

**MEETING MINUTES**

PROJECT: Bayfront Parkway Improvements Project  
 MEETING: Holland Street Pedestrian Bridge Peer Review Meeting  
 DATE: March 25, 2021  
 TIME: 3:00 PM – 4:30 PM  
 LOCATION: Virtual Meeting via Teams Web Conference

Attendees:

<b>Name</b>	<b>Agency / Firm</b>	<b>E-mail</b>
Jeremy Bloeser	Bayfront East Side Taskforce (B.E.S.T.)	<a href="mailto:jbloeser@besterie.org">jbloeser@besterie.org</a>
Adam Trott	Bike Erie	<a href="mailto:atrott@ajtarch.com">atrott@ajtarch.com</a>
Joseph Schember	City of Erie	<a href="mailto:jschember@erie.pa.us">jschember@erie.pa.us</a>
City of Erie Guest	City of Erie	
LeAnn Parmenter	City of Erie Traffic Engineer	<a href="mailto:lparmenter@erie.pa.us">lparmenter@erie.pa.us</a>
Michael Keys	Erie City Council	<a href="mailto:mkeys@erie.pa.us">mkeys@erie.pa.us</a>
Michael Batchelor	Erie Community Foundation	<a href="mailto:mbatchelor@eriecommunityfoundation.org">mbatchelor@eriecommunityfoundation.org</a>
Kathy Dahlkemper	Erie County	<a href="mailto:countyexecutive@eriecountypa.gov">countyexecutive@eriecountypa.gov</a>
Honey Stempka	Erie County	<a href="mailto:hstempka@eriecountypa.gov">hstempka@eriecountypa.gov</a>
Gus Pine	Erie Events	
Casey Wells	Erie Events	<a href="mailto:casey@erieevents.com">casey@erieevents.com</a>
Jeff Brinling	Erie Insurance	<a href="mailto:Jeffrey.brinling@erieinsurance.com">Jeffrey.brinling@erieinsurance.com</a>
Bill Petit, PE	Erie – Western PA Port Authority	<a href="mailto:wpetit@urbanengineers.com">wpetit@urbanengineers.com</a>
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Veronica Feliciano	FHWA	<a href="mailto:Veronica.feliciano@dot.gov">Veronica.feliciano@dot.gov</a>
Nikki Bedillion, PE	JMT	<a href="mailto:nbedillion@jmt.com">nbedillion@jmt.com</a>
Steven Delong, PE	JMT	<a href="mailto:sdelong@jmt.com">sdelong@jmt.com</a>
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Andy Duerr, PE	Kittleson	<a href="mailto:aduerr@kittelson.com">aduerr@kittelson.com</a>
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Sean Sawford, PE	MS Consultants	<a href="mailto:ssawford@msconsultants.com">ssawford@msconsultants.com</a>
Anna Frantz	Our West Bayfront	<a href="mailto:anna@ourwestbayfront.org">anna@ourwestbayfront.org</a>
Kim Thomas	PA Dept of Community & Economic Development, Northwest Regional Office	<a href="mailto:kimbethoma@pa.gov">kimbethoma@pa.gov</a>

Sharon Knoll	PA State Transportation Commission	slknoll@twc.com
Jeff Bucher, PE	PennDOT	<a href="mailto:jebucher@pa.gov">jebucher@pa.gov</a>
Ray DeArmitt	PennDOT	<a href="mailto:radearmitt@pa.gov">radearmitt@pa.gov</a>
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Jill Harry	PennDOT	<a href="mailto:jharry@pa.gov">jharry@pa.gov</a>
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Tom McClelland, PE	PennDOT	<a href="mailto:thmcclella@pa.gov">thmcclella@pa.gov</a>
Brian McNulty, PE	PennDOT	<a href="mailto:brmcnulty@pa.gov">brmcnulty@pa.gov</a>
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Denny Belknap Jr	Voices for Independence	<a href="mailto:dbelknapjr@vficil.org">dbelknapjr@vficil.org</a>
Rick Hoffman	Voices for Independence	<a href="mailto:rhoffman@vficil.org">rhoffman@vficil.org</a>
Tom New	WQLN Public Media	<a href="mailto:tnew@wqln.org">tnew@wqln.org</a>

**Action Items:**

- **PennDOT – Prepare Informational Elevator Memo**
- **PennDOT – Coordinate entry to B.E.S.T neighborhood at south side of proposed pedestrian bridge**
- **PennDOT – Discuss potential for incorporating educational elements across the project area**
- **TYLI – Provide power point to Tom McClelland so it may be posted to the project website**
- **TYLI – connect with Pieper O’Brien Herr to coordinate potential proposed architecture with the Market House near Sassafra Street**

**Summary:**

Brian McNulty, District Executive for PennDOT District 1-0, provided a brief introduction to the meeting.

- Federal BUILD grant funds will be used to fund Phase 1 of the project, which includes only one pedestrian bridge (Holland Street). PennDOT applied for \$25M Build grant and were awarded \$21M, which is a positive outcome. The project does have a funding gap, but are looking for ways to close the gap, not change the project scope.
- The purpose of this meeting is to discuss options and pros/cons; not to vote on a design concept. Constructability, impacts to utilities, cost, and long term maintenance requirements must be considered in this design process.

Tom McClelland, PennDOT District 1-0 Project Manager and Assistant District Executive for Design, provided some opening remarks and updates.

- The Soldiers and Sailors Bridge was advertised last week, and the project is expected to break ground around Memorial Day.
- The remaining part of the central bayfront is continuing to progress forward (utilities, drainage, ROW plans, structure at State Street).
- PennDOT has retained the services of T.Y. Lin International (TYLI), nationally recognized pedestrian bridge experts, to provide a peer review of the pedestrian bridge at Holland Street. This peer review will differ from the roundabout peer review last month in that it will focus more on aesthetics and costs.

The TYLI project team of Stephanie Lanno-Lynch, Dan Fitzwilliam, and Noel Shamble presented a PowerPoint of the Holland Street Peer Review and pedestrian bridge concepts. The presentation was followed by questions and group discussion (provided below).

The meeting concluded with closing remarks from Tom McClelland, Jennie Granger and Brian McNulty.

**Group Discussion / Questions:** Jill Harry facilitated Q/A session after the presentation. Questions and comments are documented below. Responses were provided by TYLI unless otherwise noted.

1. Adam Trott (Bike Erie) - What is the structural load for the bridge deck, 100#/sf?

*Response* – Pedestrian load is dictated by AASHTO, which is specified as 90 psf. A load factor of 1.75 is applied. Other loads, such as snow, wind, etc. are also considered.

2. Brian Iavarone (UPMC Hamot) - Winter maintenance considerations will be important – snow removal and its placement as well as impacts of salt or other deicing materials on structural steel or cast-in-place concrete. The useful width might be somewhat compromised in winter months during moderate or heavier snowfalls.

*Response* – Consideration will be given to snow/ice and wear on the structure in final design.

3. Adam Trott (Bike Erie) - Can we add a direct stair on the north end with a bicycle wheel gutter along the side of the steps?

*Response* – That could be considered. The switchbacks and curves of the structure indicate cyclists would dismount bicycled and walk it across. Additionally, the physical footprint is not present to be able to smooth out the curves. However, the bicycle wheel gutter is something that could be investigated further.

4. Rick Hoffman (Voices for Independence) - Concepts need to keep equal access for people with disabilities in mind. The concept with stairs is not equal access. With some of the designs the wall height needs to allow for line of sight for people with disabilities.

*Response* – The “stramp” (combination of stairs/ramp) concept is an attempt to allow all to engage in the same experience to the extent possible. The sightlines will be investigated further along in the design process. The goal is to keep walls of structures at hip height. Bicycle and driver sight distances as they pass beneath the structure will be considered as well during final design.

5. Michael Keys (Erie City Council) – Did you give consideration to have a receiving structure with elevator in it to reduce length people may need to travel (particularly helpful to those with disabilities)?

*Response* –

Brian McNulty mentioned that it needs to be determined who will own and maintain the structure. If a partner is willing to maintain the elevator, that may change the decision. Jennie Granger concurred with Brian. In addition to higher construction costs, long term maintenance costs, HVAC, and safety are concerns that arise for enclosed areas/elevators. An elevator can be considered depending on the long-term ownership. The Department will prepare a summary of general elevator costs and share with this group for educational purposes.

