and protective screen wall protects pedestrians and prevents on grade crossing.

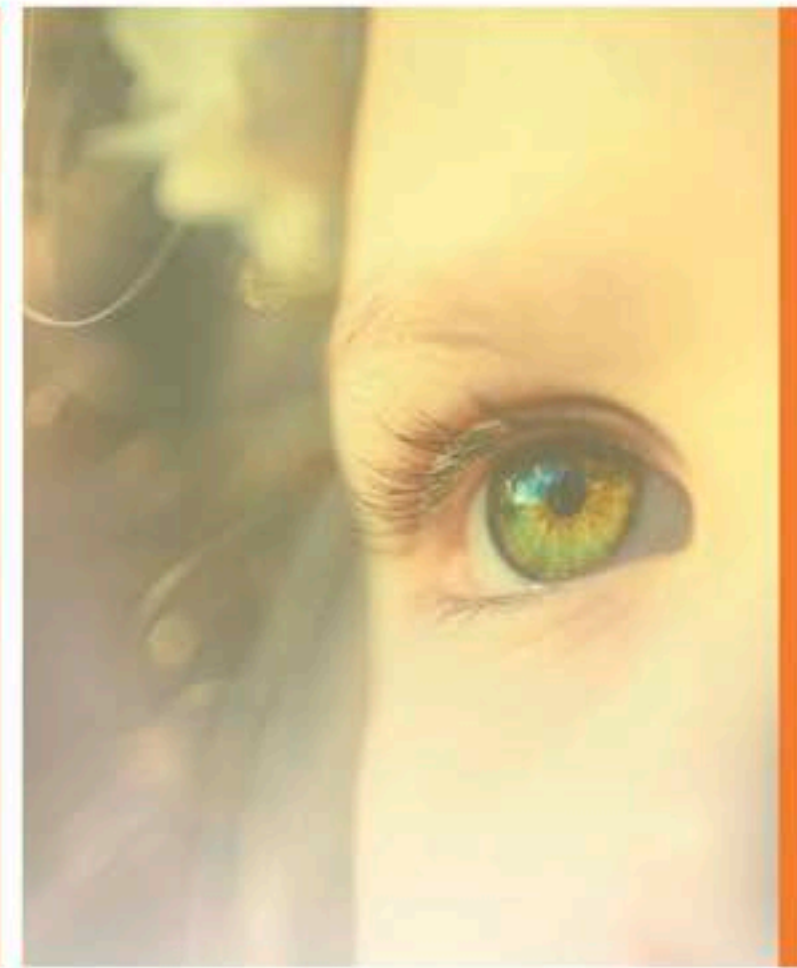
Crosswalks have been removed.



### Summary

Ground Floor Platform	192sf
Stair Width	6' Wide
Elevator Shaft	10' x 8'-4"
Elevator Cab Size	6'-8" x 5'-5"
Total Ground Level Footprint	506sf
Bridge Width	10'-0"



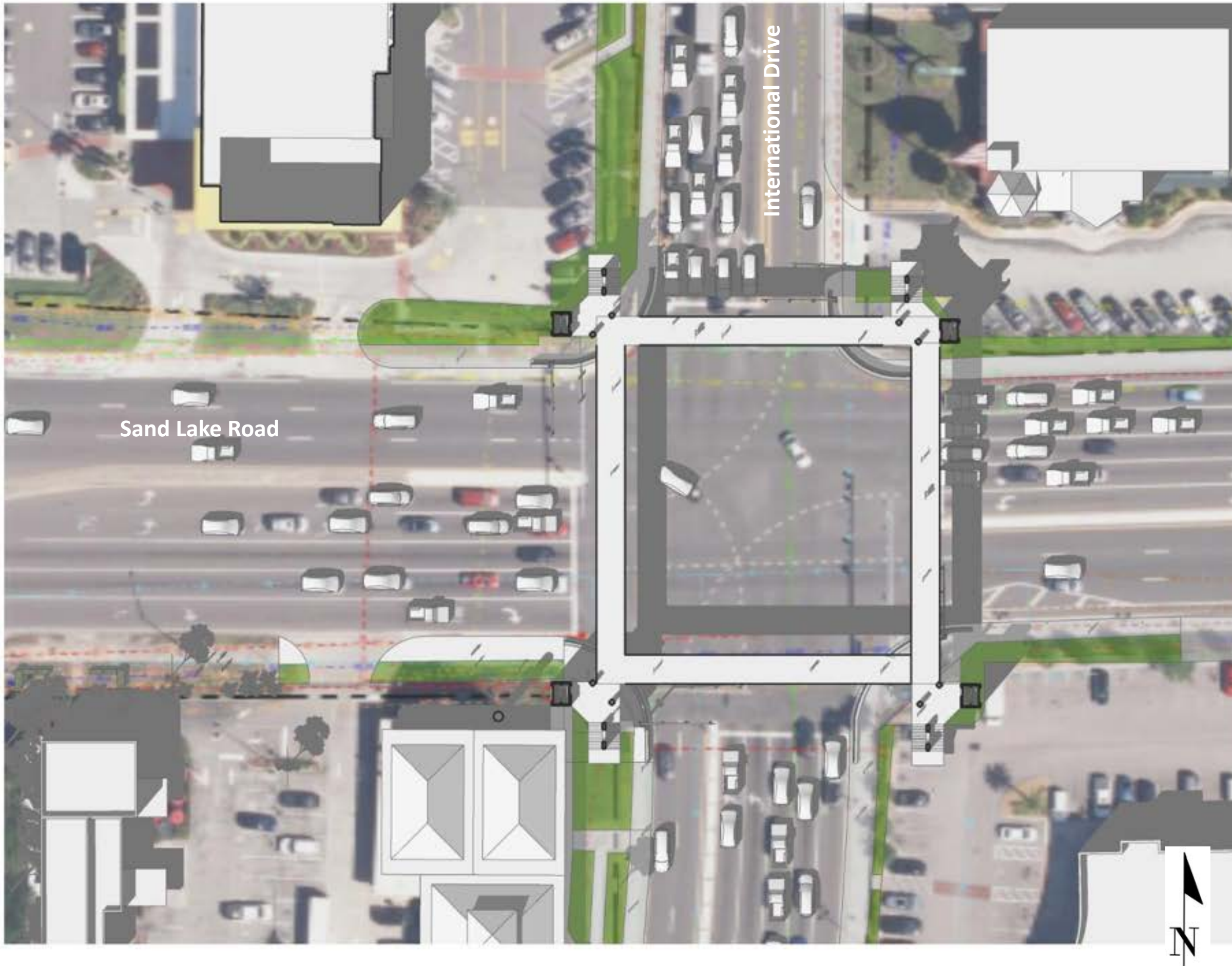


## Meeting Number Three

# Preliminary Bridge Configuration Concepts



**HHCP&AVCON**  
A JOINT VENTURE



## Bridge Configuration Square Option

### Description

The square bridge configuration is the most pragmatic of the options reviewed.

The square bridge has the simplest structural configuration with four simple bridge spans.

The most challenging part of this configuration is its simplistic form, and lack of dynamic quality. This option suffers from its lack of positive user experience with the focus of crossing being straight ahead with people walking with you and against you. Also the requirement to make 90 degree turns at the intersections make this the least favorable user experience.

The overall length of the bridge in the square configuration is the third longest of all options at 584' of length.

### Summary

Average Travel Distance	279'
Bridge Length	584'
Bridge Width	12'-0"





