



CITY OF ANN ARBOR PARKS & RECREATION

GALLUP PARK BRIDGE, ROAD AND TRAIL SCHEMATIC DESIGN

Ann Arbor, MI

June 2021

SMITHGROUP



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EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

OVERVIEW

The Gallup Park Bridge, Road and Trail Schematic Design study explores options to re-imagine the vehicular bridge which is due to be replaced. It also explores cohesive design solutions for the adjacent segments of park road and the Border-to-Border Trail.

Multiple engagement opportunities with the public and a steering committee (of city and county representatives) provided the project team guidance throughout the design process. Project goals and design criteria were established directly from feedback received. This feedback also revealed which options should be considered and ultimately recommended as the preferred design.

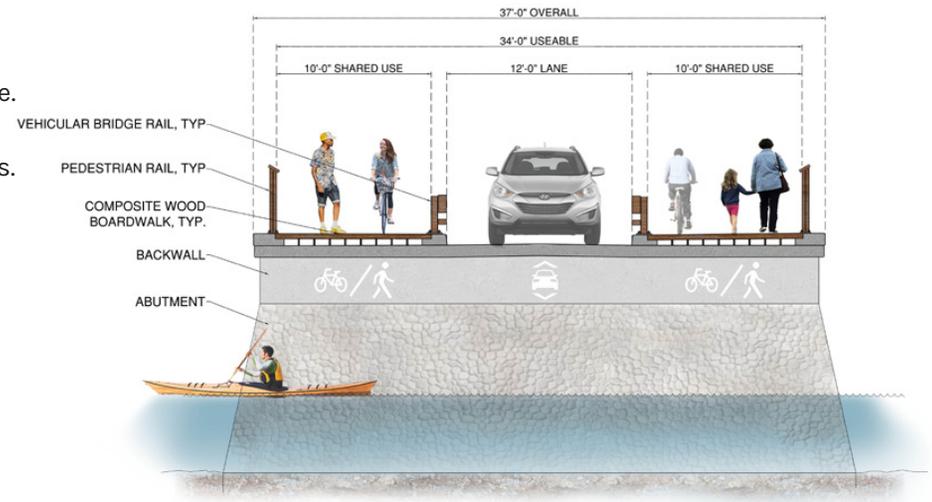
VEHICULAR BRIDGE RECOMMENDATIONS

The new vehicular bridge is proposed to be located so the existing bridge can remain during construction. If not, the south side of the river will be inaccessible for four to five months. Locating the bridge directly west and adjacent to the existing bridge will keep the span to a minimum while avoiding the most costly nearby utilities to relocate. The span and structural material of the bridge is recommended to have the least destruction to the site while still meeting the design criteria and loading requirements. A concrete bridge will have the smallest beam depth and require the least amount of maintenance and a two-span bridge will also allow for a thinner beam depth creating less disruption and fill needed on site. The existing bridge is loved for its park-like character and the new bridge should include as many natural and wood materials as possible while still being easy to maintain.

The recommended cross section for the new bridge is one-lane for vehicles with a 10 foot wide shared use path on either side. A timber rail is proposed to serve as a vehicular guardrail and as an additional buffer between vehicles. Traffic calming and more room for pedestrians and bicyclists were the most important factors in this recommendation.