6. Kathy Dahlkemper (Erie County) – The Truss concept looks a bit frightening for those with fear of heights. Usually, a bit of solid side walls gives people a bit of personal security.

7. Brian Iavarone (UPMC Hamot) - Was a center support considered in option 1 in order to reduce the clear span and reduce depth of structural members? It may also assist in constructability.

*Response* – Yes, TYLI presented a couple of options that have a column in the median. However, 140' is not a long span. We can easily span that distance without a column.

8. Kathy Dahlkemper (Erie County) - Is lighting being considered with any of these concepts?

*Response* – All concepts have unique aspects that would benefit from functional and aesthetic lighting. The arch and cable stay would benefit from aesthetic lighting at night. Tom McClelland mentioned that lighting will be considered as the design is refined. Lighting for safety would be an important consideration.

Jennie Granger added that particularly if an elevator is added, lighting and security cameras need to be considered.

9. Rick Hoffman (Voices for Independence) - Are you rebuilding the roadway that spans Bayfront up to Holland? Concerns on the grading coming down to that point for people with disabilities.

*Response* – The slope of the sidewalk near the building is 8%. Alternately, Front Street provides a more gradual grade. On Bayfront Parkway there are limitations on regrading due to the building at the corner of Holland and 2<sup>nd</sup> Street.

Tom McClelland stated the proposed situation will be improved from the existing condition. The sidewalk from Bayfront Parkway will guide people to the bridge.

10. Adam Trott (Bike Erie) - What about going in the other direction – when you leave the bridge going in the SE direction, you are entering the B.E.S.T. area. Any thought of a “threshold” type of element at the south end to establish neighborhood pride and identity?

*Response* - Brian McNulty said this can be considered. There is an overall budget for landscaping, lighting, etc. PennDOT could evaluate the cost / maintenance.

11. Anna Frantz (Our West Bayfront) - Can all of these concepts be easily transferred to the companion bridge that is planned for the west side (i.e. Sassafra Street)? Assuming we want the two bridges to relate to each other we wouldn't want to lock into a design that doesn't work on west side.

*Response* – The bridges will each be unique, but the same theme could be applied to all three (such as materials, colors, railing). Companion bridges generally create a theme and make a “family of forms,” each bridge being uniquely tailored to its site and providing a sense of place.

12. Jeremy Bloeser, Bayfront East Side Taskforce (B.E.S.T.)
  - a. South entrance – We currently have a couple different arts grants and other major projects in the B.E.S.T. area. B.E.S.T. would like to have some input on what we can do to welcome people into the B.E.S.T. neighborhood.
  - b. 2<sup>nd</sup> and Holland St – there are two alleys/streets that run parallel to Holland; both are legal streets. If the city could pave/improve that alley, it's nearly 0% grade and could be a good access point for the bridge.
13. Casey Wells (Erie Events) - The convention center developers are committed to being recipient of bridge landing at Sassafra Street bridge location. An elevator will be necessary on the north side of the Bayfront given the significant grade change. Pieper O'Brien and Herr Architects of Pittsburgh are designing the proposed Market House development that would be the receptor on the north side. . It is recommended that TYLI speak with the architect now to understand and share information, and ensure architectural treatments /aesthetics are coordinated.
14. Adam Trott (Bike Erie) - Can you explain the biophilic elements incorporated in some of the options?

*Response* - Some of the concepts are organic in nature and try to draw upon the way the bridge is uniquely situated, providing transition from downtown urban environment and waterfront area.

15. Adam Trott (Bike Erie) – Can we consider the bridge as also a linear educational venue for the history of the bayfront?

*Response* –

Jennie Granger responded that there could possibly be an overarching educational opportunity across points within the project. If there is an entity that would like to do this, PennDOT is willing to work with those groups.

Brian McNulty mentioned there are probably other locations within the project limits that could accommodate this as well.

### **Additional Comments from Teams Chat:**

Adam Trott (Bike Erie):

- Sailboat metaphors have been used on other bayfront structures like the convention center.
- These are great visualizations. Thanks for this work.
- The location of this bridge is right on the desired path from the B.E.S.T. area to public library
- I'm sure Pat Fisher of Erie Arts and Culture may have some ideas on that front
- Viewing vistas at different points need to be identified and taken advantage of

Kathy Dahlkemper (Erie County)

-Want to compliment all in coming forward with very interesting and aesthetically pleasing designs. Iconic is what we have said from the beginning. There is much potential here to achieve that.

*These minutes are the author's interpretation and recollection from the meeting. Comments are welcomed to clarify the record. If no comments are received within 7 days of distribution, these minutes stand as presented.*

Stephanie Lanno-Lynch, P.E.  
Senior Bridge Engineer  
TY Lin International

# BAYFRONT PARKWAY IMPROVEMENTS PROJECT



## PEDESTRIAN BRIDGE OVER BAYFRONT PARKWAY

Peer Review Meeting

March 25, 2021

# T.Y. Lin International Team Introduction

## T.Y. Lin International is...

- A leader in transportation and infrastructure engineering
- Known for providing innovative and unique pedestrian bridge solutions
- Experienced at successfully delivering quality, cost-effective concepts



**Stephanie Lanno-Lynch, PE**

Senior Bridge Engineer  
Project Manager



**Dan Fitzwilliam, PE**

Senior Bridge Engineer  
Associate Vice President



**Noel Shamble, AIA**

Architecture and Visualization  
Group Director

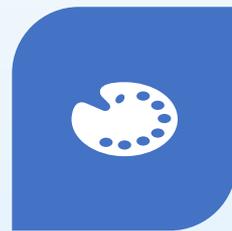
## Pedestrian Bridge at Holland Street Peer Review Meeting Agenda



INITIAL  
CONCEPT



REVIEW  
COMMENTS



AESTHETIC  
CONCEPTS



DISCUSSION



## Project Overview



Holland St. Pedestrian Bridge



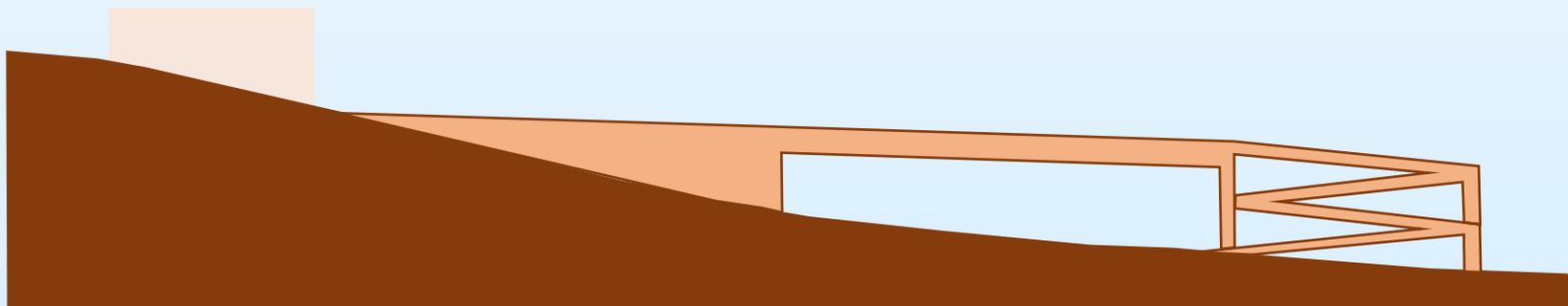
# Holland St. Ped Bridge - Initial Concept