**Sand Lake Road looking East**

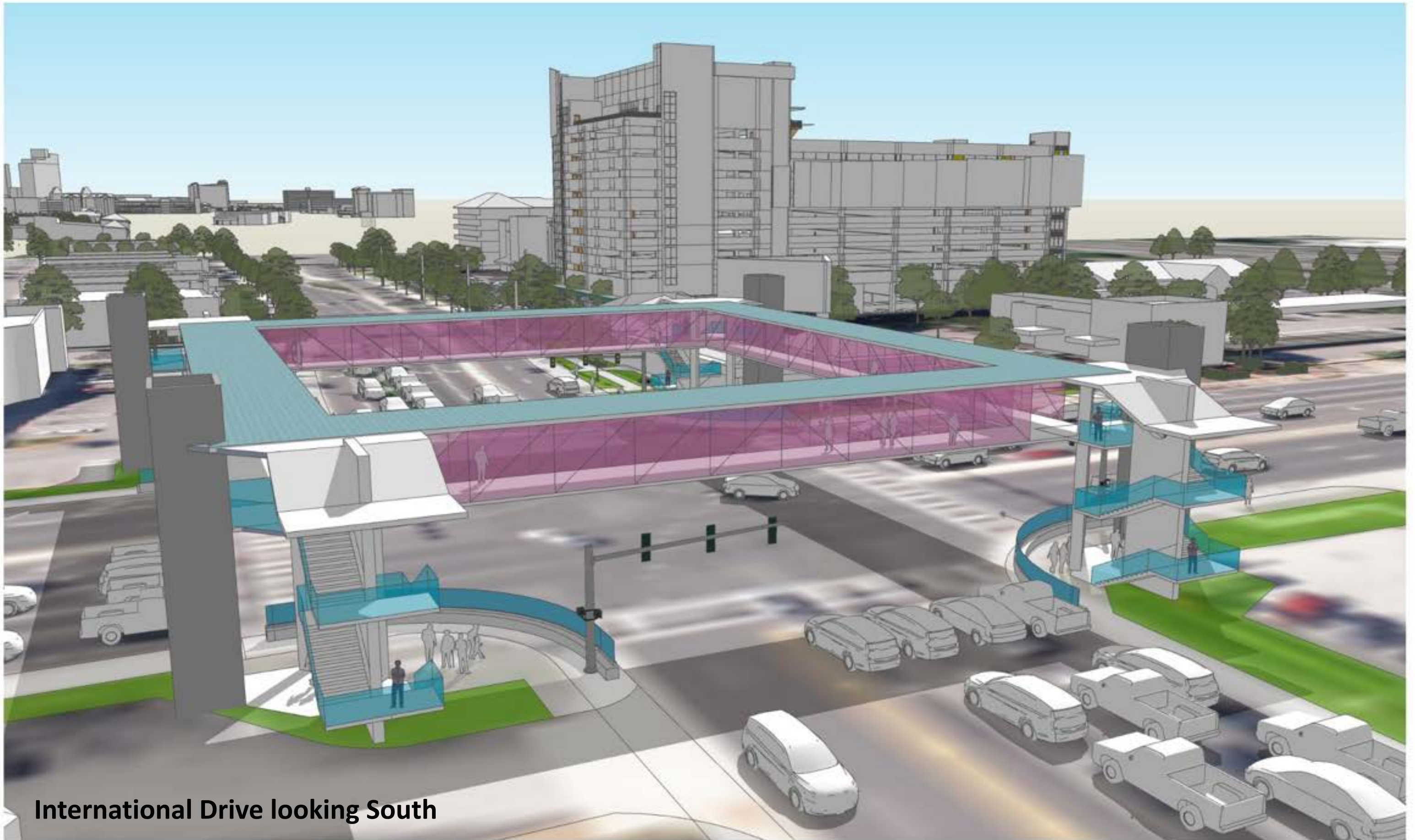




**Sand Lake Road looking East**

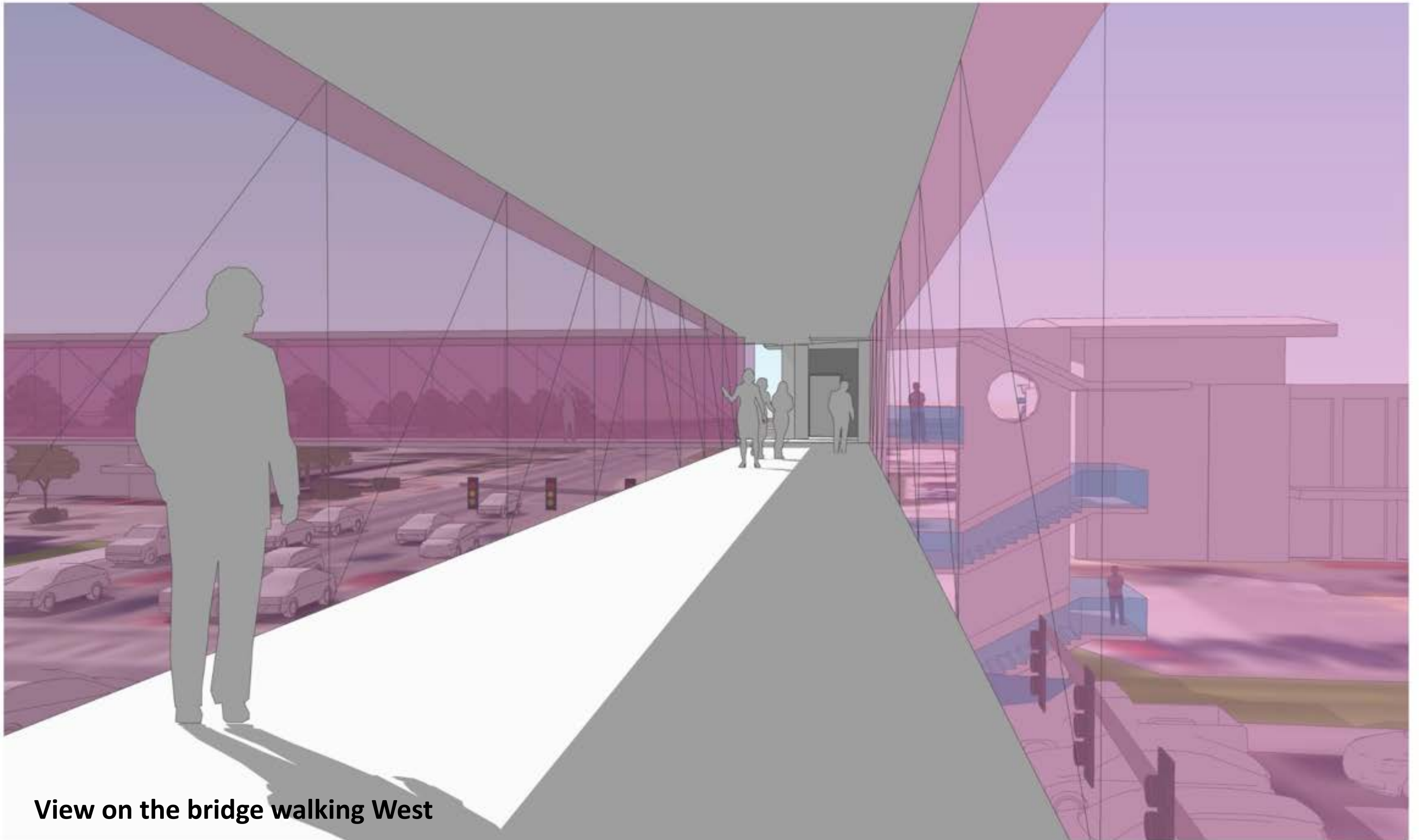






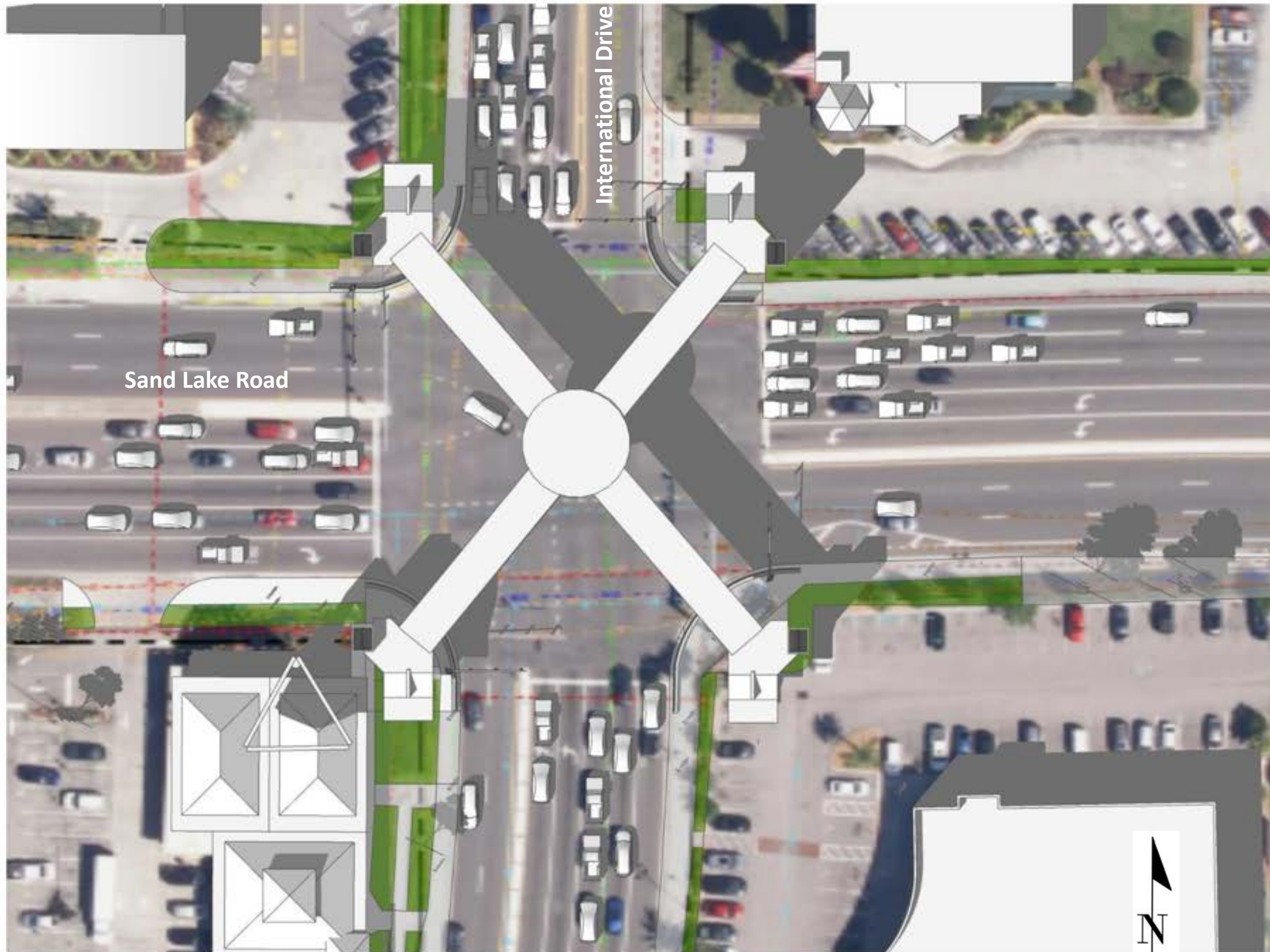
**International Drive looking South**





**View on the bridge walking West**





## Bridge Configuration "X" Option

### Description

The "X" configuration consists of two straight bridge runs intersecting in the middle of the intersection.

The overall length of the bridge in the "X" configuration is the third shortest of all options at 420' of length and has the third shortest average travel distances of the options considered.

One benefit of this configuration is that the travel distance to every other intersection is exactly the same. The negative of this configuration is that the shorter distances across International drive are actually longer in this design.

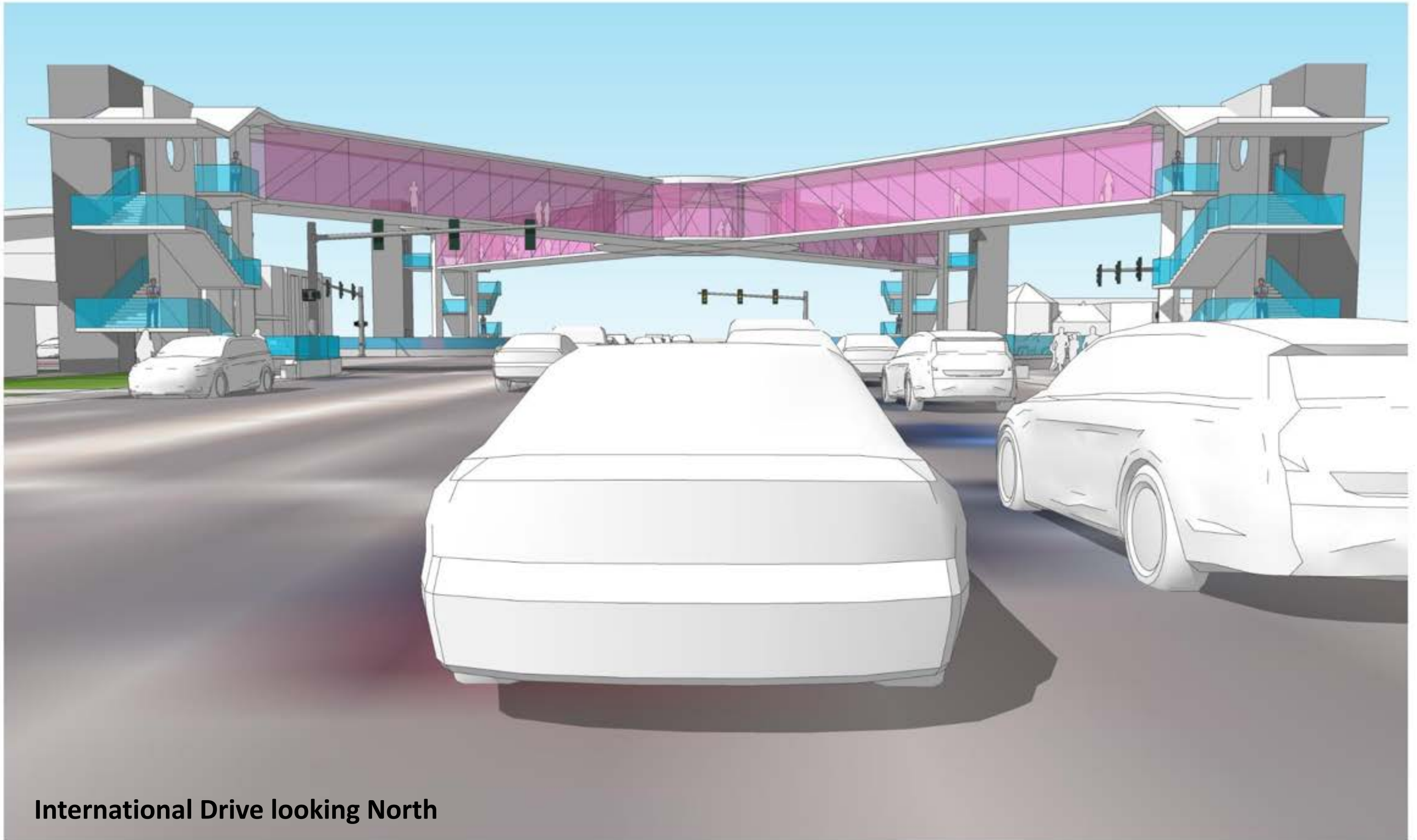
There is an opportunity for a unique feature at the crossing point of the bridge which all users will experience.

The straight bridge sections create a less desirable experience and users have to make a turn at the center section unless they are traveling diagonally across the intersection.

### Summary

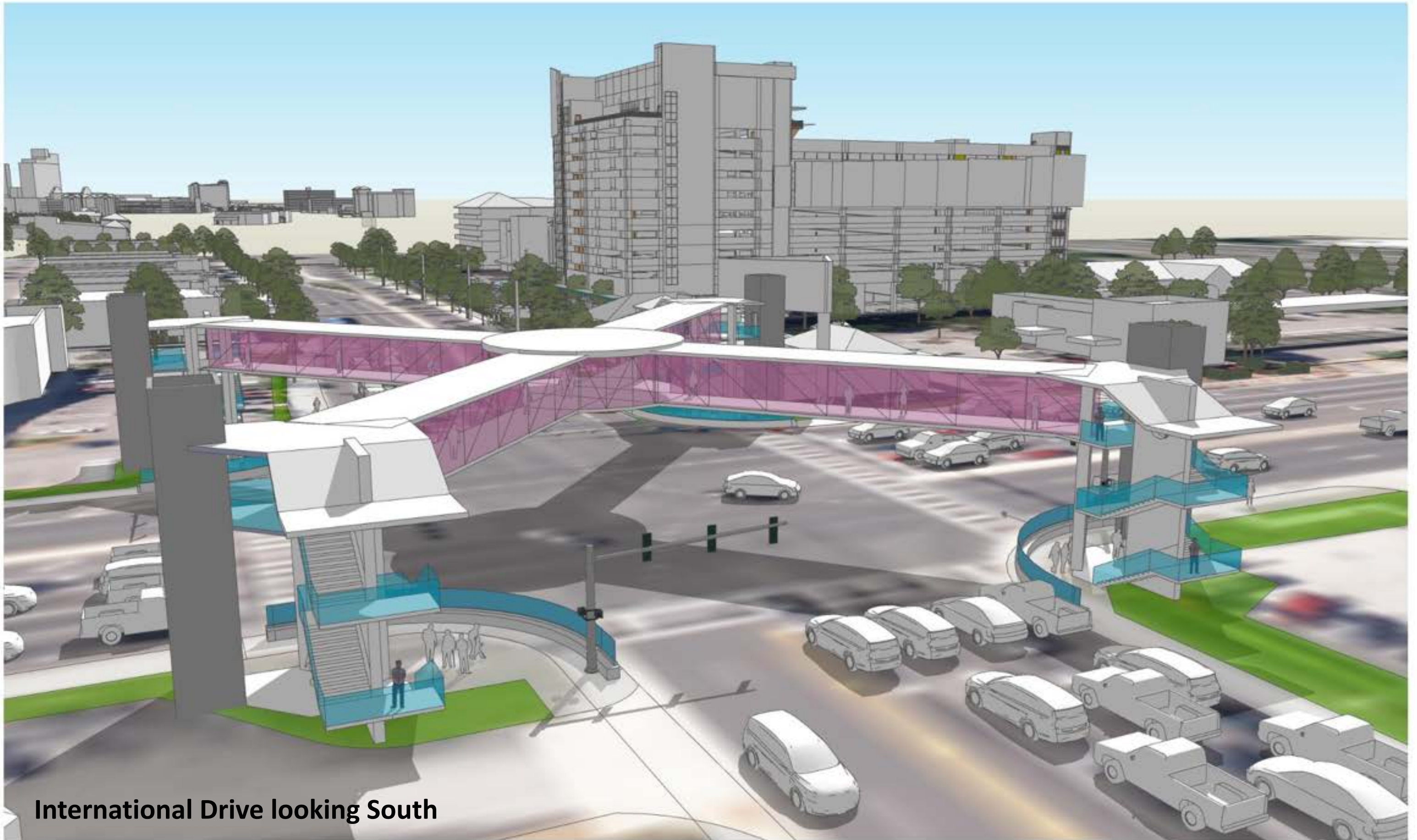
Average Travel Distance	210'
Bridge Length	420'
Bridge Width	12'-0"