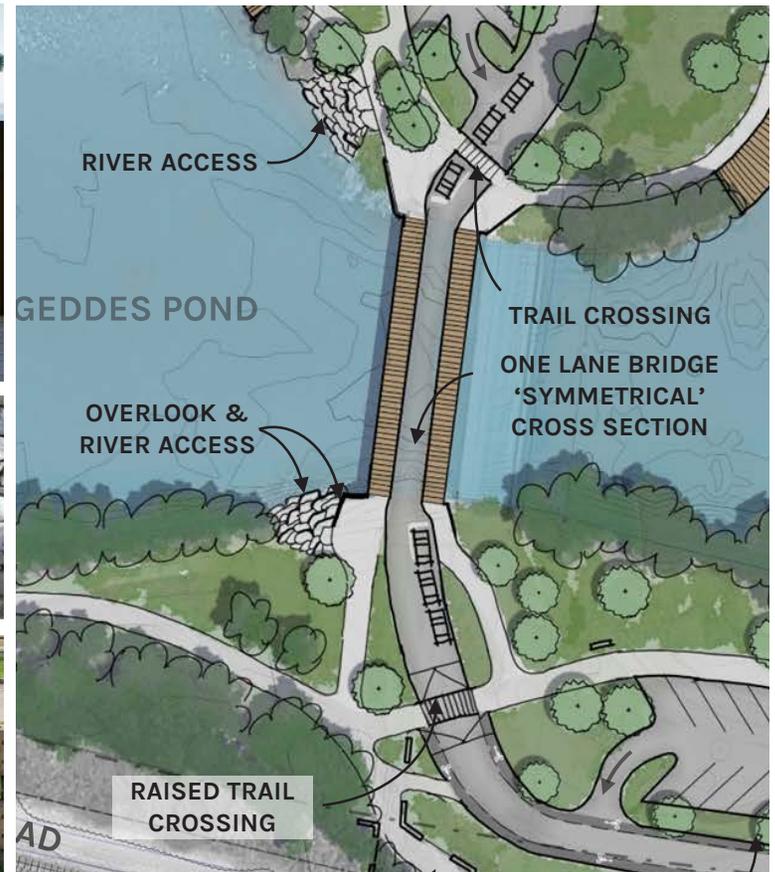
EXISTING BRIDGE



RECOMMENDED CROSS SECTION



RECOMMENDED BRIDGE CHARACTER

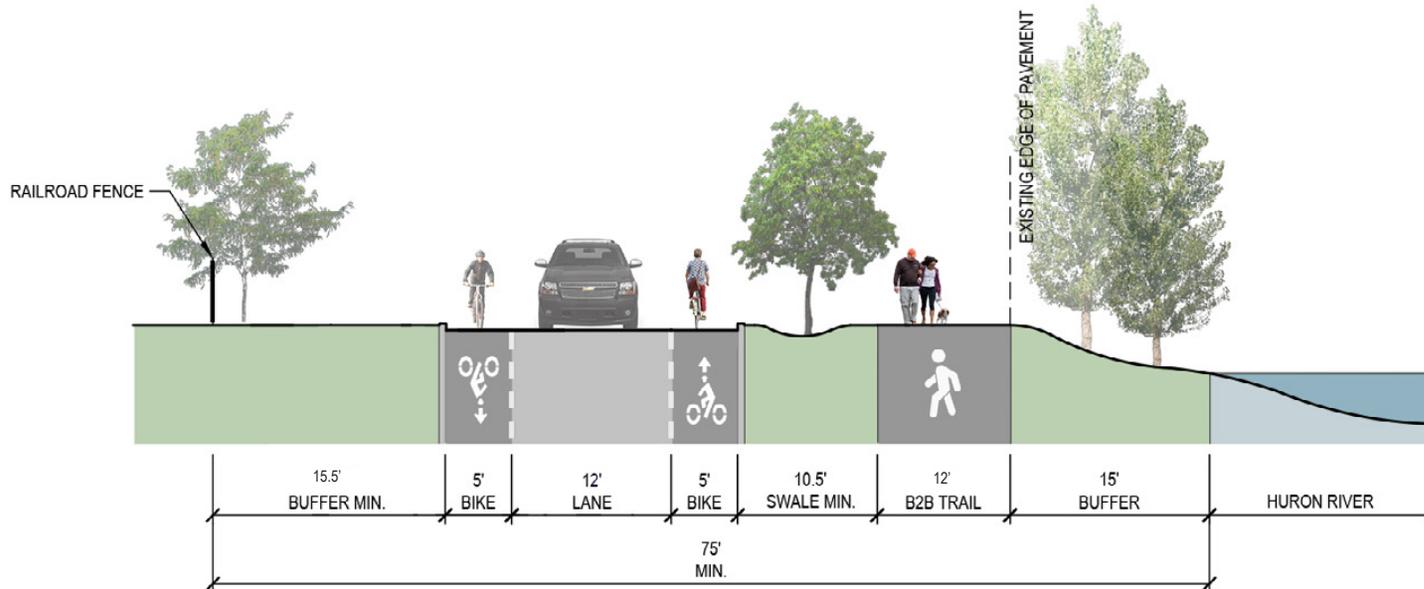


RECOMMENDED BRIDGE SITE PLAN

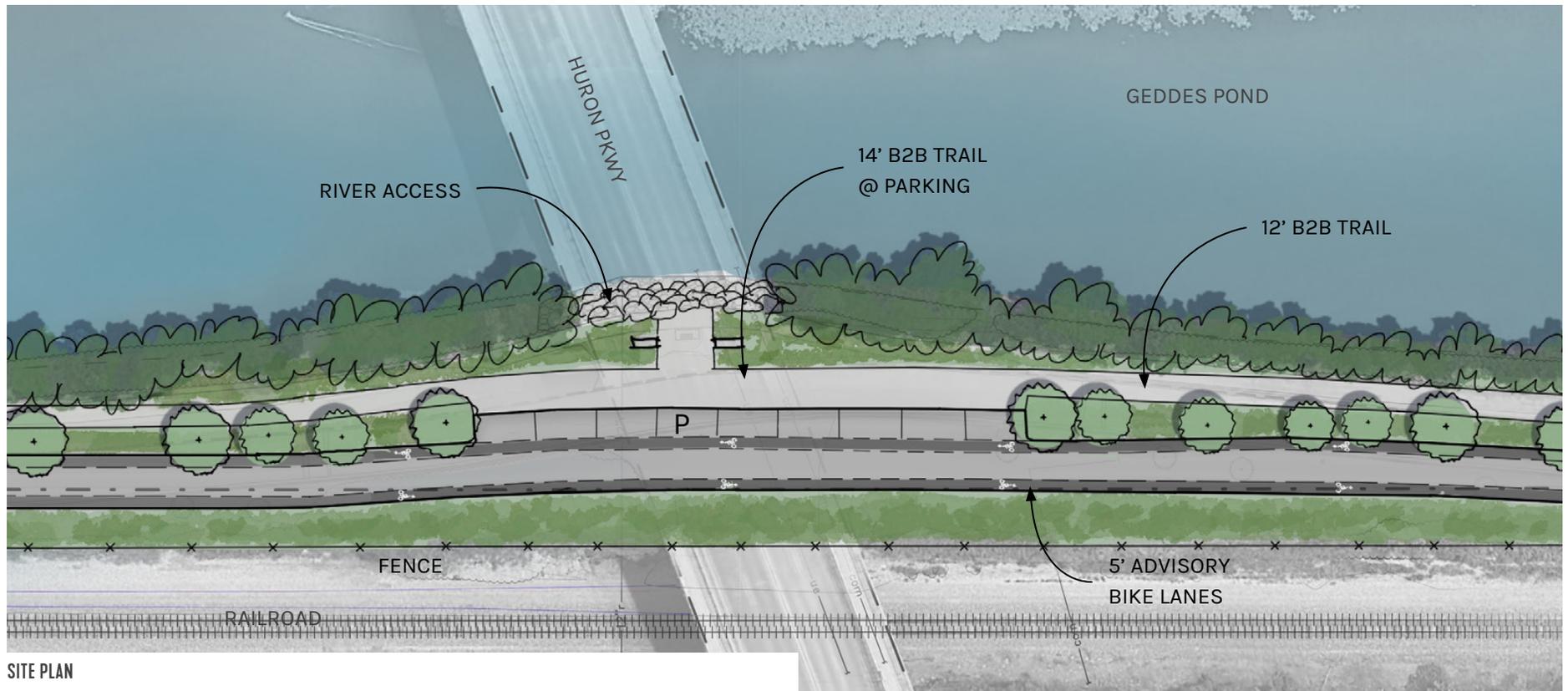
PARK ROAD AND TRAIL RECOMMENDATIONS

The recommended park road and trail cross section increases the capacity of the trail and provides different use zones for community and novice cyclists as well as other park users. An expanded landscape buffer between the park road and trail allows for stormwater collection and shade trees. The north side of the trail is located at its existing boundary approximately 15 feet from the river.

Advisory bike lanes are a new design approach being installed in various road segments across Ann Arbor and the country. The road provides enough width for two-way traffic but advisory bike lane markings provide priority to cyclists and cause traffic to yield behind bicycle traffic. Because of the low-volume vehicular traffic, advisory bike lanes are most suitable for this area. This road configuration offers a dedicated area for commuting cyclists and may also include speed humps for additional traffic calming. The Border-to-Border Trail is widened from 8-feet to 12-feet to accommodate the trail's heavy use and provide additional space for both pedestrians and novice and leisure cyclists.



The park road stretches about 2,000-feet from the vehicular bridge to the east end parking lot. In order to distribute parking along this area, additional parking spaces are provided at the Huron Parkway bridge overpass. This also provides an additional opportunity to calm traffic. A large river access area with steppable stone is included to provide additional fishing and river viewing.



SITE PLAN

ENTRY ROAD AND PARKING RECOMMENDATIONS

The Gallup Park entry road currently has parking directly on the street, causing congestion on the park road and multiple non-motorized conflicts:

- Pedestrians crossing the street from parking to get the rail/playground.
- Parked cars do not have great visibility of the road
- Bicyclists using the road conflict with pull-in parking

Moving parking off the street removes these conflicts and creates an opportunity for a turnaround point before crossing the bridge. The causeway and area north of the railroad are very narrow. The parking lot design uses an angled and one-way layout in order to minimize the parking footprint and pavement in the area.

The Border-to-Border Trail crossing is shifted south of the bridge to increase visibility and a tabled crossing is included to further encourage traffic calming in the area. Multiple new designated river access points are proposed for tubers and kayakers to reduce erosion happening at current informal entry and exit points. Additional river access points are included east of the bridge for fishing and river viewing.



COST SUMMARY

Depending on available funding, the vehicular bridge, park road and trail projects could be phased or built as one complete project. If phased separately, the vehicular bridge and required approach work is estimated to be approximately **\$2.3 million**. The park road, trail and parking lot project is estimated to be approximately **\$4.5 million** for a total of **\$6.8 million**.