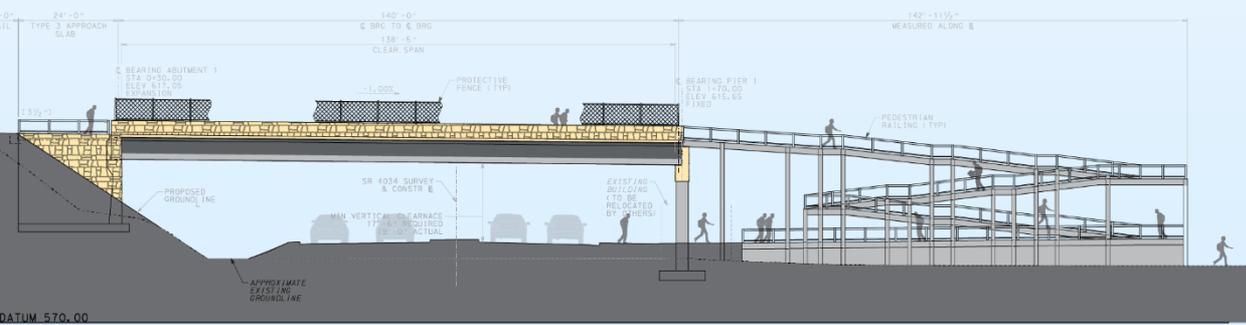
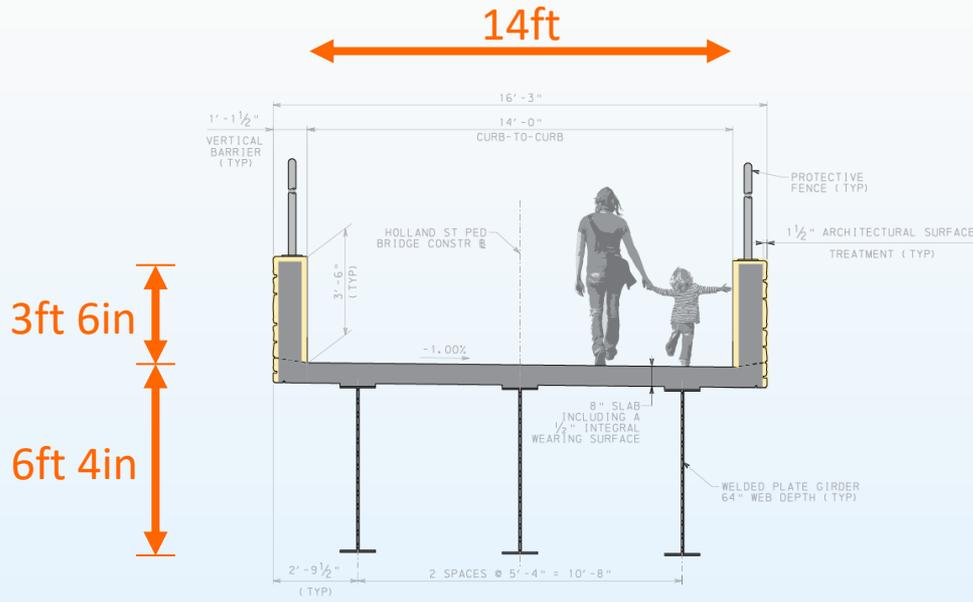
- Connects downtown Erie and neighborhoods to the Bayfront
- Spans Bayfront Parkway at Holland Street
- Ties new bike path to the Transportation Center and other Waterfront Amenities
- Enhanced Pedestrian Experience and Safety



# Initial Concept - Analysis



# Holland St. Ped Bridge - Initial Concept



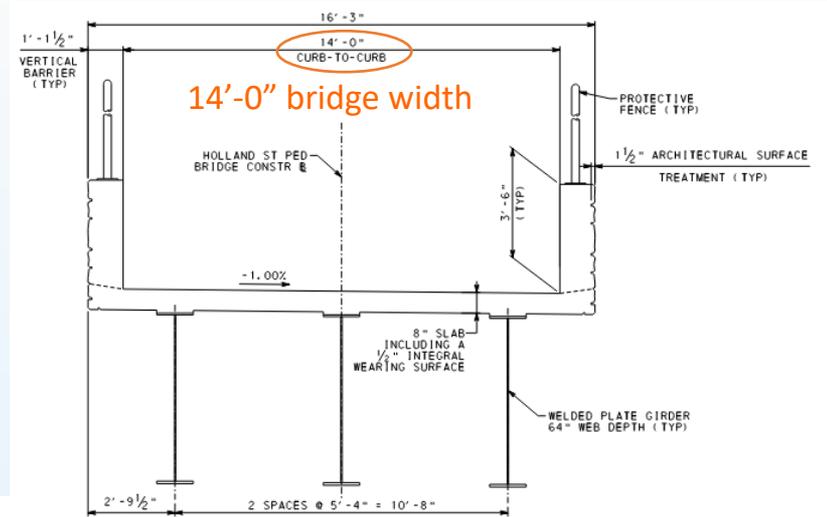
# Holland St. Ped Bridge - Initial Concept



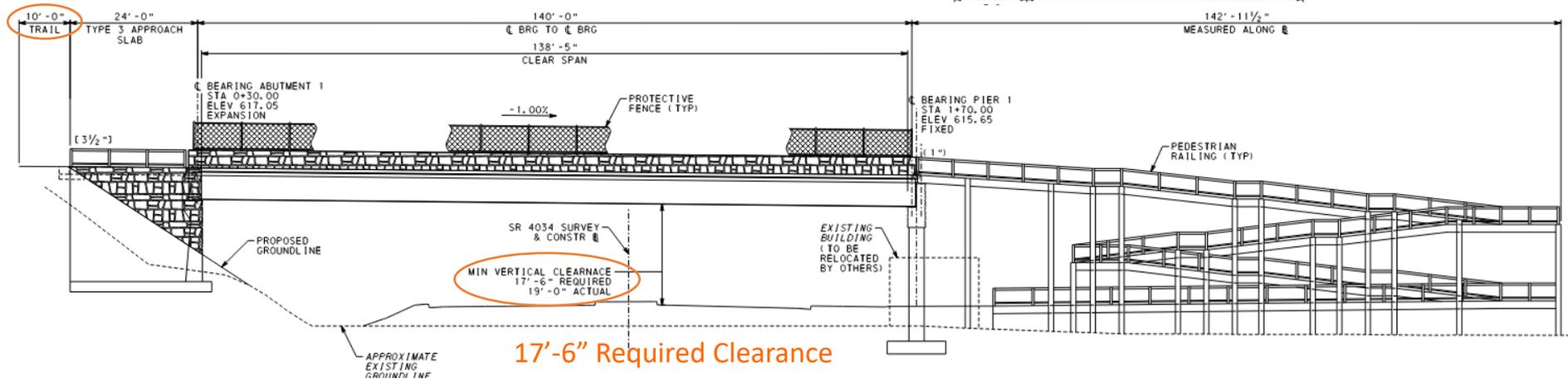
# Holland St. Ped Bridge - Initial Concept