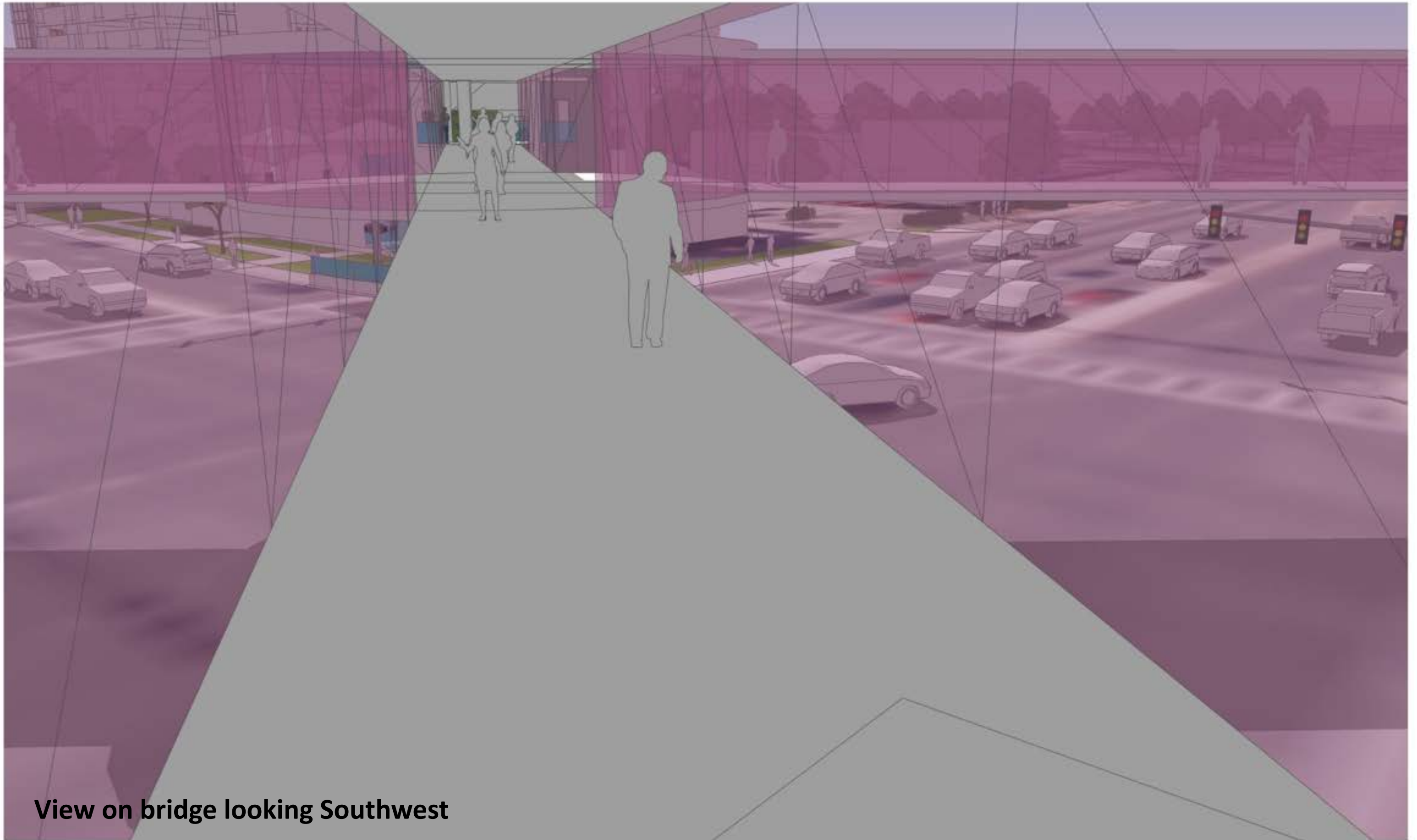
**International Drive looking North**





**International Drive looking South**





**View on bridge looking Southwest**



# DISTRICT GATEWAYS



Many memorable places have gateways that mark entrances for locals and visitors alike. Having gateways present a unique opportunity to market an area or place and highlight an area's major branding components such as its logo, name, and its signature colors.

The I-Drive District contains several gateway opportunities within its network of streets: the intersection of International Drive and Sand Lake Road, exits off of Interstate 4, and at the junction of International Drive and S.R. 528, with S.R. 528 being the major transportation route connecting the District with the Orlando International Airport. The potential Sand Lake Road and I-Drive intersection gateway offers a unique opportunity to improve pedestrian safety at one of the busiest intersections in Central Florida. It could also benefit from the planned Interstate 4 improvements (I-4 Beyond Ultimate) and current redevelopment proposals on some corners of this intersection. The Steering Review Group was presented with various design options and creative concepts for this major gateway.

## Bridge Configuration Circular Option

### Description

The I -Drive 2040 Vision Plan identified the importance of the I-Drive / Sand Lake Rd. intersection as a key gateway opportunity for the Convention and Entertainment District.

Not only does this intersection have the opportunity to create a unique gateway for visitors coming from I-4 and the International Airport, but it also can improve pedestrian safety at one of the busiest intersections in Central Florida.

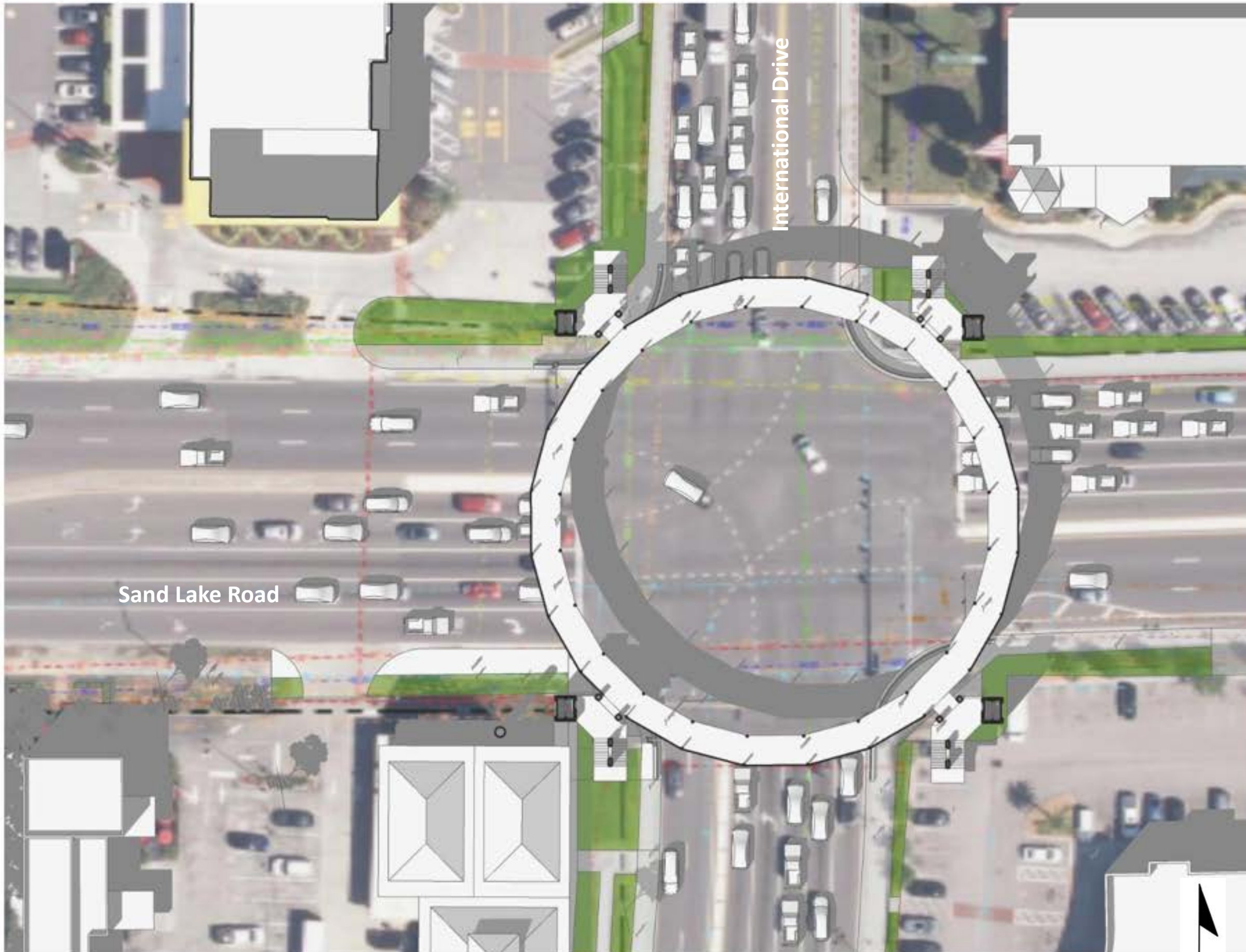
The steering group looked at multiple examples of gateways around the world and the circular option was represented in the 2040 Visioning Book.

The overall length of the bridge in the Circular configuration is the longest of all options at 816' of bridge length.

### Summary

Average Travel Distance	284'
Bridge Length	816'
Bridge Width	12'-0"





## Bridge Configuration Circular Option

### Description

The I -Drive 2040 Vision Plan identified the importance of the I-Drive / Sand Lake Rd. intersection as a key gateway opportunity for the Convention and Entertainment District.

Not only does this intersection have the opportunity to create a unique gateway for visitors coming from I-4 and the International Airport, but it also can improve pedestrian safety at one of the busiest intersections in Central Florida.

The steering group looked at multiple examples of gateways around the world and the circular option was represented in the 2040 Visioning Book.