BRIDGE	\$2.3 MILLION
PARK ROAD AND TRAIL	\$4.1 MILLION
B2B TRAIL (GRANT ELIBGIBLE)	\$360,000
TOTAL	\$6.8 MILLION

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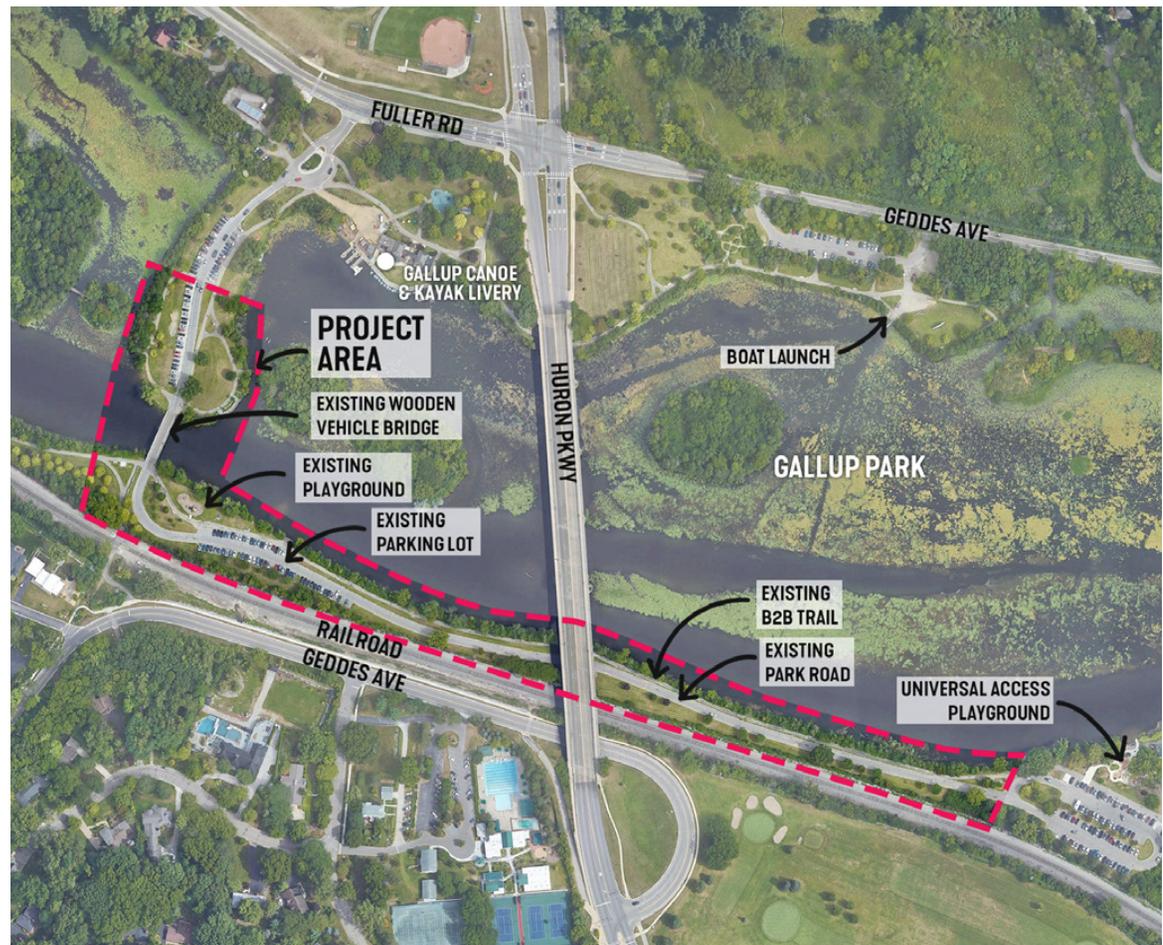
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PROJECT OVERVIEW



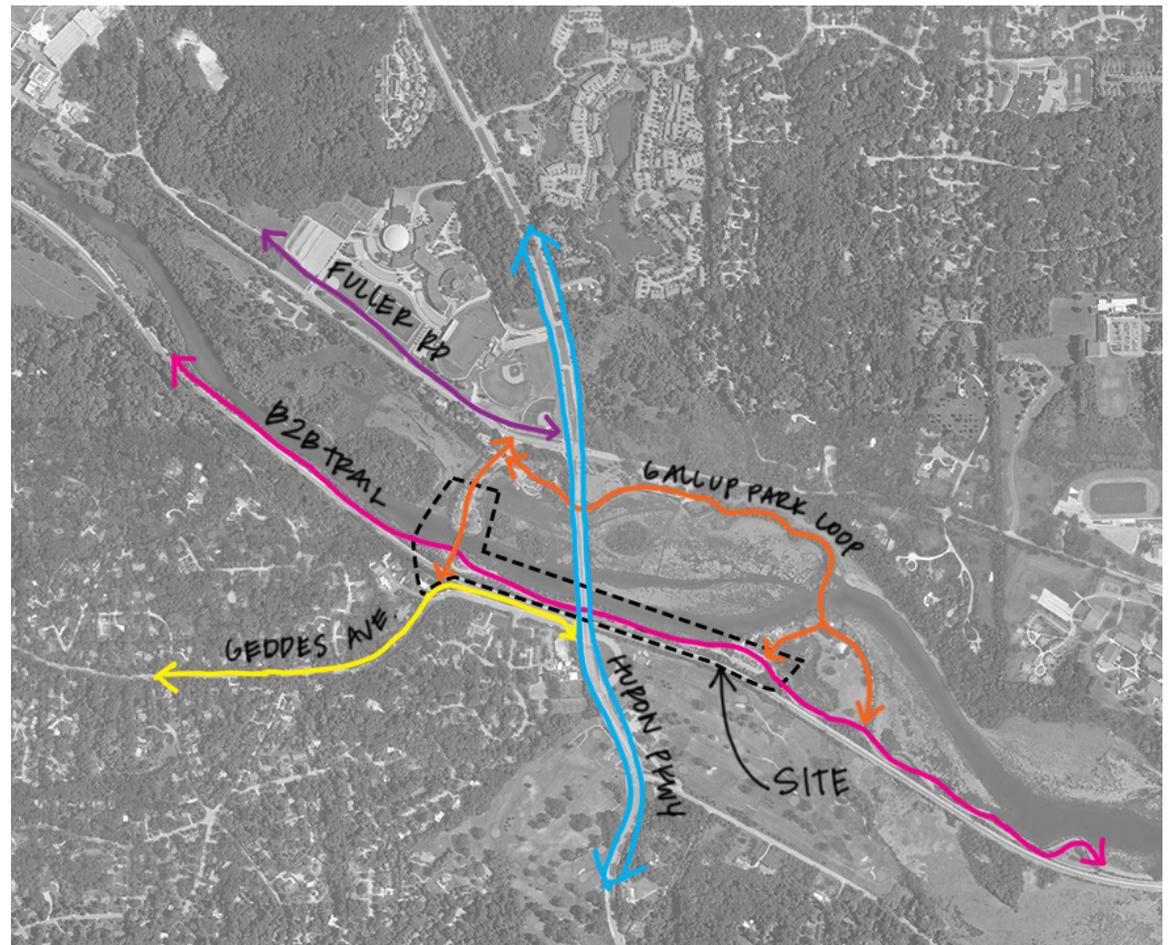
PURPOSE

The Gallup Park Bridge, Road and Trail Schematic Design study explores options to re-imagine the vehicular bridge which is due to be replaced. It also explores cohesive design solutions for the adjacent segments of park road and the Border-to-Border Trail. This project is driven by the need for future bridge replacement and the desire to improve circulation, access and safety for motorists and non-motorized users within this highly used park.