# Initial Concept - Analysis



10'-0" trail



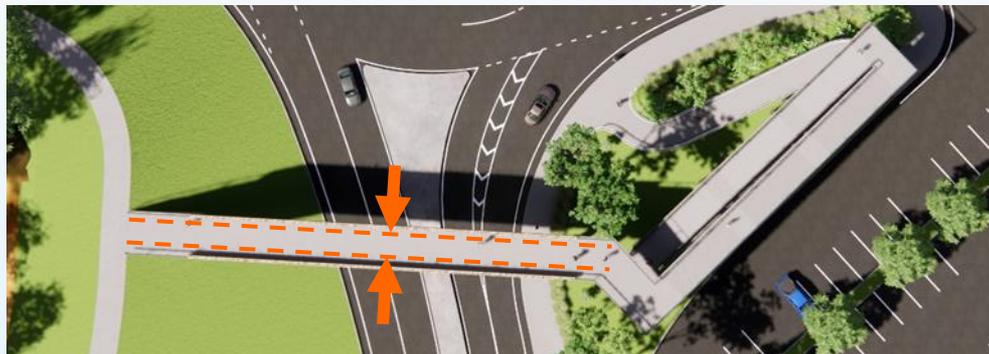
17'-6" Required Clearance



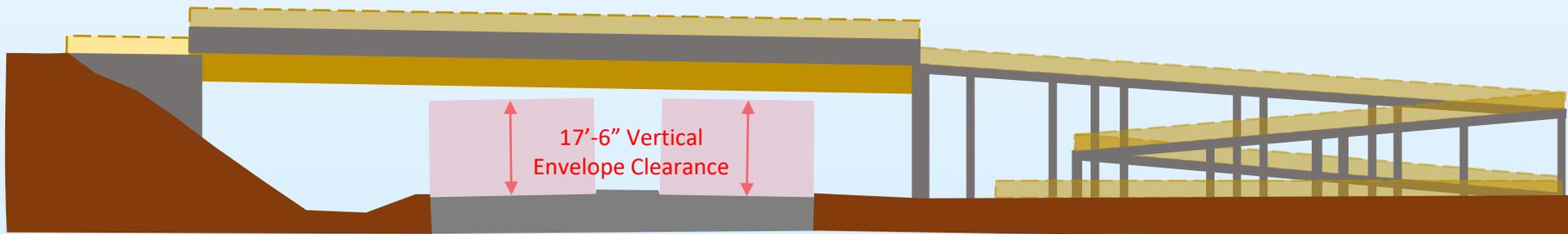
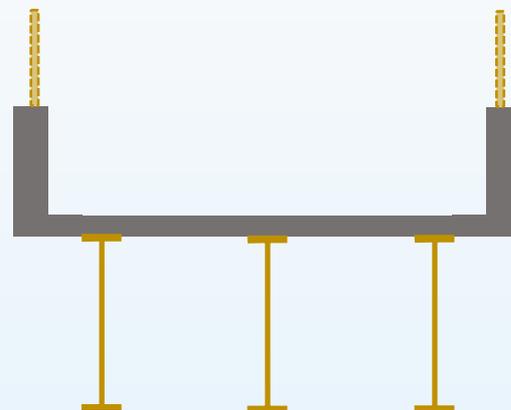
# Initial Concept - Analysis



## 1. Reduce Bridge Width



10'-0" wide





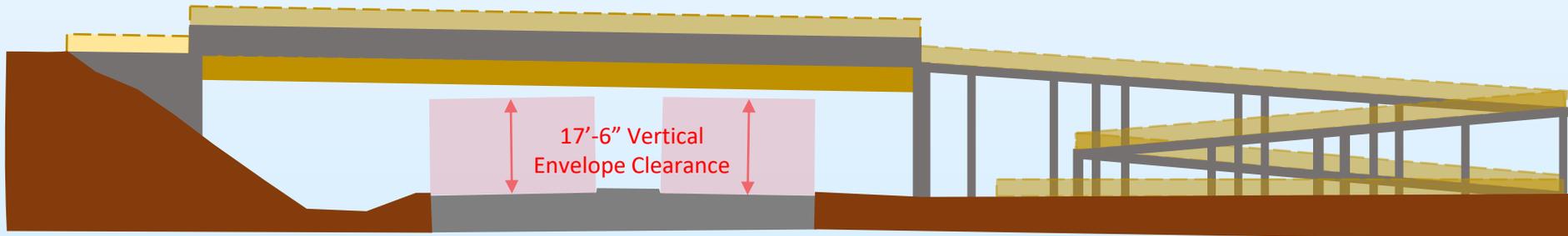
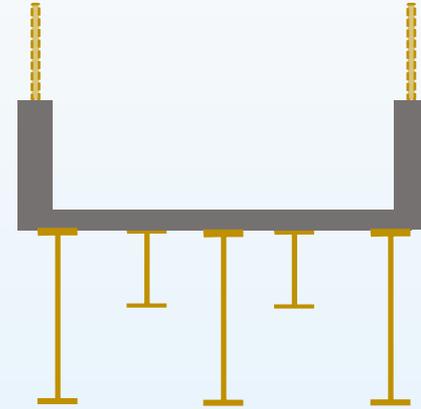
## 2. Reduce Bridge Depth

Move Beams Up Into Edges

Replace Central Beam with Two Smaller

Remove Heavy Concrete Parapet

Lower Railing Fence



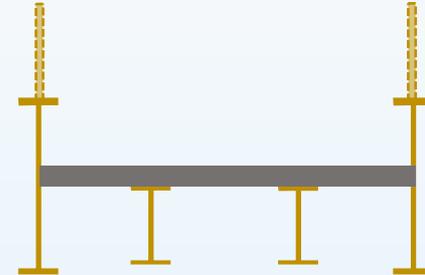


## 3. Reduce Ramp Length

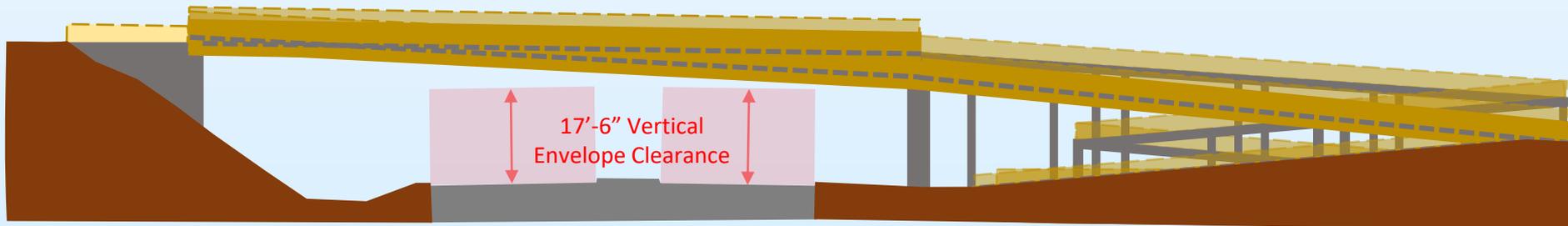
Use Shallower Depth Beam to Increase Slope  
(still ADA compliant)