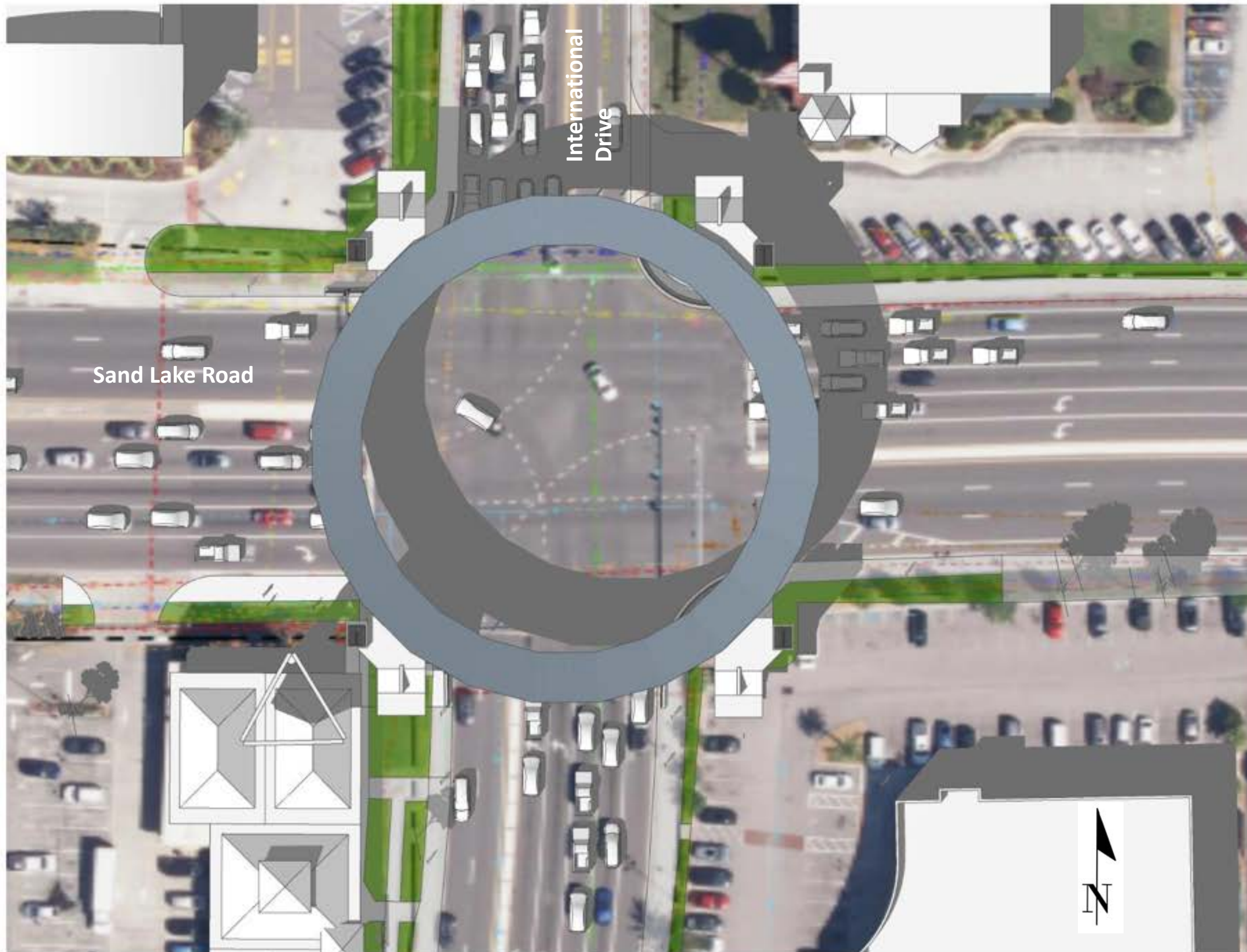
The overall length of the bridge in the Circular configuration is the longest of all options at 816' of bridge length.

### Summary

Average Travel Distance	284'
Bridge Length	816'
Bridge Width	12'-0"







## Bridge Configuration Circular Option

### Description

The I -Drive 2040 Vision Plan identified the importance of the I-Drive / Sand Lake Rd. intersection as a key gateway opportunity for the Convention and Entertainment District.

Not only does this intersection have the opportunity to create a unique gateway for visitors coming from I-4 and the International Airport, but it also can improve pedestrian safety at one of the busiest intersections in Central Florida.

The steering group looked at multiple examples of gateways around the world and the circular option was represented in the 2040 Visioning Book.

The overall length of the bridge in the Circular configuration is the longest of all options at 816' of bridge length.

### Summary

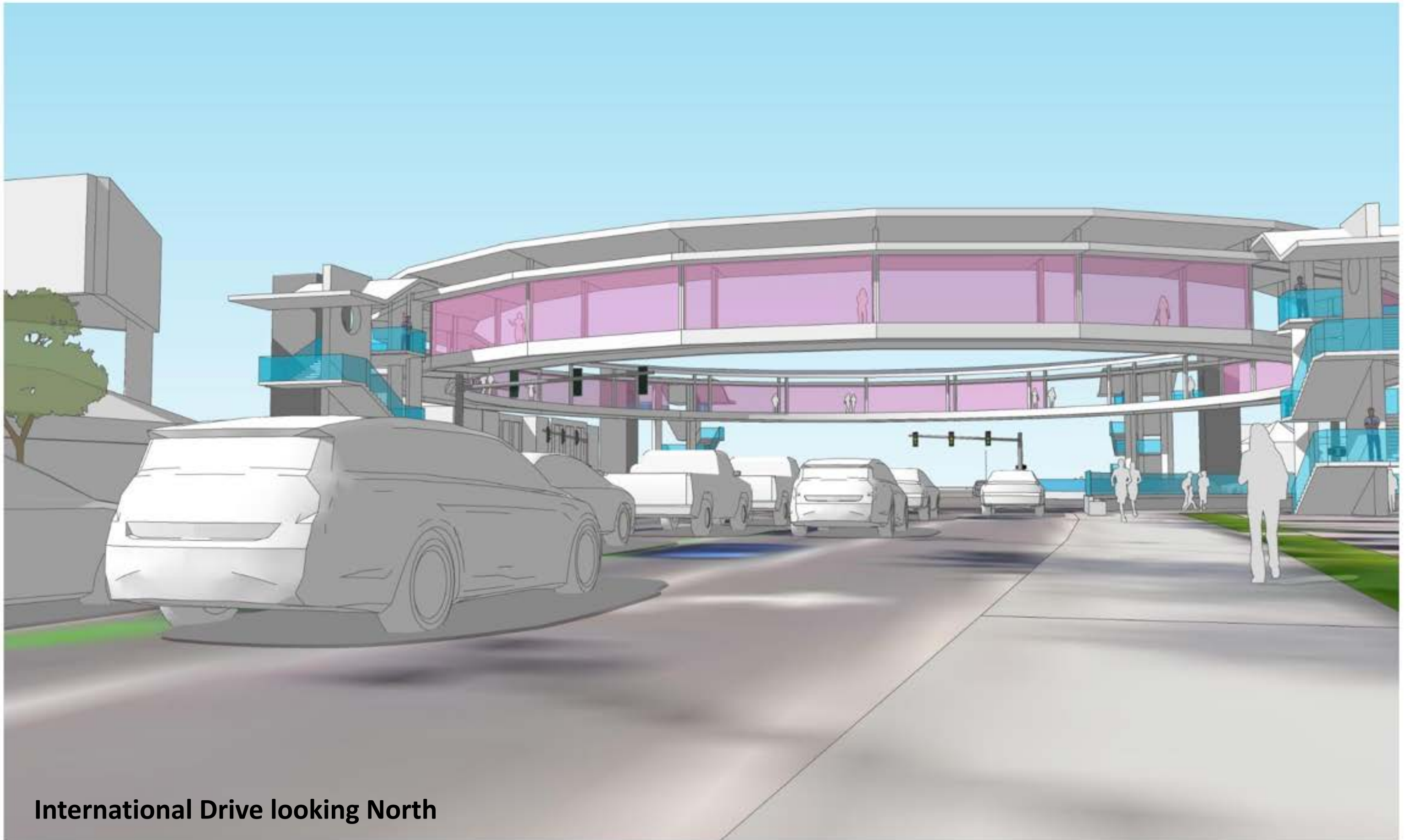
Average Travel Distance	284'
Bridge Length	816'
Bridge Width	12'-0"