SITE CONTEXT

The site, located at a confluence of multiple non-motorized trails, includes segments that connect regional destinations between Ann Arbor, Ypsilanti and beyond. The Border-to-Border Trail runs adjacent to the park road and is a major regional connector, often used by higher-speed commuting cyclists. This area is being considered as a trailhead for the Border-to-Border Trail. The Gallup Park Loop Trail circles the park and has many diverse users including families, runners and roller skaters.



EXISTING CONDITIONS

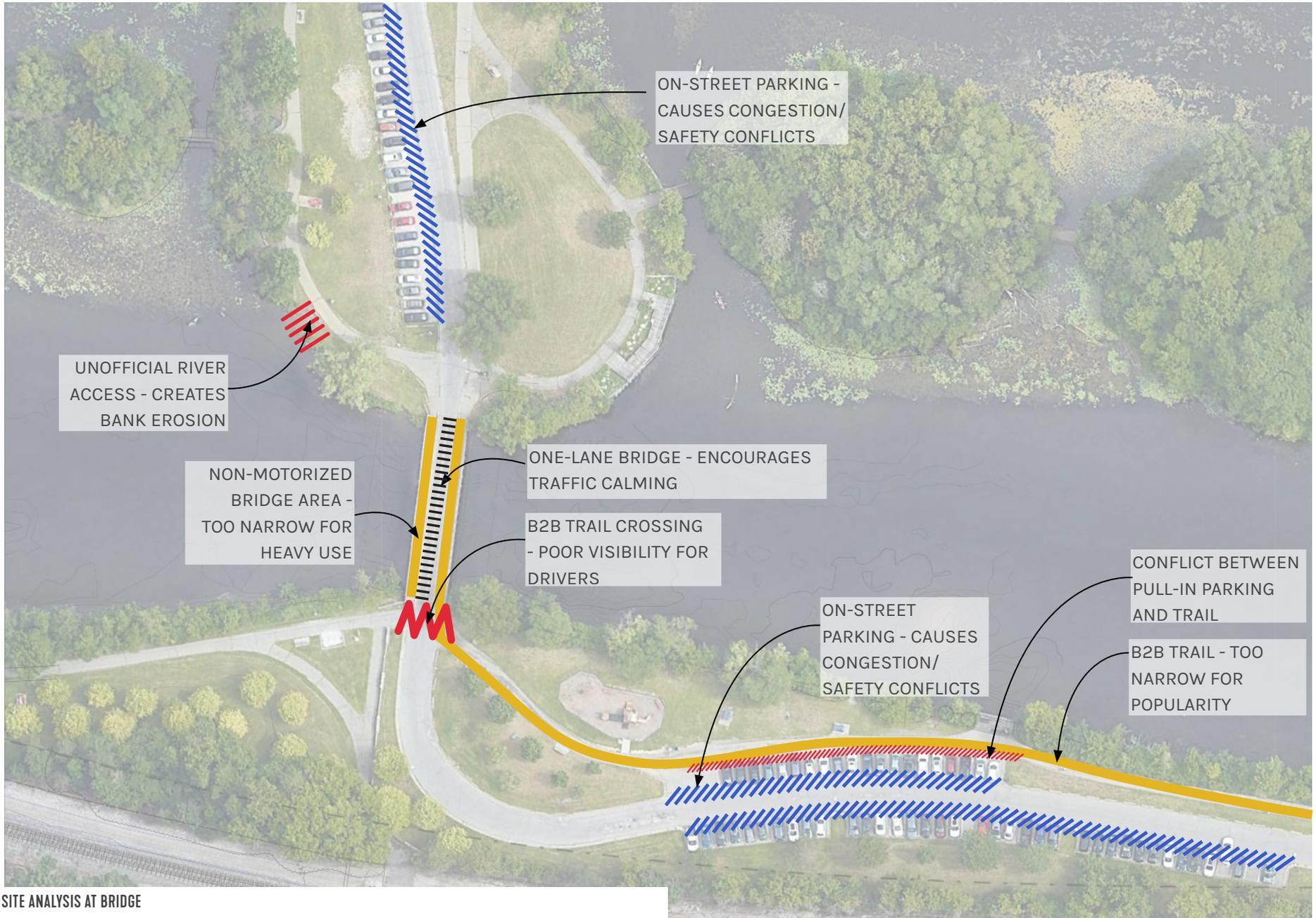
The existing wooden vehicular bridge has a rustic park-like character; however it is in need of replacement and does not meet the current demands of the park.

The bridge presents the following issues:

- Lack of adequate space for the high volume of non-motorized traffic crossing in the area.
- Southbound drivers on the bridge have poor visibility of the Border-to-Border trail that crosses directly to the south
- The walkways are too steep for barrier free access and are not Americans with Disabilities Act (ADA) compliant.
- The wood surface has developed ridges, making cycling difficult.
- The wood surface becomes slippery when wet.
- The railing often suffers damage from bridge jumpers and requires frequent maintenance.
- Lack of formal access to the river edge adjacent to the bridge creates bank erosion.

The adjacent park road, parking and Border-to-Border Trail creates conflict points between various park users. On-street pull-in parking creates congestion and safety conflicts. The Border-to-Border Trail is too narrow to accommodate both recreational and commuting non-motorized traffic. The area lacks shade and the overall aesthetic and essence of the surrounding park.





SITE ANALYSIS AT BRIDGE

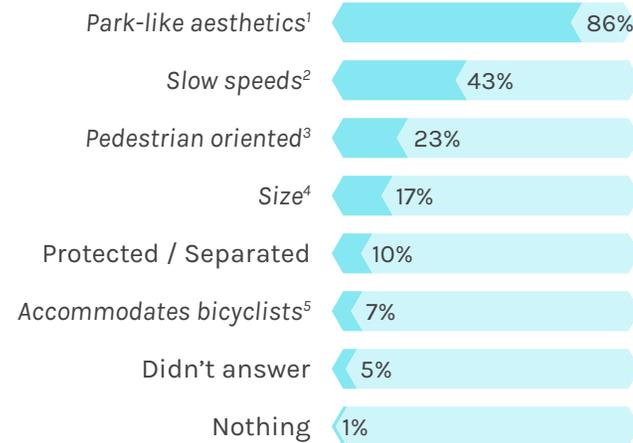
COMMUNITY ENGAGEMENT OVERVIEW

Community engagement is important to ensure the replacement bridge, as well as the park road and trail, meets the community’s needs. In order to learn what is working, what isn’t working, and listen to ideas for improvement, the project team conducted two different engagement activities.

The initial outreach to the community was done through an online survey intended to gather feedback on what people liked, what problems they had, and any suggestions they had for improvement. The survey responses generated a few overall themes about the project area that helped to inform our goals for the project. For example, respondents generally like the park-like aesthetics and slow speeds of the existing vehicular bridge. They also generally think the current Border-to-Border Trail is too narrow and too close to the road. The project team used these survey results to inform design development and decisions throughout the design process.