Replace 3 Switchbacks Runs with 2 Runs

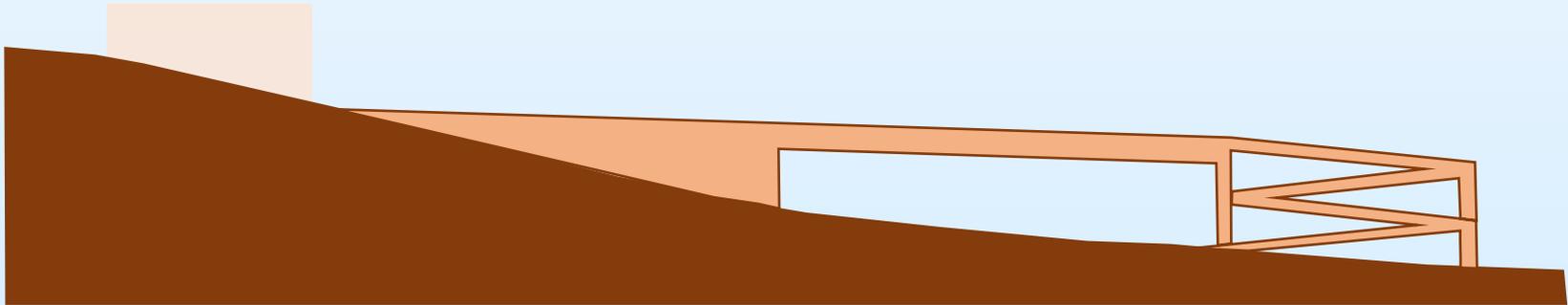
Put Ramp on Fill instead of Structure



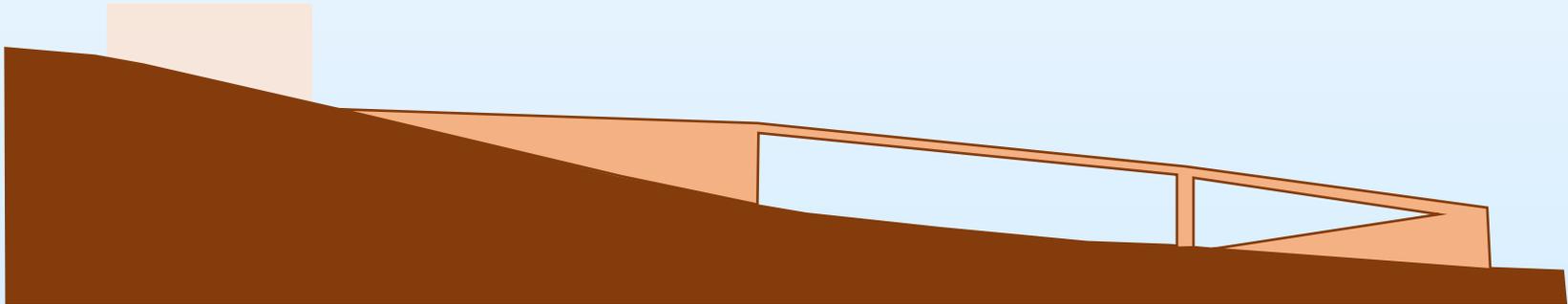
4% Slope



# Initial Concept - Analysis



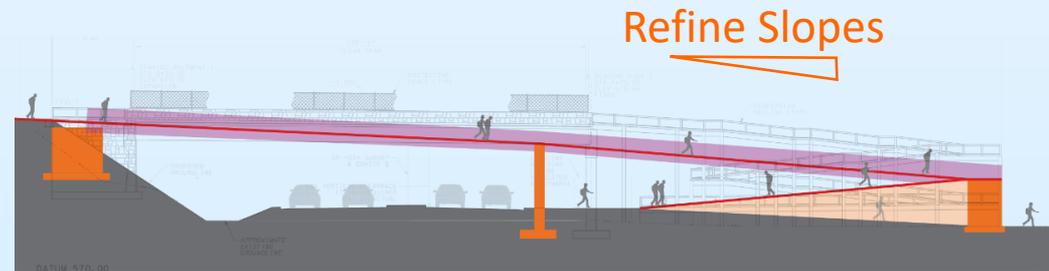
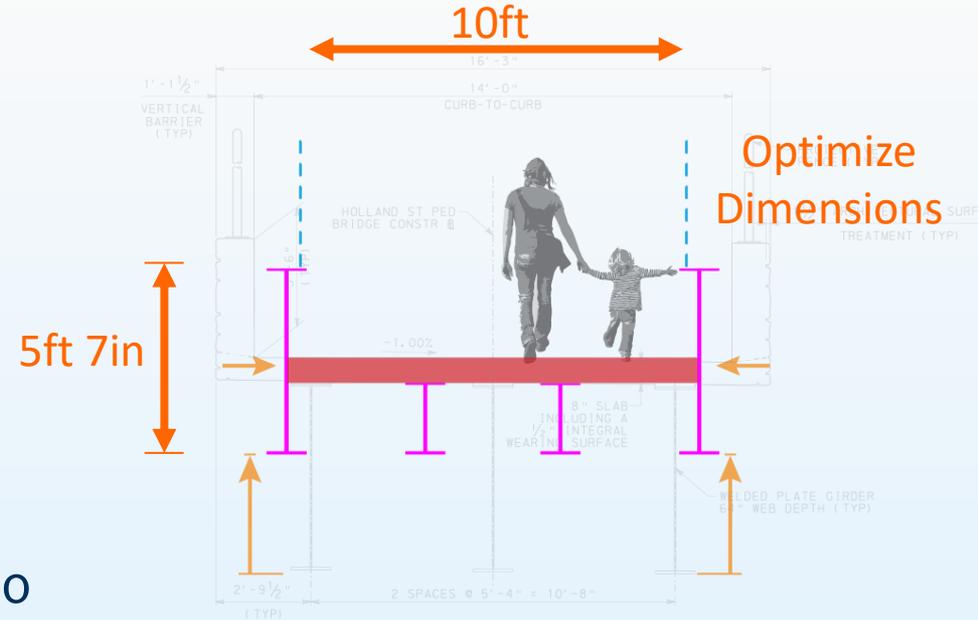
# Initial Concept - Analysis



# Initial Concept - Review Summary



- Current estimated cost for initial main span and approach is \$4.1M
- Bridge cross section inefficient
  - Barrier proposed is not economical due to weight
  - Deck width greater than approach path width
  - Girder layout can be optimized
- Ramps set to maximum slope with no cushion for construction variances
- Angular layout compromises bridge function and experience





## DESIGN GOALS

- Pedestrian Safety
- Enhance Pedestrian Experience
- Economic Materials and Layout
- Maintenance Friendly

# Context Sensitive Design



## LOCAL GUIDELINES

CUDC Jefferson Report 2019

Port Authority MP 2018

Erie Refocused 2016

Erie Downtown MP 2016

Erie Streetscape MP 2010

### Master Development and Facilities Plan The Erie-Western Pennsylvania Port Authority



### ERIE REFOCUSSED

MARCH 2016

City of Erie, Pennsylvania  
Comprehensive Plan and Community  
Decision-Making Guide