**Sand Lake Road looking East**





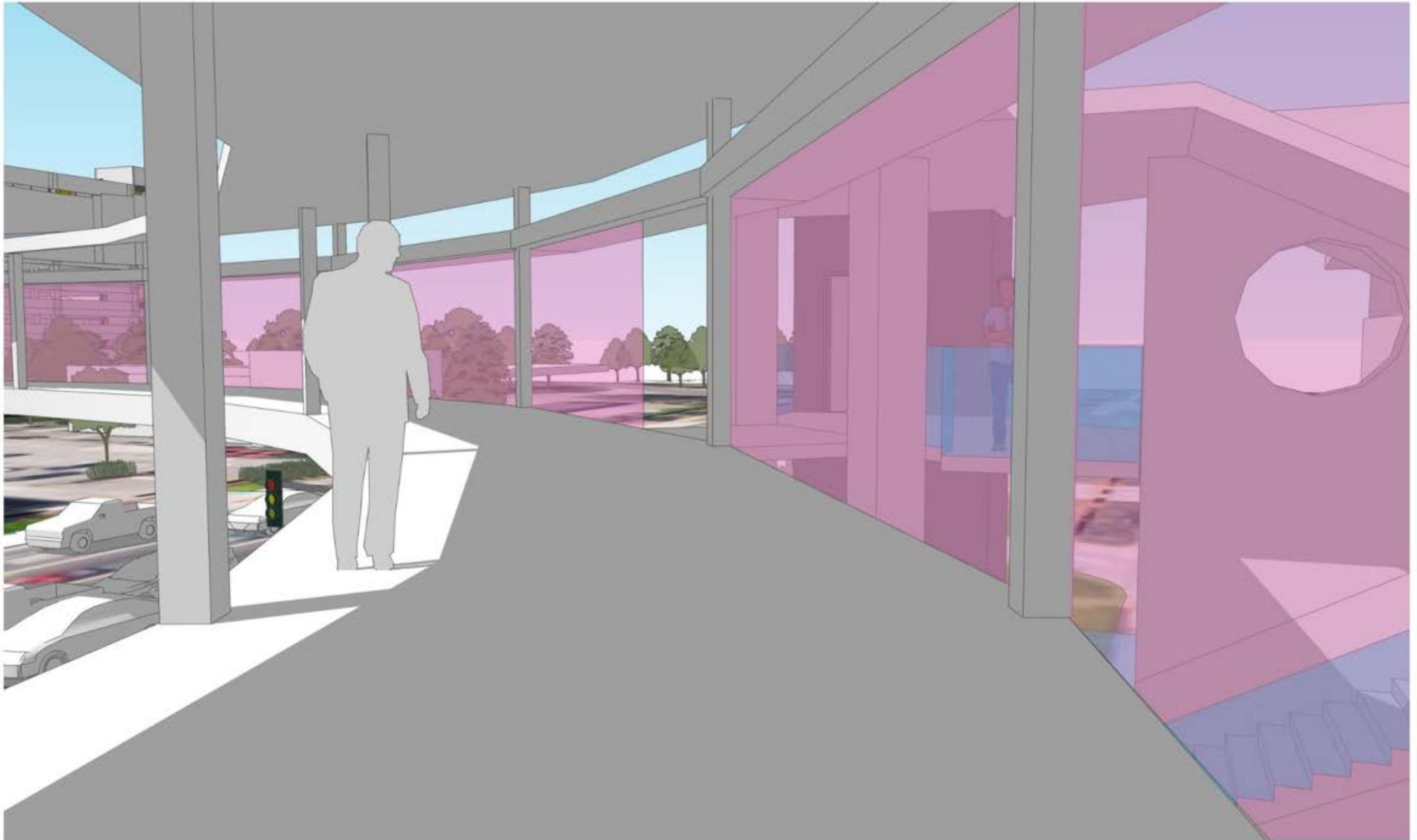
**International Drive looking North**

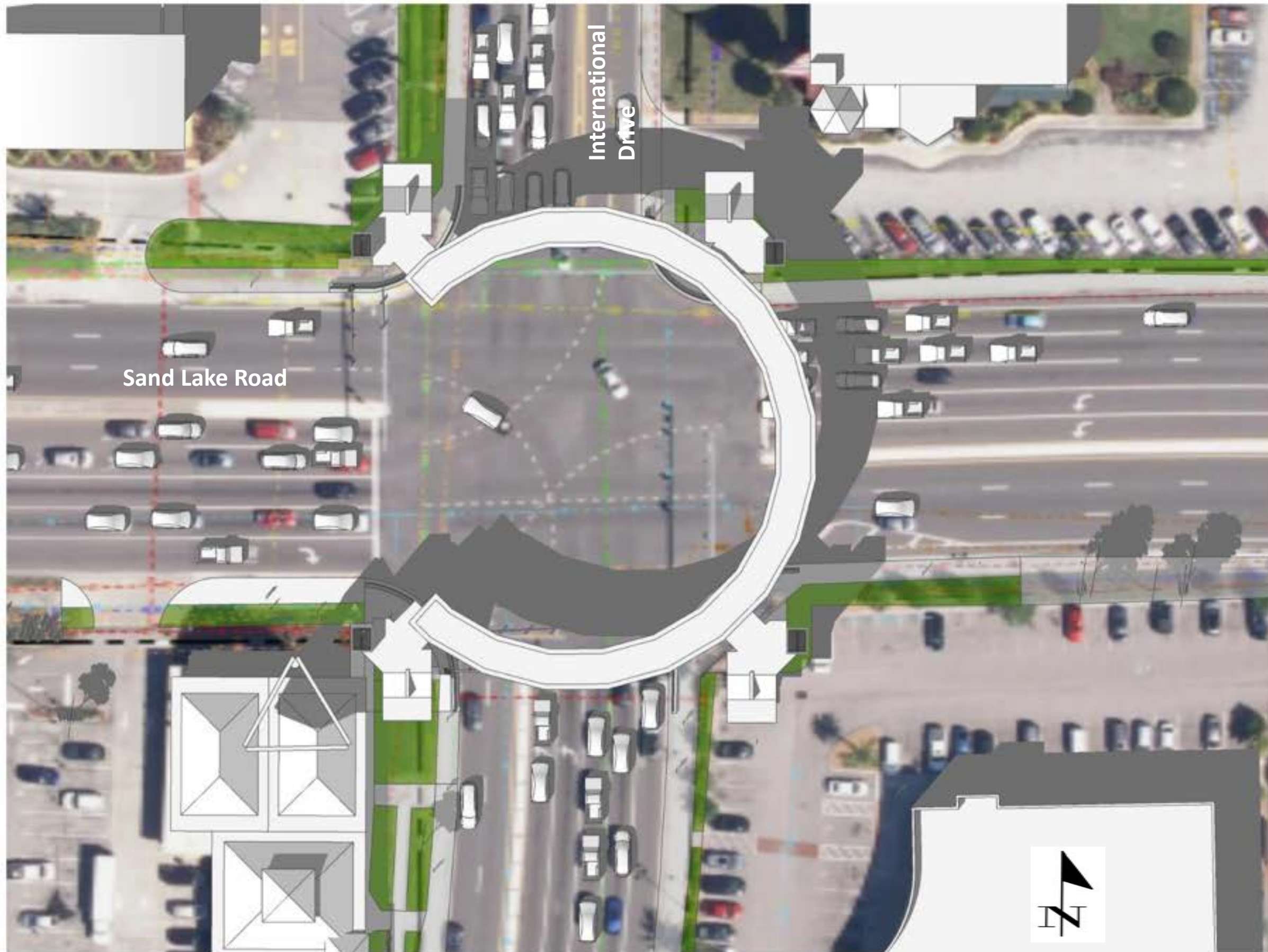




**Sand Lake Road looking West**







## Bridge Configuration "C" Option

### Description

The "C" Shaped bridge configuration provides most of the benefits of the Circular bridge configuration, but reduces the overall bridge length by 237'.

The overall length of the bridge in the Circular configuration is the longest of all options at 579' of bridge length making it the fourth most efficient configuration of the bridges analyzed.

In addition the curved sections add to the crossing experience by limiting the long view across the bridge and maximizing the views to surrounding businesses while the users traverse the bridge.

The open leg of the bridge creates a unique gateway for cars coming from I-4 traveling in any direction.

The biggest negative of this configuration is the increase in travel distance when traveling between the SW and NW intersections.

### Summary

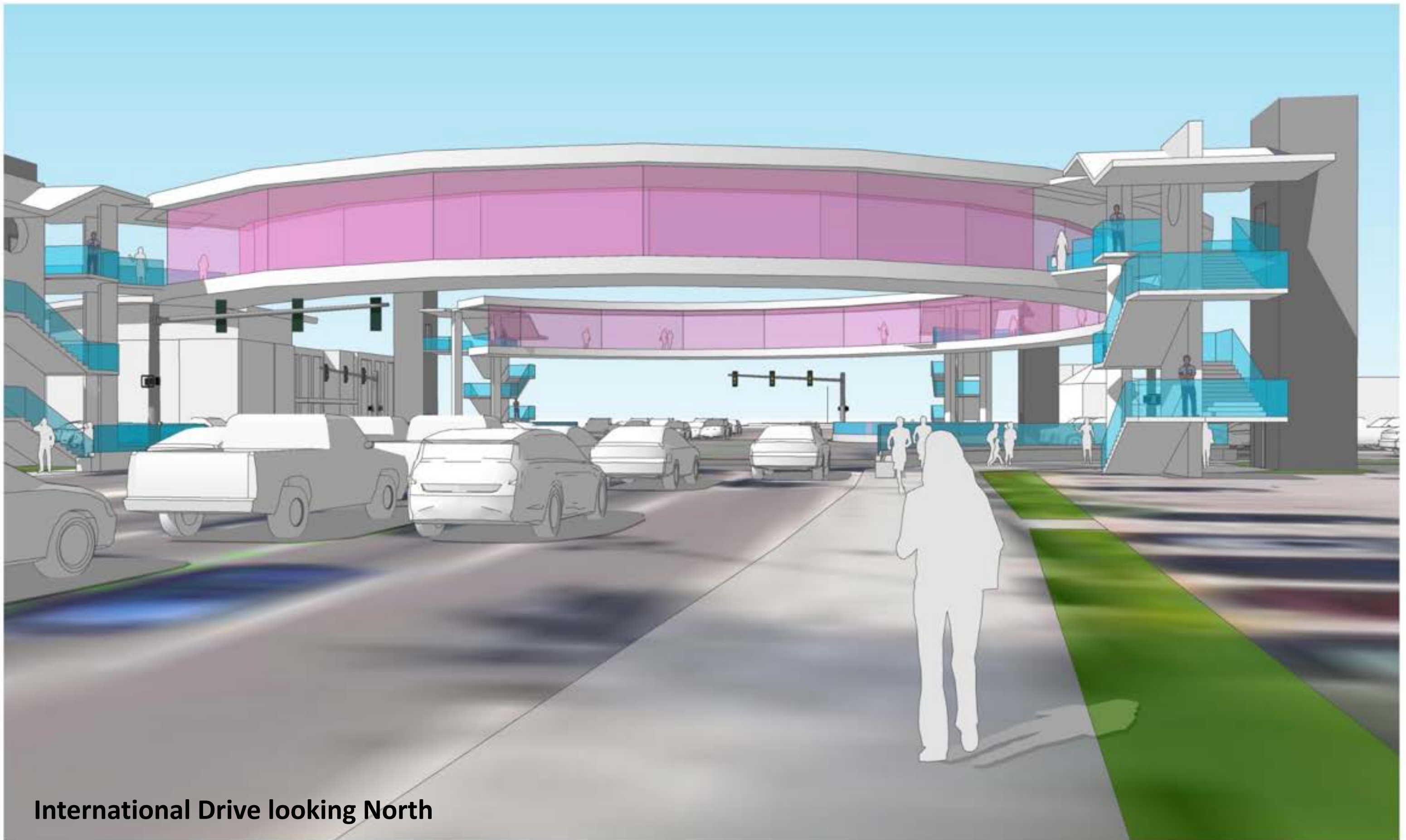
Average Travel Distance	386'
Bridge Length	579'
Bridge Width	12'-0"