VEHICLE BRIDGE SURVEY RESULTS

When asked, “What do you like about the existing bridge?”, most of the responses mentioned the existing park-like aesthetics (approximately 89%). Approximately 44% of respondents like the slow speeds of the current bridge.

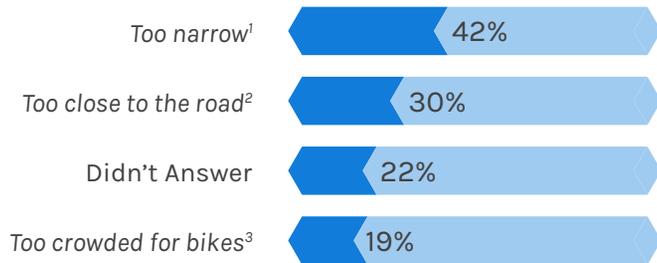


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. charm, aesthetics, natural, character, feel, unique, quaint, look, park, rustic, wood
2. speed, slow, traffic
3. pedestrian, walk, path
4. small, size, single lane, one lane, narrow
5. bike, bicycle

B2B TRAIL SURVEY RESULTS

When asked, “What don’t you like about this section of the Border-to-Border Trail?”, approximately 43% of respondents answered that the trail is too narrow. Answers also reflected the trail is too close to the road (approximately 30%).



Percentages are qualitative in nature and were deduced from respondent answers including the words below:

- 1. congested, crowded, pedestrians, narrow, walking
- 2. road, car
- 3. bike, bicycle

The second public engagement activity for the project was a virtual public meeting hosted on Zoom. Various design options were presented and twelve (12) participants provided feedback on each option, which was then used by the project team to help inform the proposed recommendations. For a full engagement summary refer to Appendix A.

STEERING COMMITTEE

A steering committee was developed for the project and consisted of Several City of Ann Arbor and Washtenaw County representatives who provided feedback and direction throughout the design process. The steering committee consisted of city engineers, park planners and other park professionals (see Appendix A for a complete list of committee members). A kick-off meeting and site visit at Gallup Park allowed steering committee members to establish preliminary project objectives and design criteria.

Initial designs for the project were shared in a virtual meeting with the steering committee early in the design process. A digital whiteboard allowed the members to provide comments in real time and captured feedback that informed the designs moving forward.

A final meeting with the steering committee was held virtually in order to narrow down a preferred option for the vehicular bridge, park road and trail. After discussion and a few Zoom polls, a clear choice for both designs emerged as a best fit for Gallup Park.



OVERALL COMMUNITY BASED PROJECT GOALS

The following goals were developed from input received from the community online survey and steering committee. These goals guided the project team in decision making throughout the design process. A full report of the survey can be found in Appendix A.

- ① The new bridge should have a park-like character similar to the existing bridge.
- ② Encourage slow speeds on the vehicular bridge and park road.
- ③ Reduce congestion and improve safety overall on the site:
 - At the intersection of the Border-to-Border Trail and the bridge
 - On the bridge
 - On the Border-to-Border Trail
- ④ Improve pedestrian and non-motorized experience along the trail and road (i.e. shade, views).
- ⑤ Reduce conflicts between parking spaces and pedestrians/non-motorized traffic.

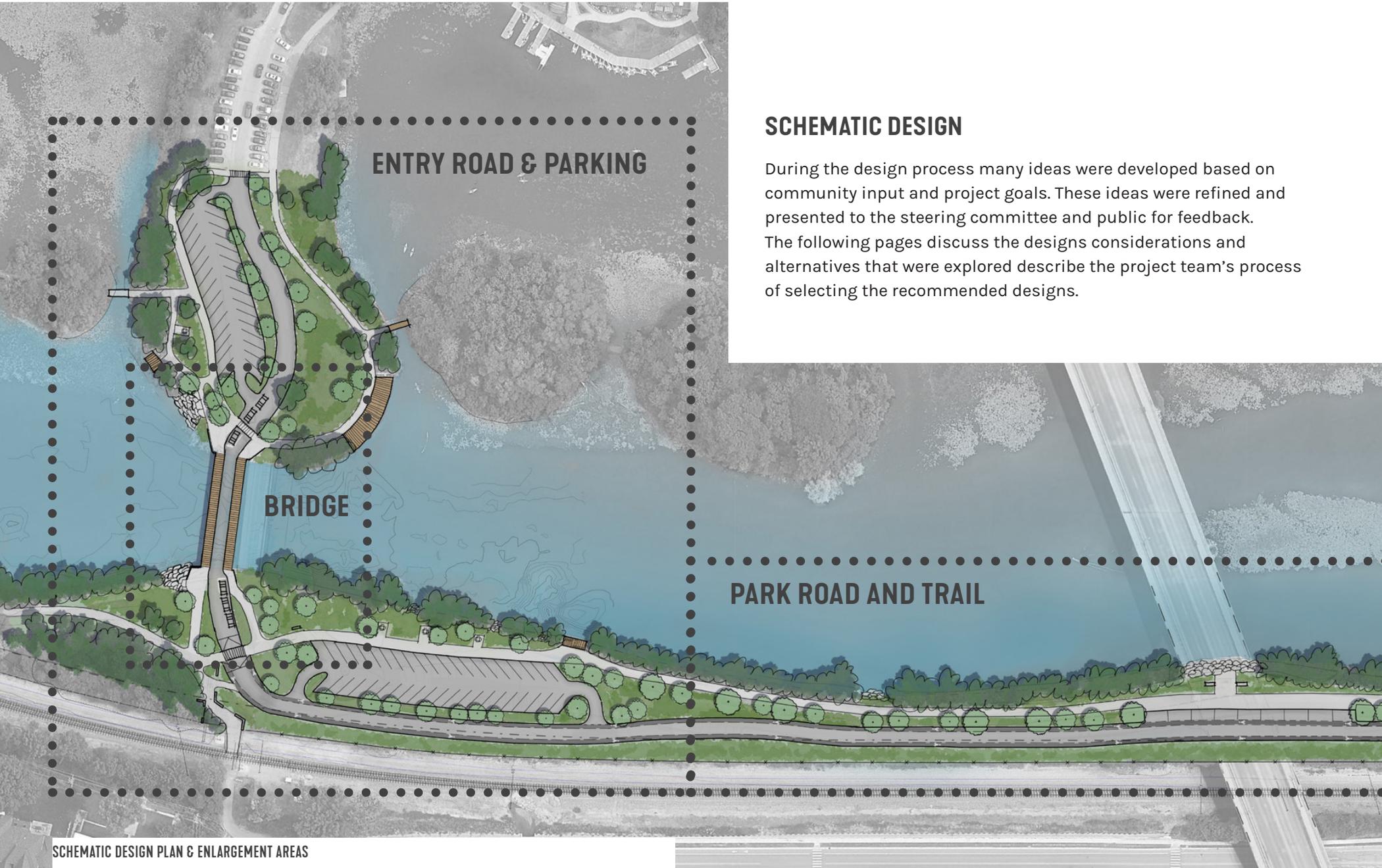
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SCHEMATIC DESIGN