### JEFFERSON REPORT



ERIE, PA:  
RECONNECTING THE BAYFRONT

2019 MIDWEST URBAN DESIGN CHARRETTE REPORT

Cleveland Urban Design Collaborative



Pennsylvania  
Downtown Streetscape Master Plan

### ERIE DOWNTOWN MASTER PLAN



*One Vision...Endless Opportunities*

*Connecting our Vision and Resources  
for a new Downtown Erie*

# Context Sensitive Design



## INSPIRATIONS | Erie Architecture



# Context Sensitive Design



## INSPIRATIONS | Lake Erie Life



Sharp Hornsnails



Motorboat Wake



White Heron



# Context Sensitive Design



## INSPIRATIONS | Lake Erie Geologic Formations



Lake Erie Cliffs



Presque Isle

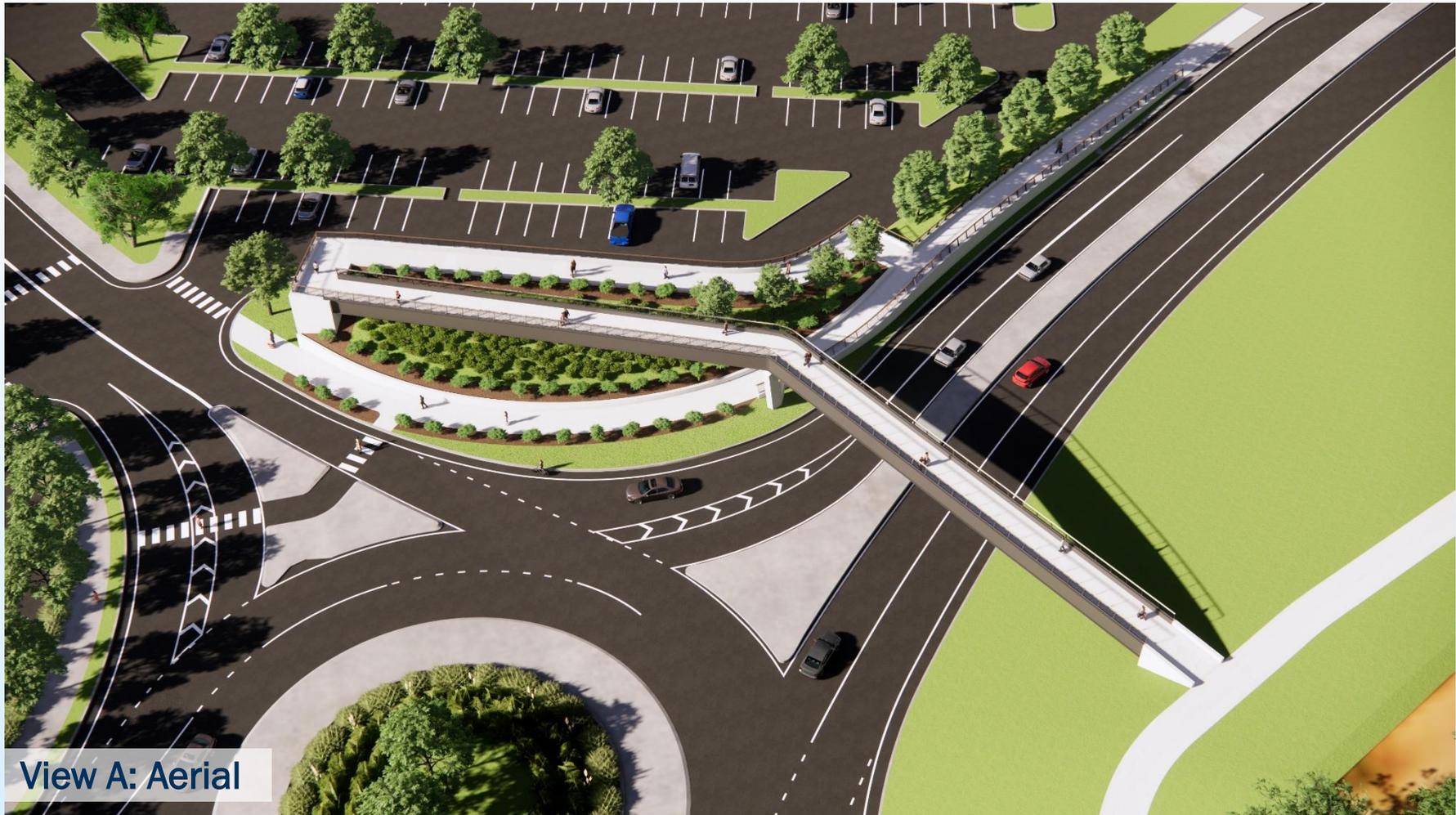




## CONCEPT EXPLORATIONS

1. Steel Girder
2. Steel Truss
3. Concrete Girder
4. Terrace Arch
5. Terrace Girder
6. Cable Stay

# CONCEPT 1 | Steel Girder



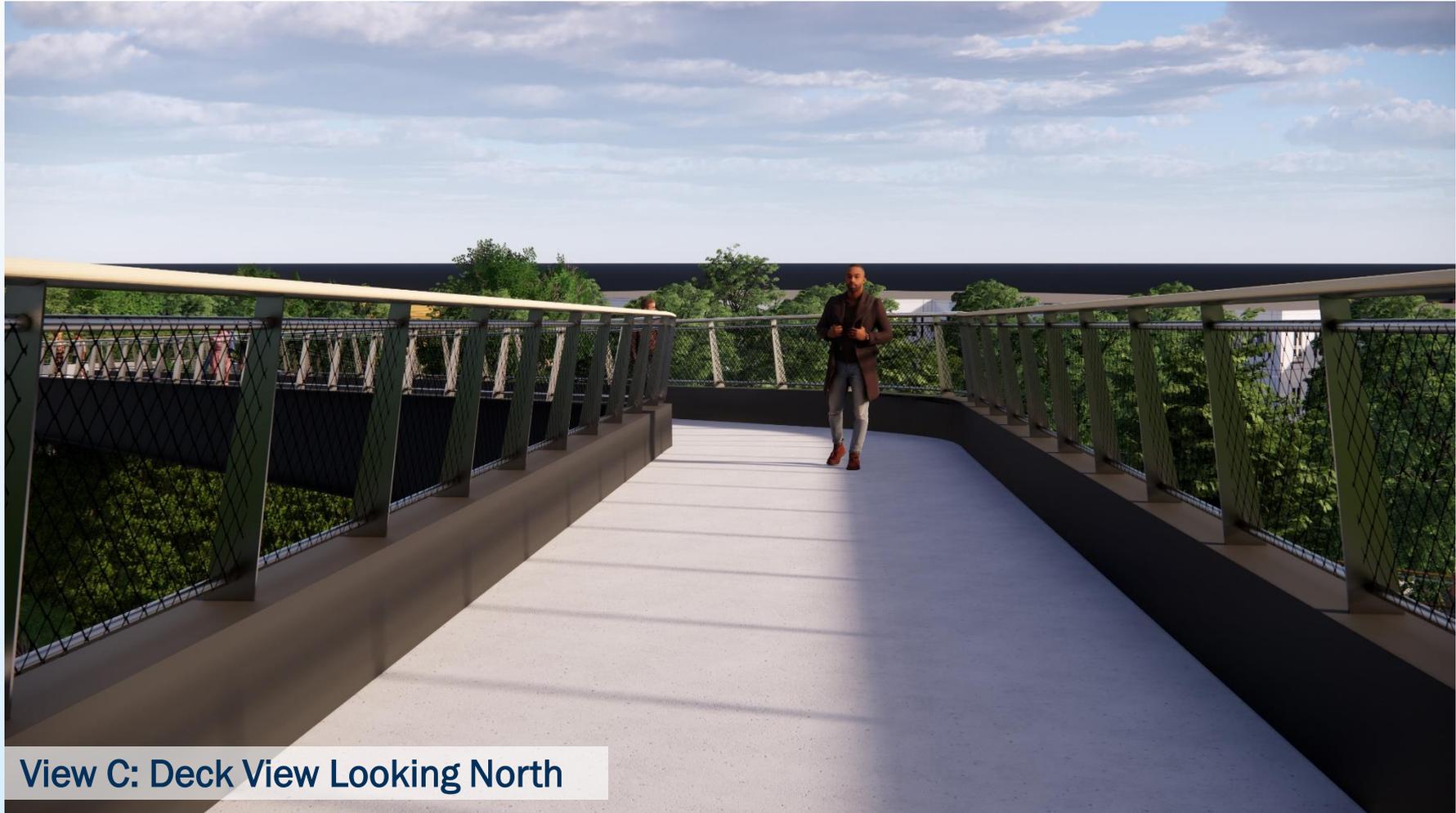
View A: Aerial

# CONCEPT 1 | Steel Girder



View B: Looking West

# CONCEPT 1 | Steel Girder



View C: Deck View Looking North



# CONCEPT 1 | Steel Girder



View D: Underside Looking North



# CONCEPT 1 | Steel Girder



View E: Bayfront Ramp



# CONCEPT 2 | Steel Truss



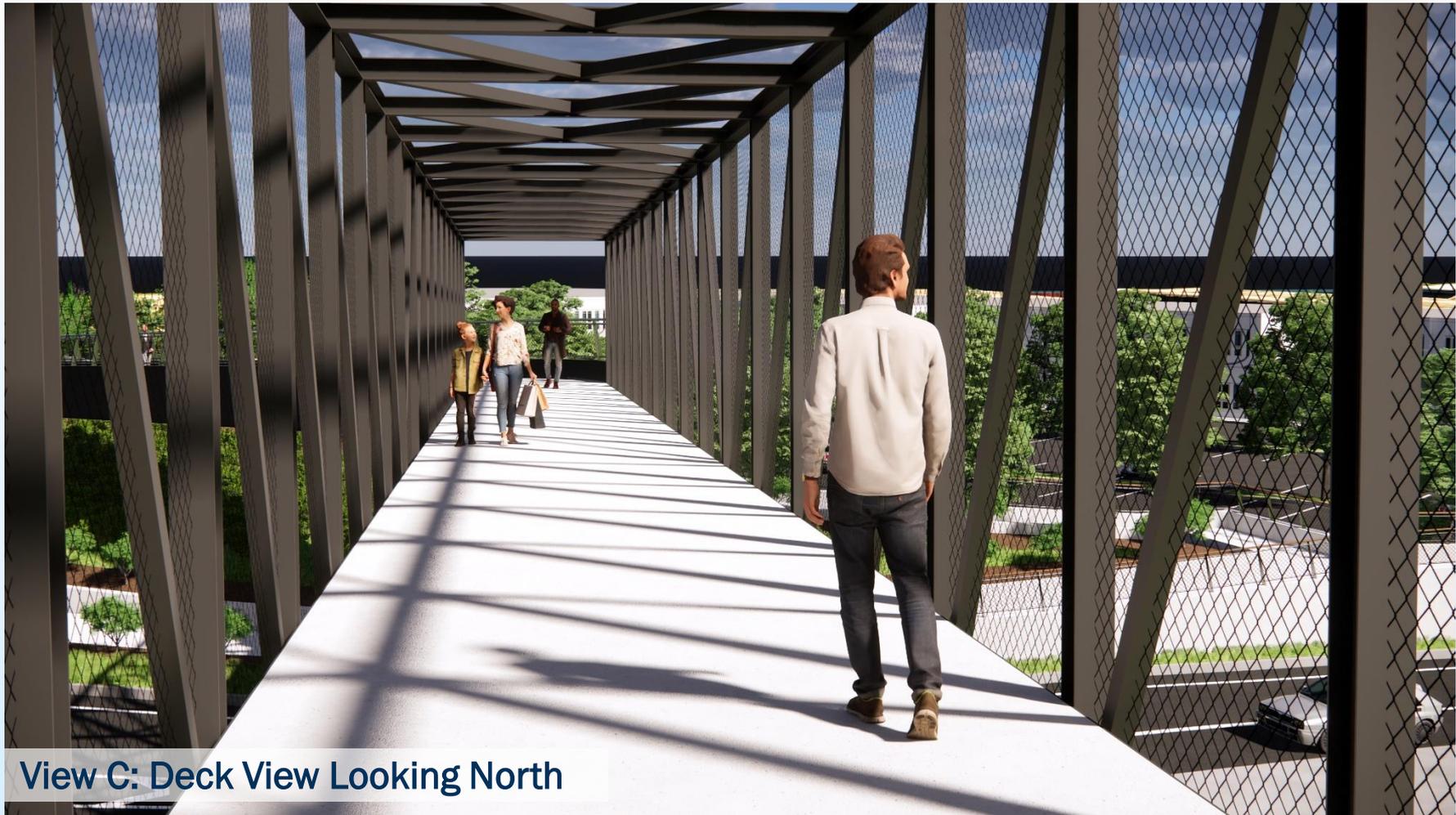
View A: Aerial

# CONCEPT 2 | Steel Truss



View B: Looking West

# CONCEPT 2 | Steel Truss



**View C: Deck View Looking North**

# CONCEPT 2 | Steel Truss



View D: Underside Looking North