**Sand Lake Road looking East**

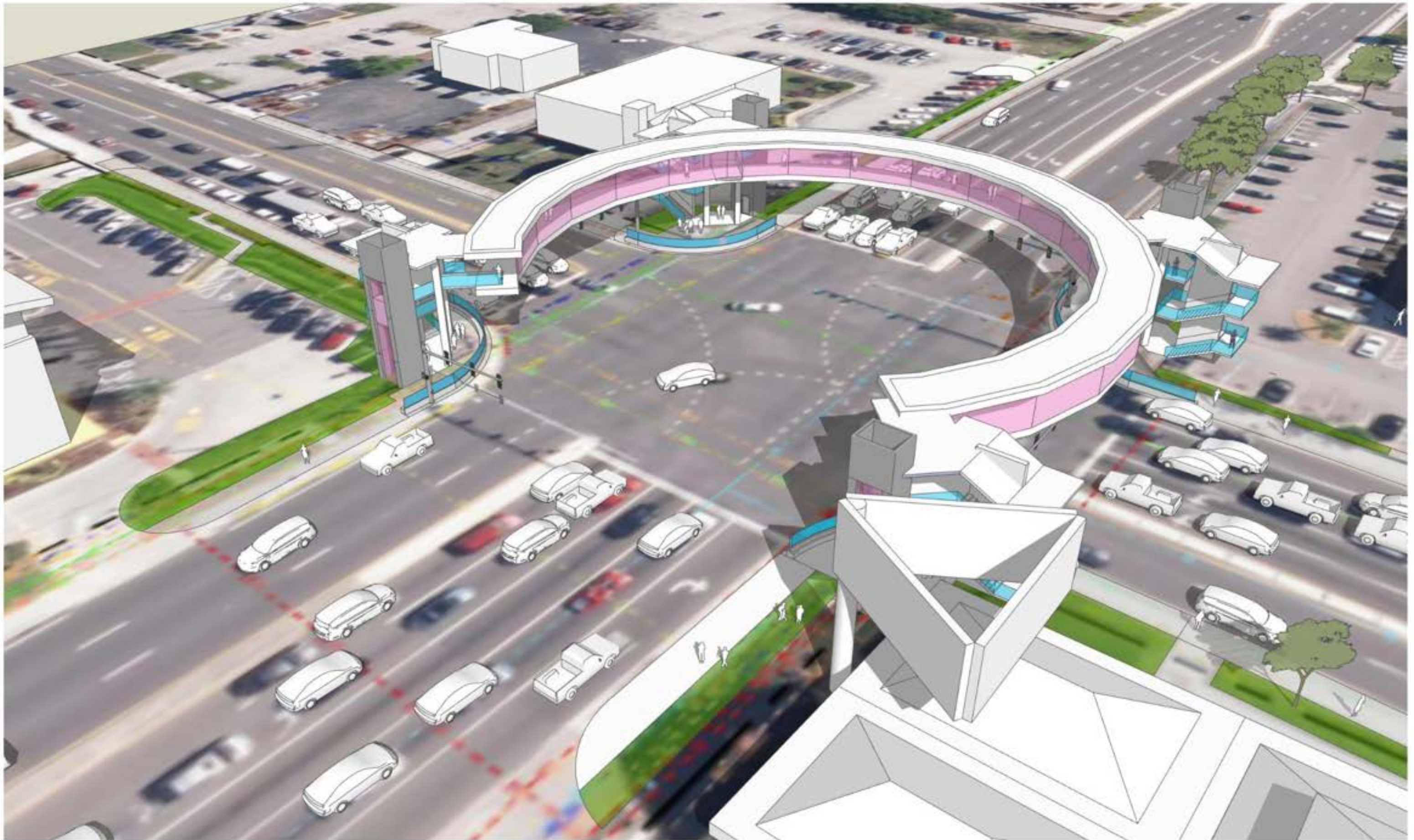




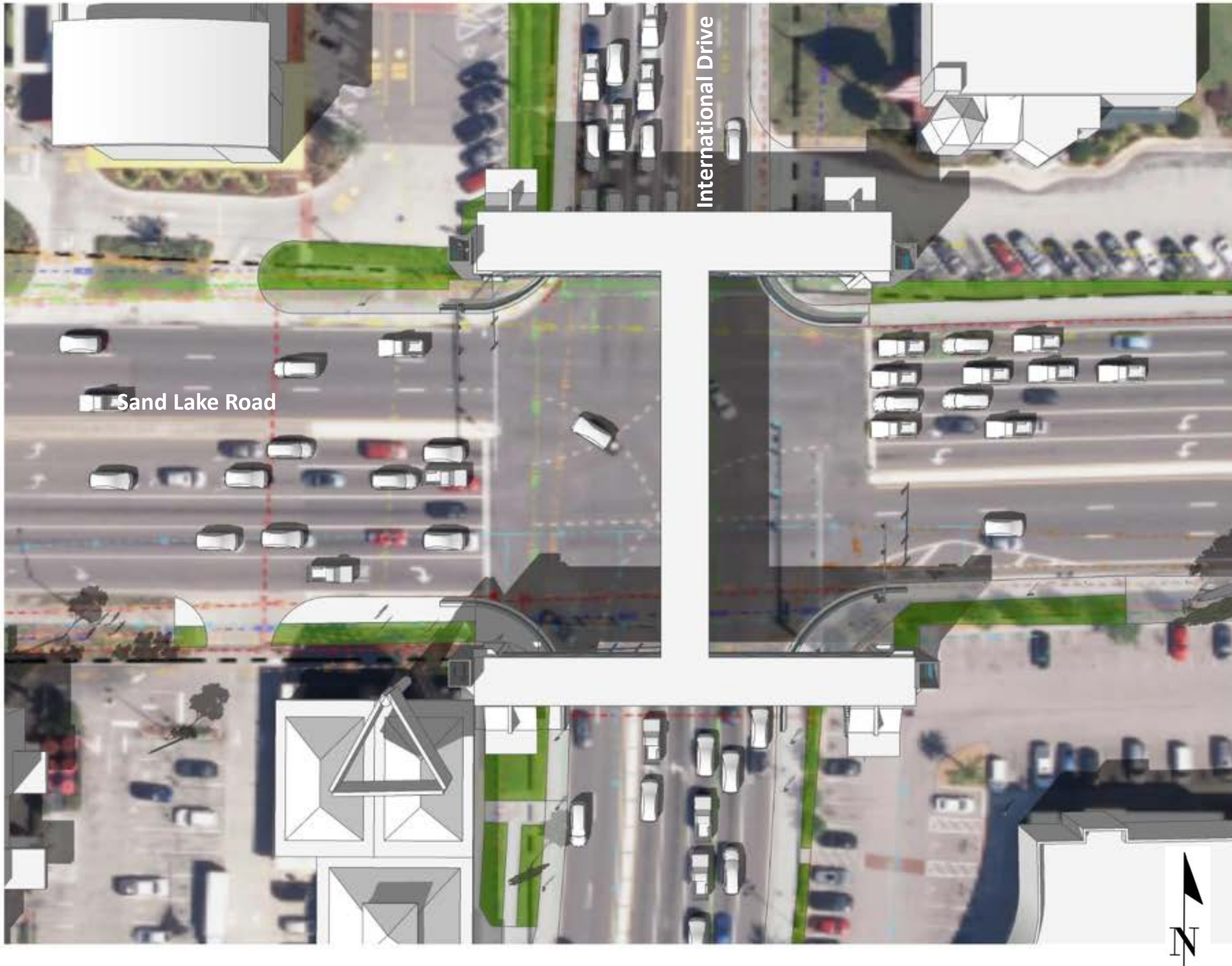
**International Drive looking North**











## Bridge Configuration "I" Option

### Description

In PAG meeting #2 there was interest expressed for the "I" configuration with an obvious connection to International Drive.

We originally looked at the "I" configuration and were concerned over the 90 degree turns in the bridge and straight runs of bridge section with 2-way traffic. First thought was to start to round the intersections of the "I" to create serif's.

With the new curved serif's on the "I" it no longer seemed necessary to have the straight connector sections crossing International Drive.

This thought process led to the evolution of the "I" configuration into the Interlocking "C" configuration.

The overall length of the bridge in the "I" configuration is the second shortest of all options at 402' of length.

### Summary

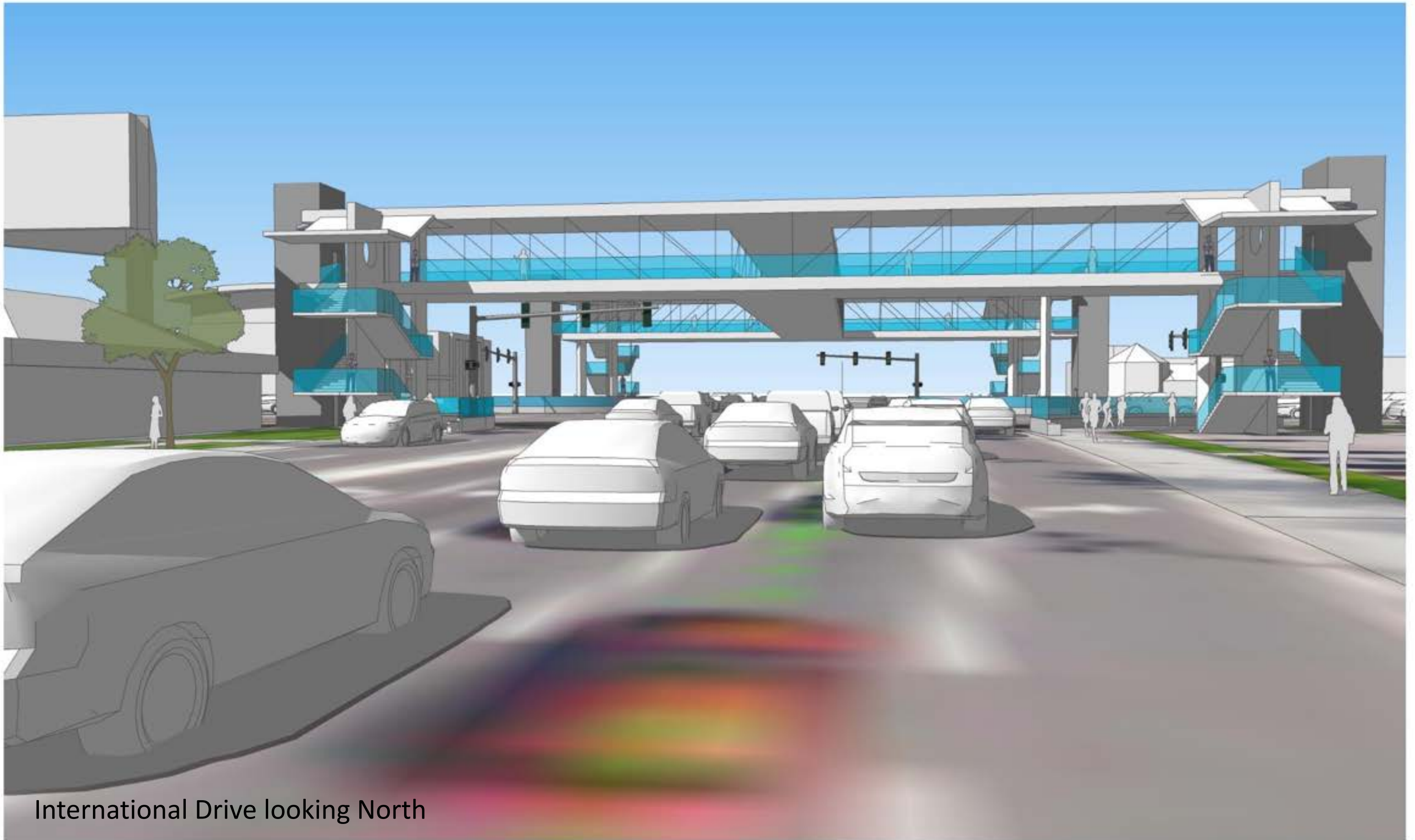
Average Travel Distance	226'
Bridge Length	402'
Bridge Width	12'-0"





**Sand Lake Road looking East**





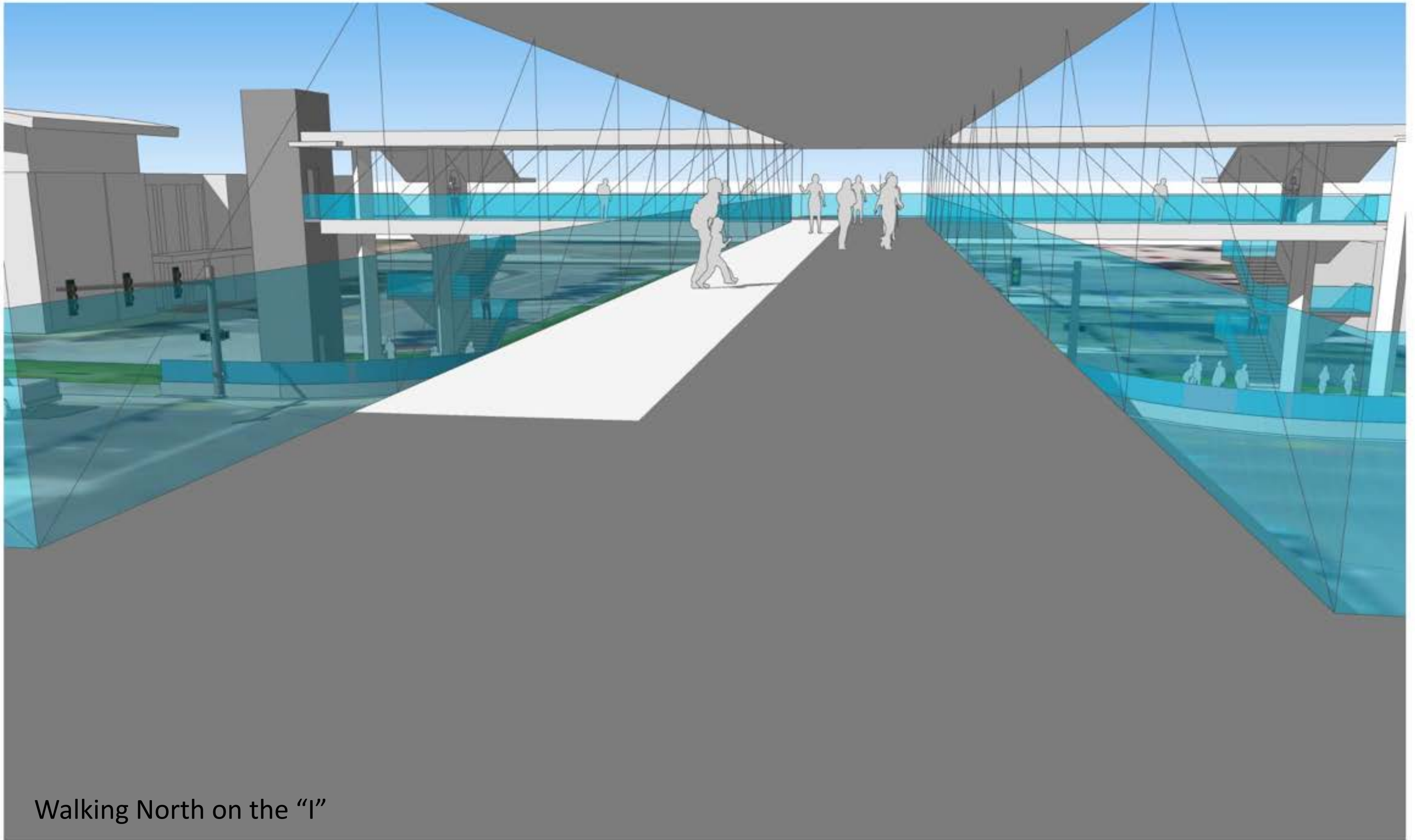
International Drive looking North





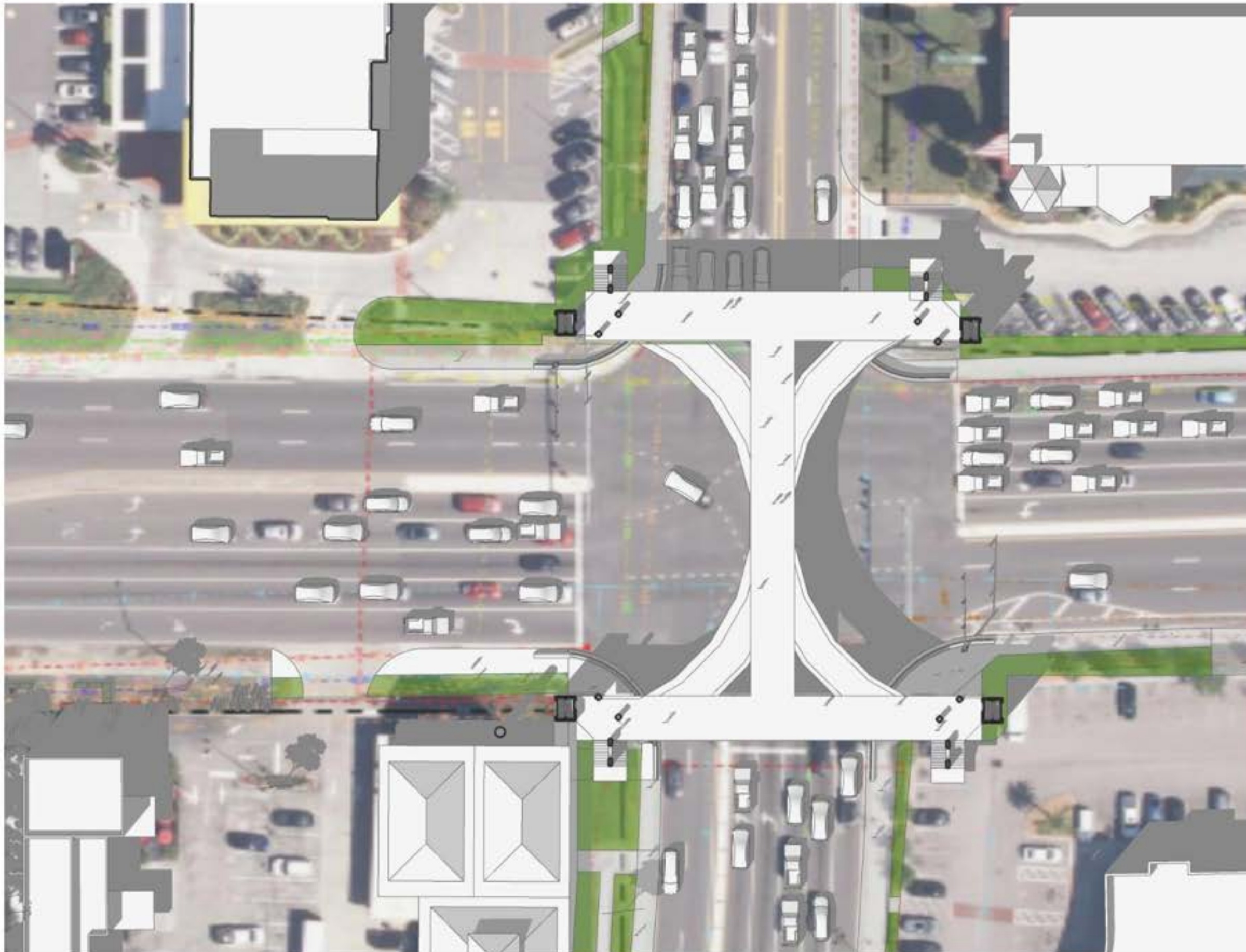
Sand Lake Road looking East





Walking North on the "I"





## Bridge Configuration "I" Option - Modified

### Description

In PAG meeting #2 there was interest expressed for the "I" configuration with an obvious connection to International Drive.