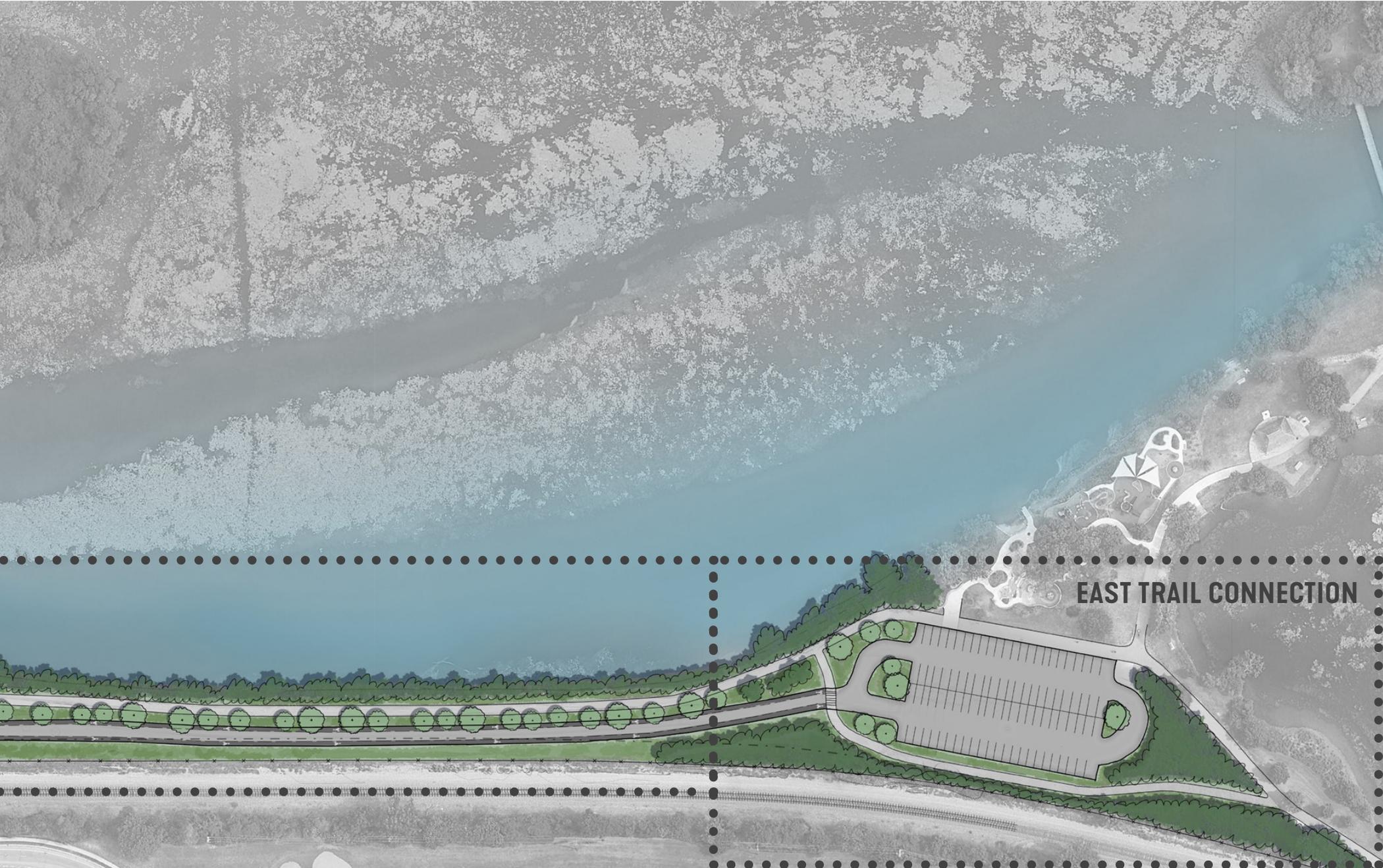




SCHEMATIC DESIGN

During the design process many ideas were developed based on community input and project goals. These ideas were refined and presented to the steering committee and public for feedback. The following pages discuss the designs considerations and alternatives that were explored describe the project team’s process of selecting the recommended designs.

SCHEMATIC DESIGN PLAN & ENLARGEMENT AREAS



EAST TRAIL CONNECTION

VEHICULAR BRIDGE

DESIGN DRIVERS

BRIDGE RELATED OVERALL PROJECT GOALS

The following goals were developed from input received from the community survey and steering committee. These goals guided the project team in decision making throughout the design process.

- 1 Keep the park-like character of the bridge.
- 2 Incorporate wood and natural elements.
- 3 Retain the same charm, feel and uniqueness.
- 4 Encourage slow speeds and calm traffic.
- 5 Reduce non-motorized congestion.
- 6 Improve the pedestrian and cycling experience.
- 7 Enhance driver visibility across the bridge.

DESIGN CRITERIA

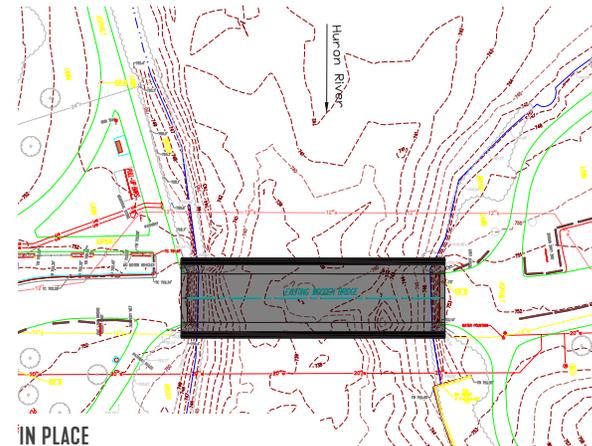
The following design criteria was developed from input received from the community survey and steering committee. These served as the basis of design for the bridge

- ① Increase load capacity for emergency and construction vehicles to HS-20 or 16,000 lbs.
- ② Strive to maintain access to south side of park during construction.
- ③ Minimize maintenance through material choices.
- ④ Provide a vehicular guardrail or combination pedestrian and vehicular guardrail that meets current American Association of State Highway and Transportation Officials (AASHTO) standards of 10-kip impact.
- ⑤ Discourage bridge jumpers with rail design.
- ⑥ Include an underclearance of 4'-3" minimum per Michigan Department of Natural Resources MDNR recommendations.

The bridge location and span were significant considerations that influenced the design and overall cost of the bridge. The following two sections provide a summary of the different options explored as part of the design process.

LOCATION AND ALIGNMENT

Various bridge locations and alignments were studied as part of the design process for a single bridge design and a two bridge design. The locations considered were based on maintaining access during construction and the location of existing utilities. The gas and water lines located east of the bridge are more expensive to relocate than the electric and sanitary lines west of the bridge. Because of this only locations that leave the gas and water lines in-place were considered. Based on project goals, design criteria and cost, a bridge location and alignment directly west and adjacent to the existing bridge is the recommended option.