# CONCEPT 2 | Steel Truss



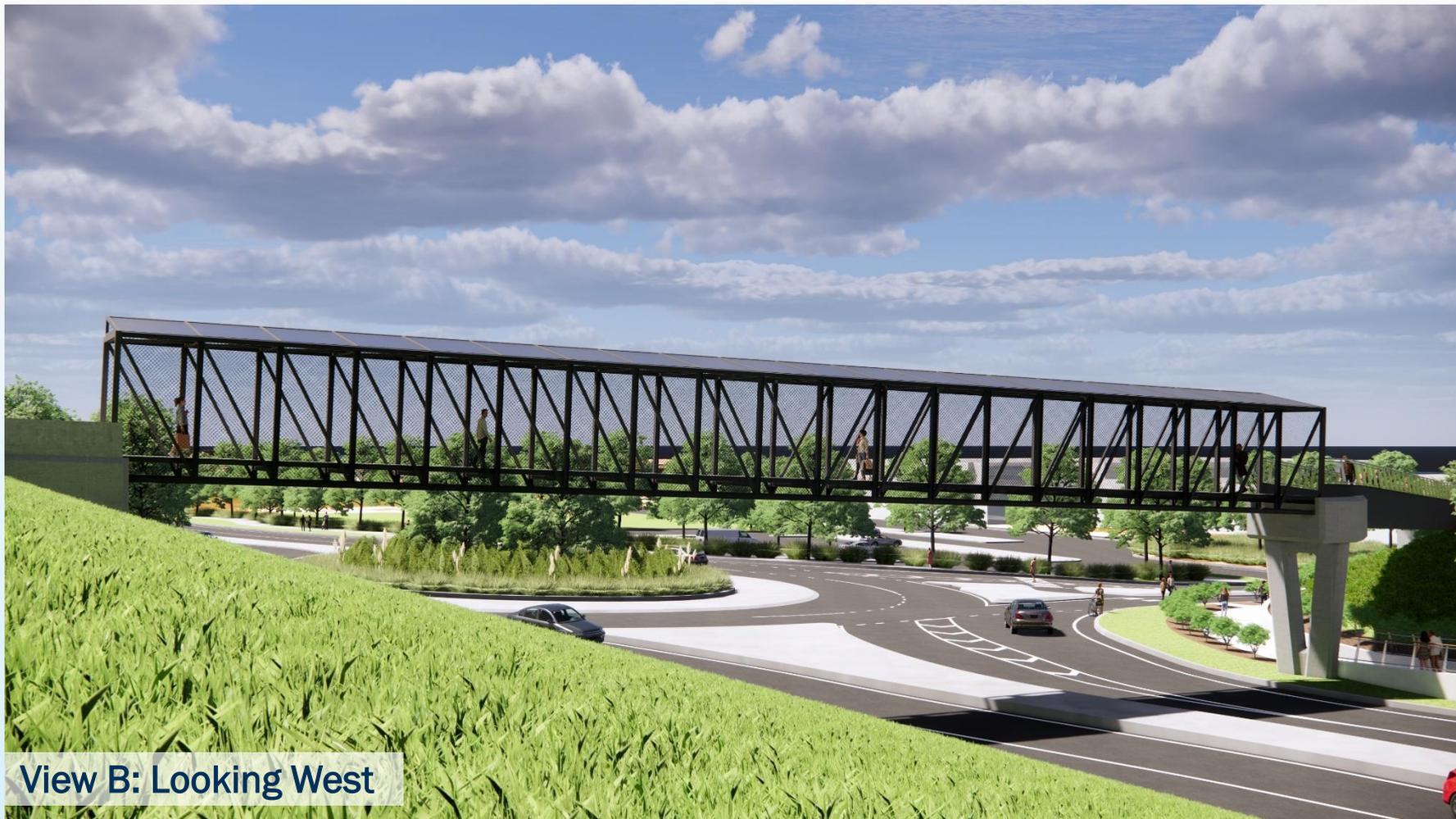
View E: Bayfront Ramp

# CONCEPT 2 | Steel Truss B



View A: Aerial

# CONCEPT 2 | Steel Truss B



View B: Looking West



# CONCEPT 2 | Steel Truss B



**View C: Deck View Looking North Covered**



# CONCEPT 3 | Concrete Girder



View A: Aerial

# CONCEPT 3 | Concrete Girder



View B: Looking West



# CONCEPT 3 | Concrete Girder



**View C: Deck View Looking North**

# CONCEPT 3 | Concrete Girder



View D: Underside Looking North

# CONCEPT 3 | Concrete Girder



**View E: Bayfront Ramp**



# CONCEPT 4 | Terrace Arch



View A: Aerial

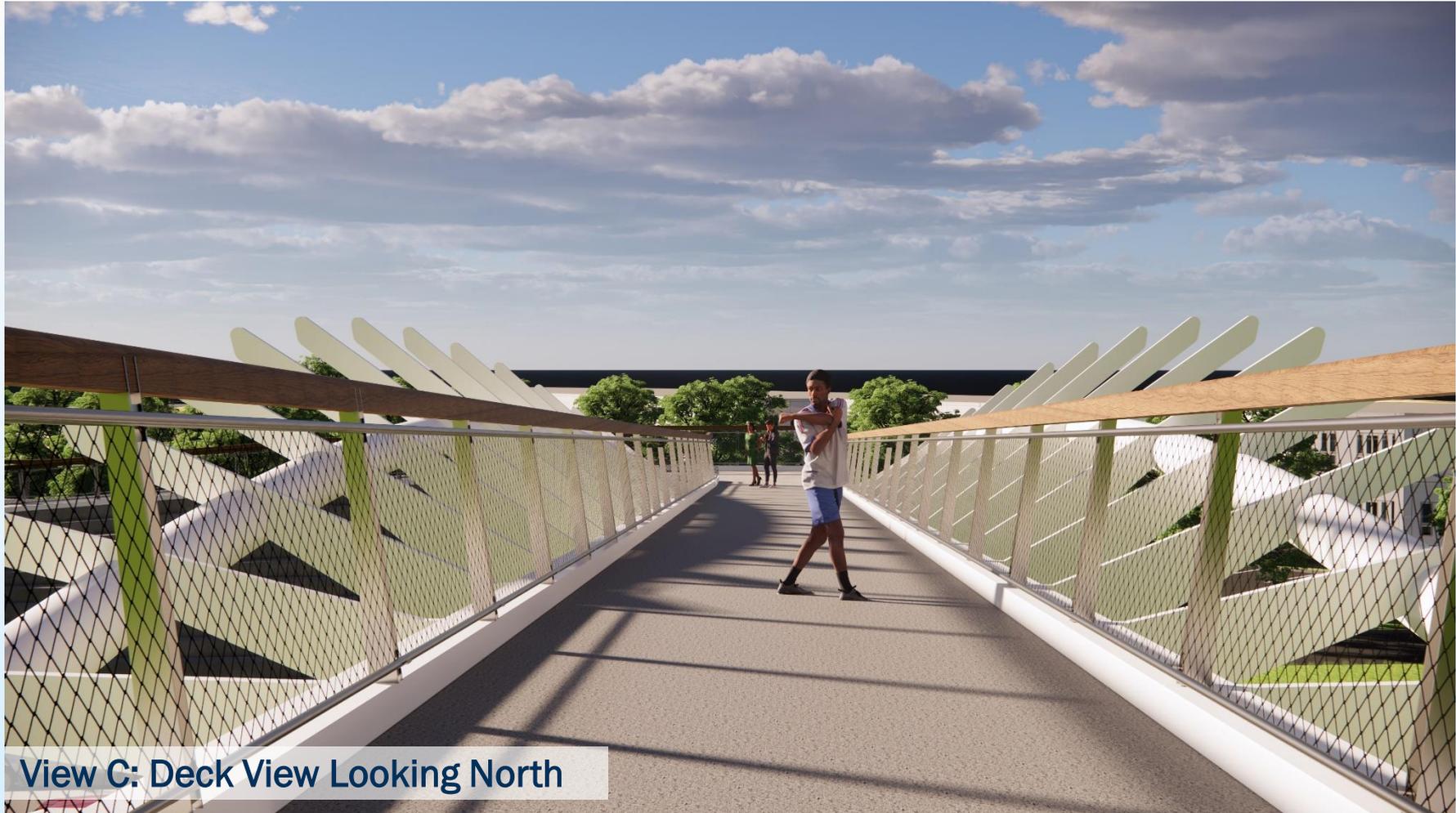
# CONCEPT 4 | Terrace Arch



View B: Looking West



# CONCEPT 4 | Terrace Arch



**View C: Deck View Looking North**



# CONCEPT 4 | Terrace Arch



View D: Underside Looking North

# CONCEPT 4 | Terrace Arch



View E: Bayfront Ramp



# CONCEPT 5 | Terrace Girder



View A: Aerial

# CONCEPT 5 | Terrace Girder



View B: Looking West

# CONCEPT 5 | Terrace Girder



View C: Deck View Looking North



# CONCEPT 5 | Terrace Girder



View D: Underside Looking North



# CONCEPT 5b | Terrace Girder w/ Roof



View A: Aerial

# CONCEPT 5b | Terrace Girder w/ Roof



View B: Underside Looking North

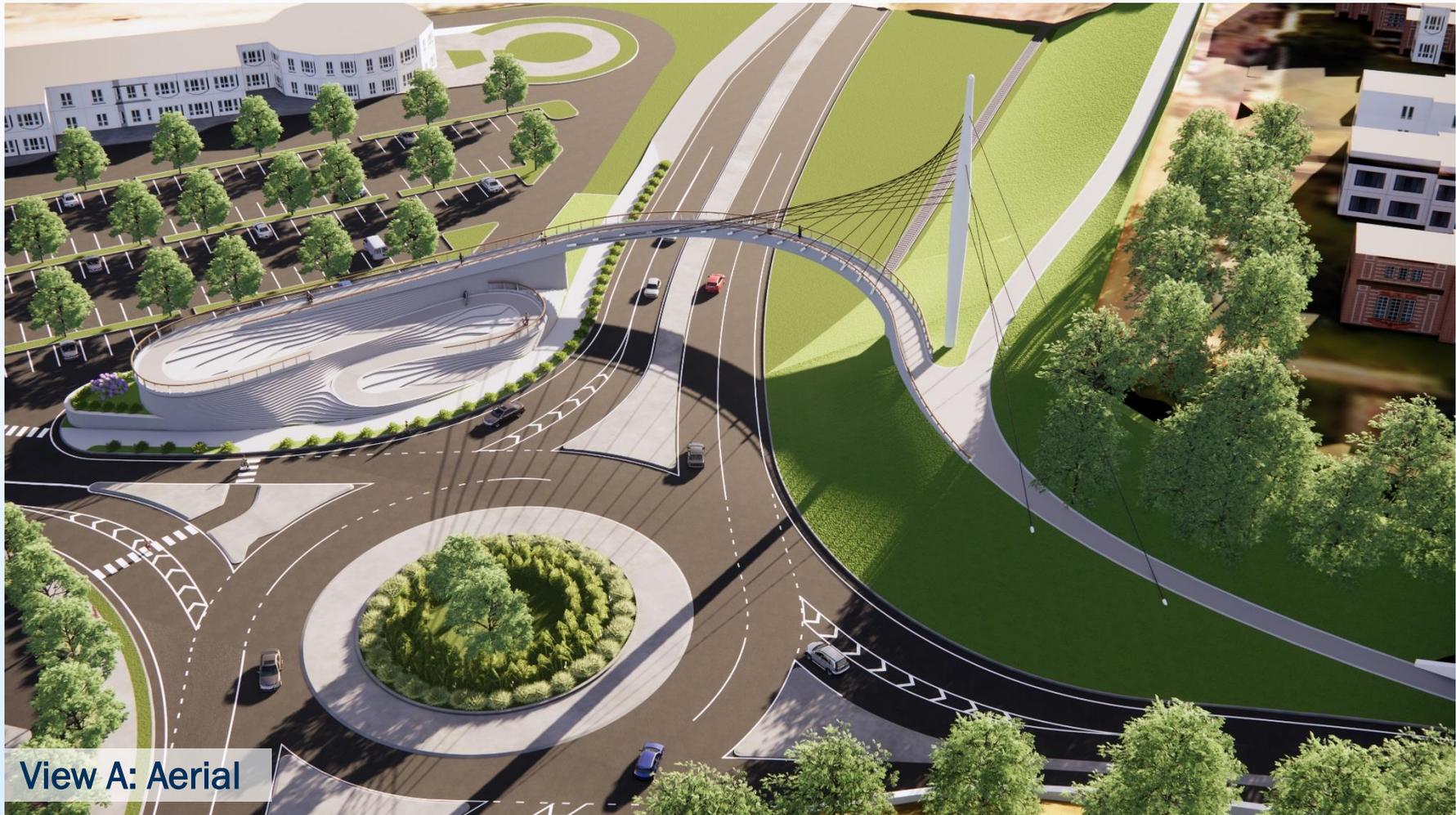
# CONCEPT 5b | Terrace Girder w/ Roof



View C: Deck View Looking North



# CONCEPT 6 | Cable Stay



View A: Aerial