We originally looked at the "I" configuration and were concerned over the 90 degree turns in the bridge and straight runs of bridge section with 2-way traffic. First thought was to start to round the intersections of the "I" to create serif's.

These new connectors make the bridge pedestrian experience better but create multiple paths and greatly increase the length of the bridge.

The overall length of the bridge in the modified "I" configuration becomes much longer than the "I" option at 686' of length.

### Summary

Average Travel Distance	195'
Bridge Length	686'
Bridge Width	12'-0"







## Bridge Configuration "I" Option

### Description

In PAG meeting #2 there was interest expressed for the "I" configuration with an obvious connection to International Drive.

We originally looked at the "I" configuration and were concerned over the 90 degree turns in the bridge and straight runs of bridge section with 2-way traffic. First thought was to start to round the intersections of the "I" to create serif's.

These new connectors make the bridge pedestrian experience better but create multiple paths and greatly increase the length of the bridge.

The overall length of the bridge in the modified "I" configuration becomes much longer than the "I" option at 686' of length.

### Summary

Average Travel Distance	195'
Bridge Length	686'
Bridge Width	12'-0"





**Sand Lake Road looking East**





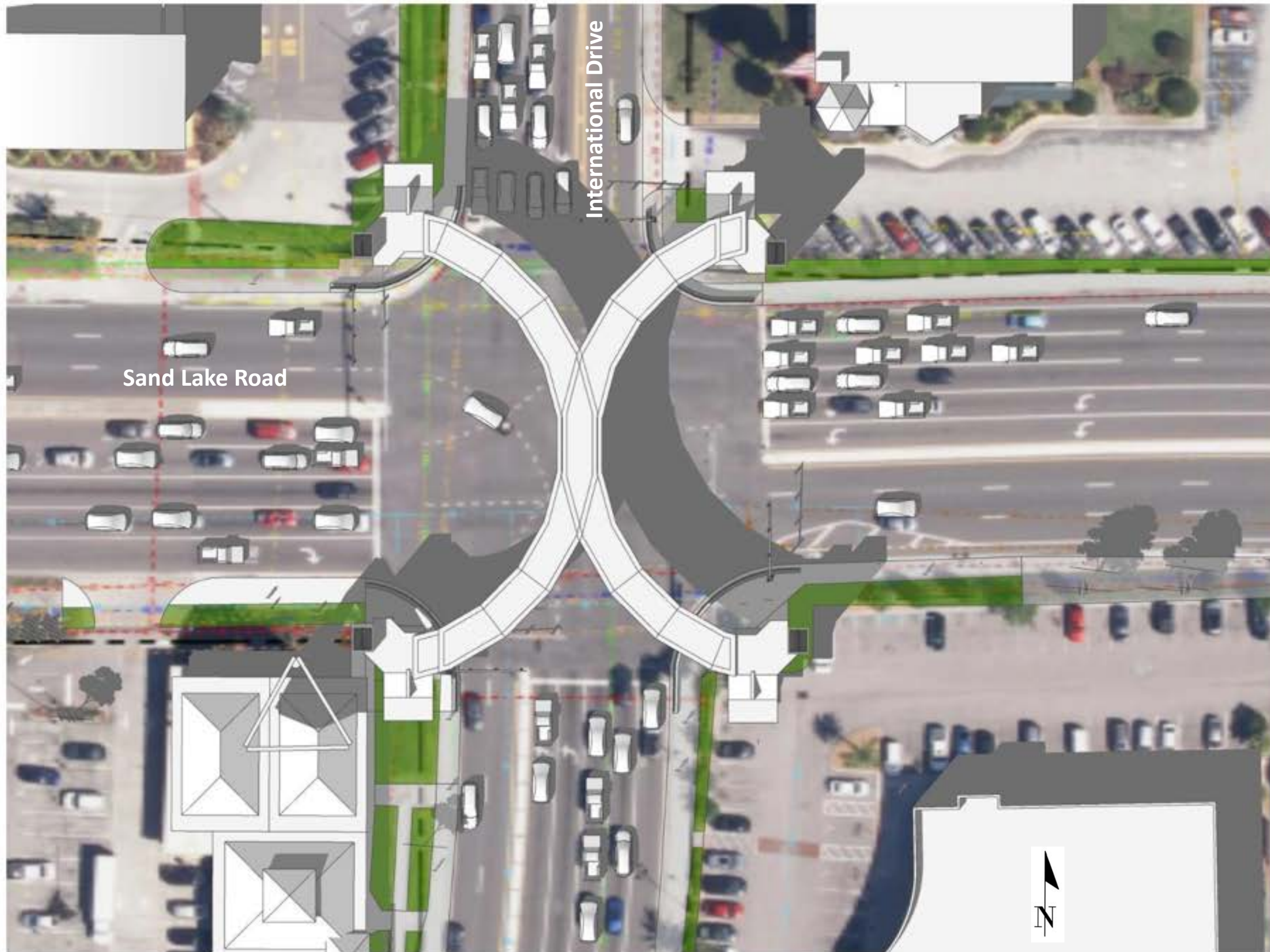
**International Drive looking North**





**Sand Lake Road looking East**





## Bridge Configuration Intersecting "C" Option

### Description

The interlocking "C" Shaped bridge configuration evolved from the "I" configuration. This bridge configuration provides a similar travel distance to all intersections served.

The overall length of the bridge in the Interlocking "C" configuration is the shortest of all options at 395' of length and has one of the shortest average travel distances of the options considered.

In addition the curved sections add to the crossing experience by limiting the long view across the bridge and maximizing the views to surrounding businesses while the users traverse the bridge.

There is an opportunity for a unique feature at the crossing point of the bridge which all users will experience.

This configuration creates a unique gateway for automobiles from all directions. The effect is different for vehicles on International Drive and Sand Lake Rd.

### Summary

Average Travel Distance	205'
Bridge Length	395'
Bridge Width	12'-0"





**Sand Lake Road looking East**



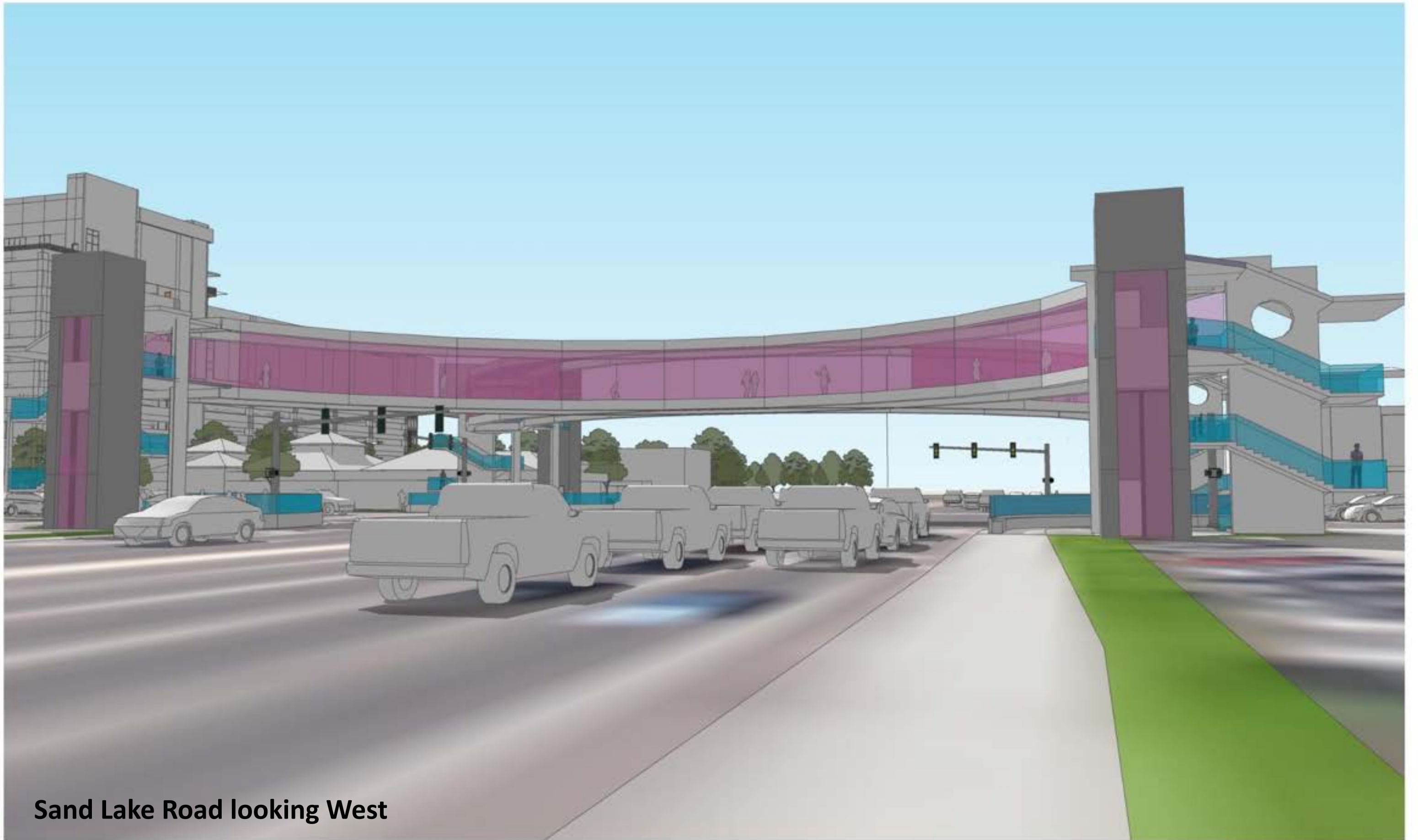




**International Drive looking North**

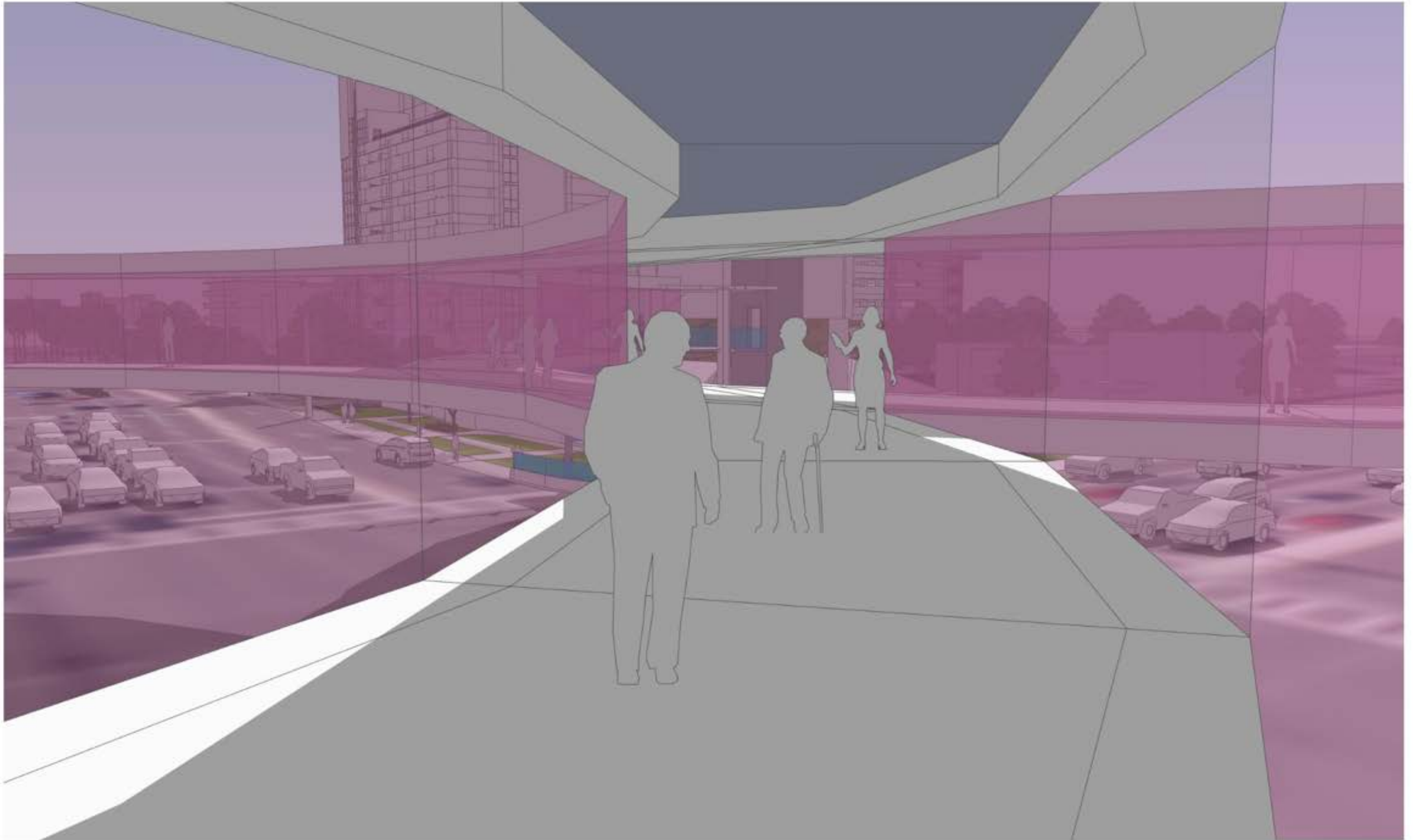


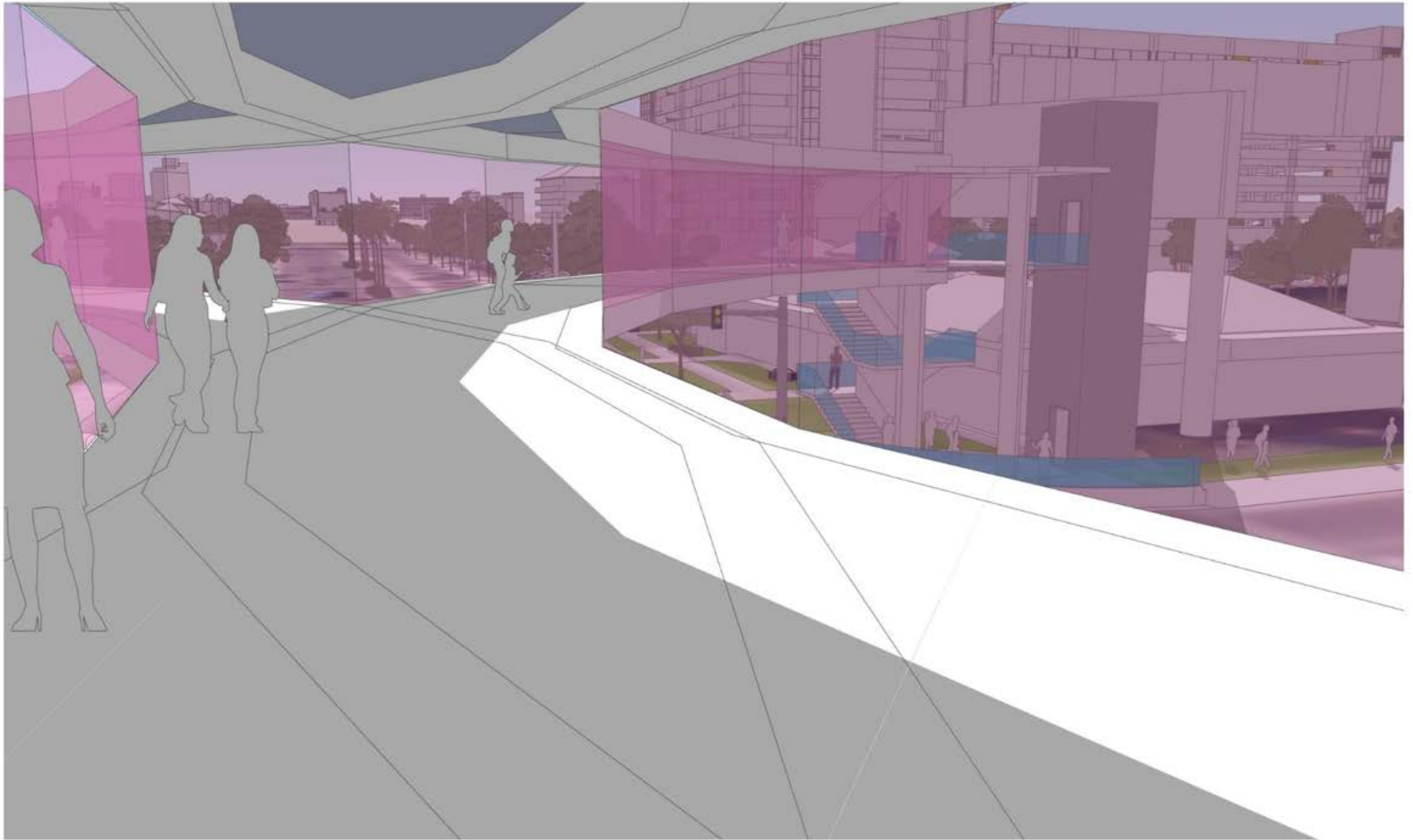




**Sand Lake Road looking West**







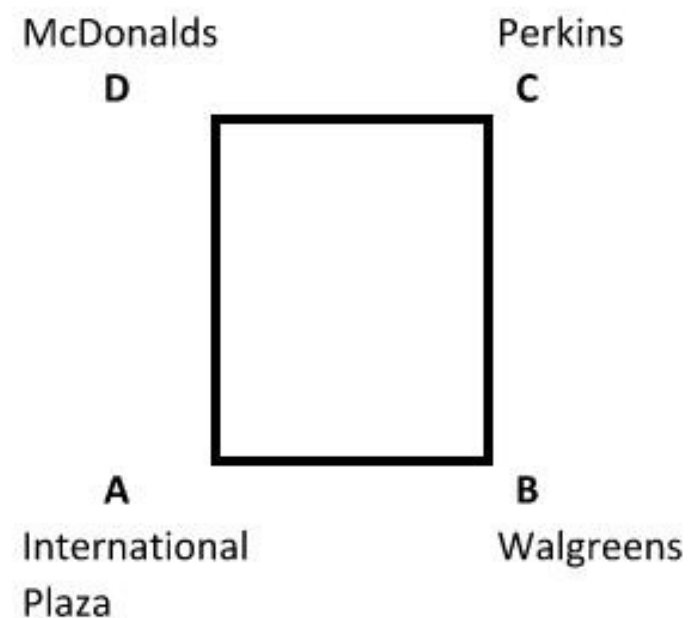
### Bridge Configuration Evaluation Matrix

(lower score is higher ranking)

	Travel Dist. Int. A-B		Travel Dist. Int. A-C		Travel Dist. Int. A-D		Avg. Walk Dist.	Rank	Bridge Length	Rank	Total Score	Rank
<b>Square Configuration</b>	126	292	418	279	5	584	5	10	4			
<b>"X" Configuration</b>	210	210	210	210	3	420	3	6	2			
<b>Circular Configuration</b>	171	408	272	284	6	816	7	13	6			
<b>"C" Configuration</b>	171	408	579	386	7	579	4	11	5			
<b>"I" Configuration</b>	126	276	276	226	4	402	2	6	2			
<b>Modified "I" Configuration</b>	126	229	229	195	1	686	6	7	3			
<b>Intersecting "C" Configuration</b>	158	229	229	205	2	395	1	3	1			

#### Exist. Crosswalk Distance

A-B	96'
A-C	259'
A-D	132'
<b>Avg.</b>	<b>162'</b>



Note:

Distance from A-C is the same as B-D

The lowest scoring option is the Intersecting "C" configuration.



**Bridge Configuration Evaluation Matrix**  
(lower score is higher ranking)

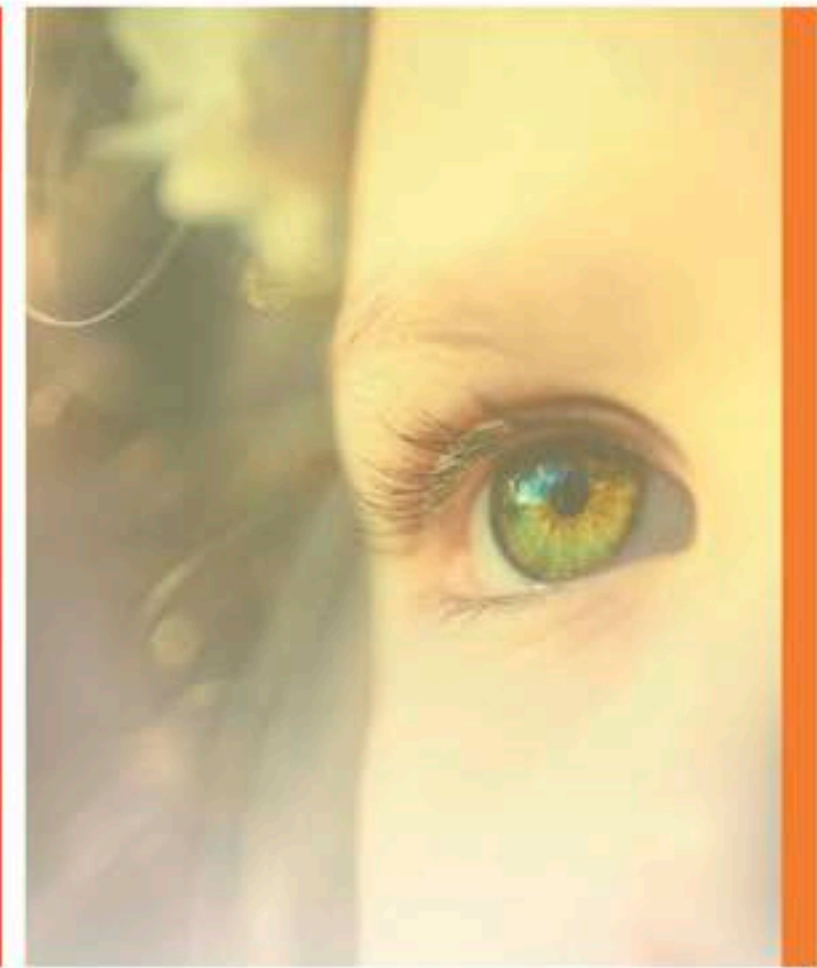
	Bridge Length	Rank		Structural Complexity		Relative Cost		Design Icon Value		Total Score		Rank
Square Configuration	584	5		1		3		7		11		4
"X" Configuration	420	3		4		2.5		6		12.5		5
Circular Configuration	816	7		2		4.5		3		9.5		3
"C" Configuration	579	4		3		3.5		2		8.5		1
"I" Configuration	402	2		5		3.5		4		12.5		5
Modified "I" Configuration	686	6		6		6		5		17		6
Intersecting "C" Configuration	395	1		5		3		1		9		2

Bridge length not included in aggregate score, but is used to calculate relative cost.

$$\text{Relative Cost} = \frac{\text{Bridge Length Rating} + \text{Structural Complexity Rating}}{2}$$

The lowest scoring option is the "C" configuration.





# Meeting Number Three

## Summary of Findings



**HHCP&AVCON**  
A JOINT VENTURE

# Summary

- Curved bridge configurations create a more dynamic visual and a better experience for bridge users.
- Elimination of the crosswalks will increase pedestrian safety and reduce traffic congestion.
- Corner wrapping seat wall/barriers will be required to prevent people from attempting to cross the intersection on grade.
- Bridge configuration has little impact on space required at intersection corners.
- Bridge Configuration Evaluation Matrix shows the “Intersecting C” configuration to be the highest rated option (lowest score).
- We are seeking input from the PAG on the preferred configuration to meet the operational, aesthetic, budget, and iconic gateway criteria.