# CONCEPT 6 | Cable Stay



View B: Underside Looking North

# CONCEPT 6 | Cable Stay



View C: Bayfront Ramp

# CONCEPT 6 | Cable Stay



View D: Deck View



# CONCEPT 6 | Cable Stay



View E: Looking West

# Aesthetic Study Comparison



		<b>PRO</b>	<b>CON</b>	<b>Length</b>	<b>\$Millions</b>
<b>0</b>	<b>Initial Concept</b>	Simple, Conventional	Cross section inefficient, Tight switchback	1124 FT	\$4.1
<b>1</b>	<b>Steel Girder</b>	Economical, Simple	Tight Switchback Little Experience	1026 FT	\$3.6
<b>2</b>	<b>Steel Truss</b>	Economical, Integrated Fence, Easy Roof Add	Tight Switchback Tight Experience	1026 FT	\$3.8
<b>3</b>	<b>Concrete Girder</b>	Economical, Contemporary, Unique Experience, Improved Ramps	Unique Forms	947 FT	\$2.7
<b>4</b>	<b>Terrace Arch</b>	No Switchbacks, Open & Legible, Unique Experience	“Longer” Alignment Enhanced Structure	965 FT	\$5.7
<b>5</b>	<b>Terrace Girder</b>	Economical, No Switchbacks, Open & Legible, Unique Experience, Roof	“Longer” Alignment Slope/RR Impact	1116 FT	\$4.0
<b>6</b>	<b>Cable Stay</b>	Distinctive, No Switchbacks, Iconic	“Longer” Alignment Potential conflict with overhead utilities	1116 FT	\$6.4



# DISCUSSION



**0** Initial Concept \$4.1M



**1** Steel Girder \$3.6M



**2** Steel Truss \$3.8M



**3** Concrete Girder \$2.7M



**4** Terrace Arch \$5.7M



**5** Terrace Girder \$4.0M



**6** Cable Stay \$6.4M



# T.Y. Lin International Ped Bridges