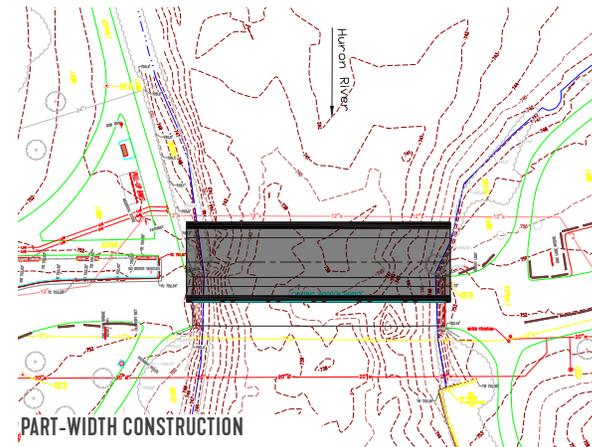
IN PLACE

PROS:

- Minimum site disturbance and approach work
- Minimum span length

CONS:

- Prevents vehicular access to the south side of the park for four to five months during construction



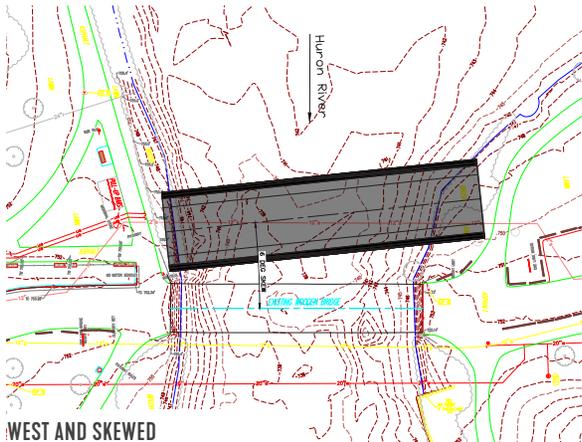
PART-WIDTH CONSTRUCTION

PROS:

- Part width construction is a method where one half of the bridge is demolished and built before the other half allowing users to continue to cross the Huron River
- Minimum span length

CONS:

- Longer construction time (7-8 months)
- More expensive construction method



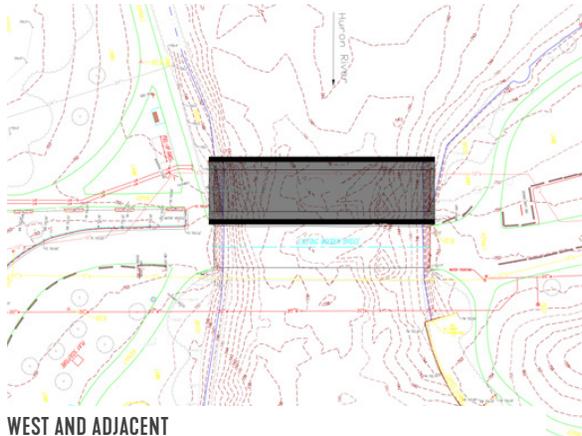
WEST AND SKEWED

PROS:

- Continued park access during construction
- Minimum construction time (4-5 months)
- Minimum span length

CONS:

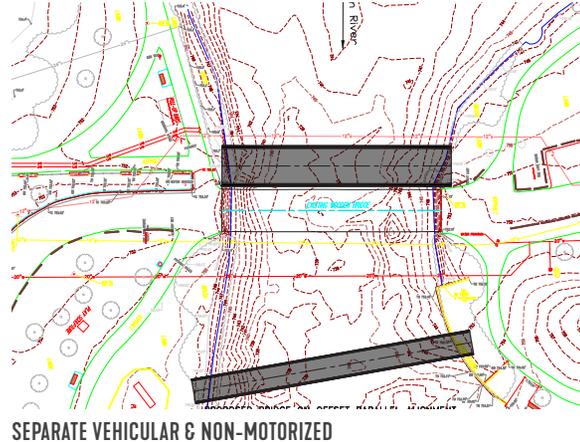
- Longer span



WEST AND ADJACENT

PROS:

- Minimum site disturbance
- Access to south side of river is maintained
- Minimum construction time



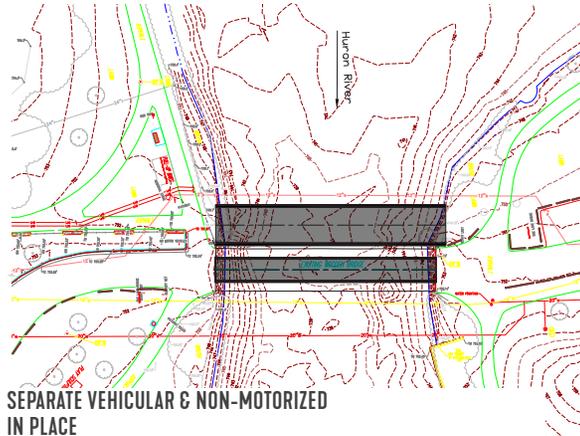
SEPARATE VEHICULAR & NON-MOTORIZED

PROS:

- Improved pedestrian and cycling experience
- Access to south side of river is maintained

CONS:

- Vehicular bridge obstructs view
- Pedestrians may use vehicular bridge



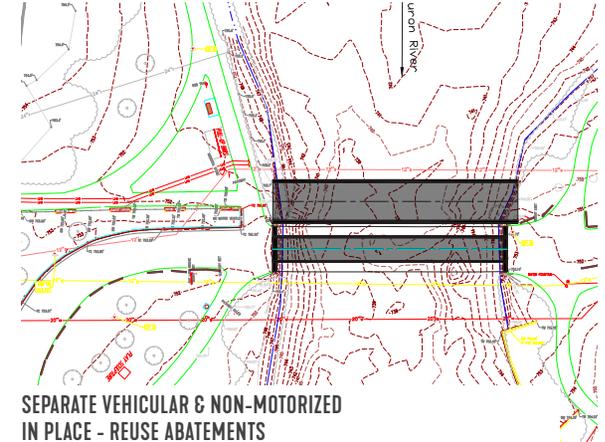
**SEPARATE VEHICULAR & NON-MOTORIZED
IN PLACE**

PROS:

- Minimum site disturbance
- Vehicular bridge could be built before demolishing the existing bridge, maintaining access to the south side of the park

CONS:

- Vehicular bridge obstructs view



**SEPARATE VEHICULAR & NON-MOTORIZED
IN PLACE - REUSE ABUTMENTS**

PROS:

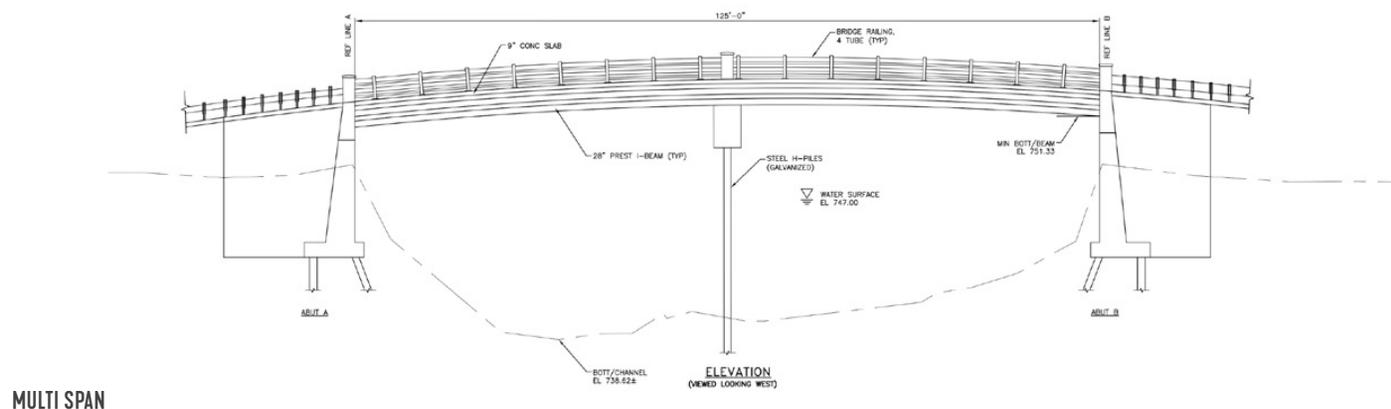
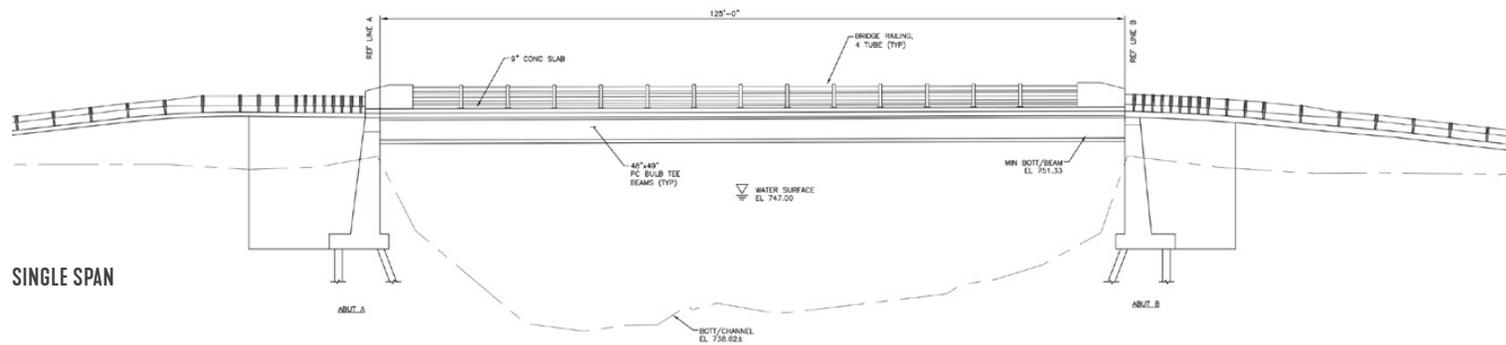
- Minimum site disturbance
- Vehicular bridge could be built before demolishing the existing bridge, maintaining access to the south side of the park
- Reuse existing vehicular abutments saving construction time and cost

CONS:

- Vehicular bridge obstructs view

SPAN

The existing vehicular bridge is a multi-span bridge with two piers in the river. Early in the design process a single span bridge was preferred because it lacked the need to maintain a pier in the water. After further study, the different span configurations (single span versus multi-span) had a direct affect on the approach roadways and significantly impacts the project costs. It is desired to maintain a similar underclearance from the bottom of beams to the water surface. In addition, environmental regulations by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) recommend low chord (bottom structural beam of the bridge) be maintained or improved on bridge replacement projects. With this in mind, single span bridges will require much deeper beams. These deeper beams result in a larger increase in elevation of the approaches at the bridge abutments. Maintaining a maximum 5% grade for accessibility requirements, the approach runouts for a single-span bridge would be approximately 100- to 120-feet long. For a two-span bridge, the beams will be shallower, resulting in approach disturbances that are approximately one-half that of single span. This results in significantly less cost for the revised approaches and is the recommended span type for the future vehicular bridge.



DESIGN ALTERNATIVE EXPLORED

Early in the design process, the project team explored several single lane and two-lane bridge options. Cross sections were developed that combined various motorized and non-motorized configurations. Different travel areas and sizes like bike lanes and shared use paths were considered.

TWO-LANE BRIDGES

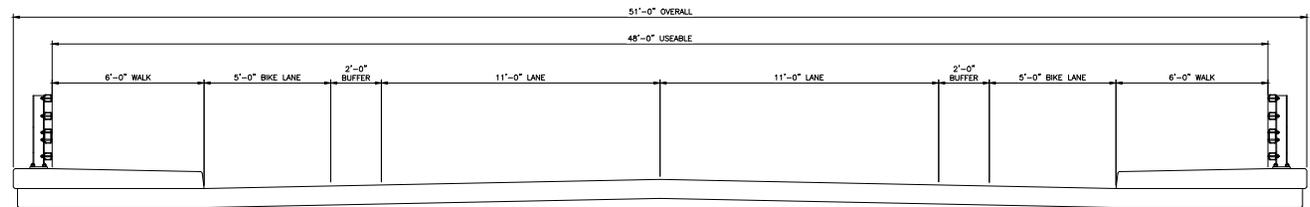
The two-lane bridge options provided more infrastructure than necessary for the area and also detracted from the desire to maintain a pedestrian scale. Traffic calming would also be more difficult with a two-lane bridge.

BUFFERED BIKE LANES WITH TWO VEHICLE LANES

PROS:

CONS:

- Largest cross section
- Minimal traffic calming



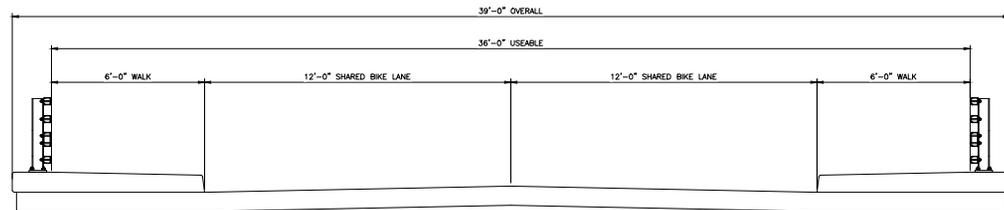
SYMMETRICAL

PROS:

- Pedestrians and cyclists have separate paths
- Non-motorized users can use both sides of the bridge

CONS:

- Bicyclists are not buffered from vehicles
- Minimal traffic calming



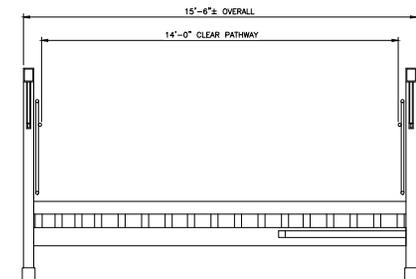
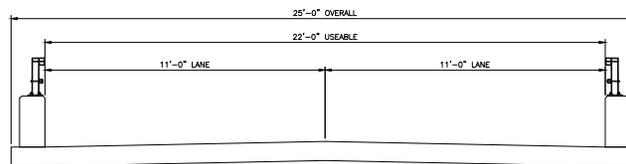
SEPARATE VEHICULAR & NON-MOTORIZED

PROS:

- Pedestrians and cyclists are separate from vehicles
- Improved non-motorized user experience

CONS:

- Pedestrians may use vehicular bridge
- Minimal traffic calming



ONE-LANE BRIDGES

A one-lane bridge option allowed for a cross section closer in size to the existing bridge and provided needed traffic calming measures for the site. The single-lane bridge options received overall support from the public and steering committee and is the recommended option for the future bridge.

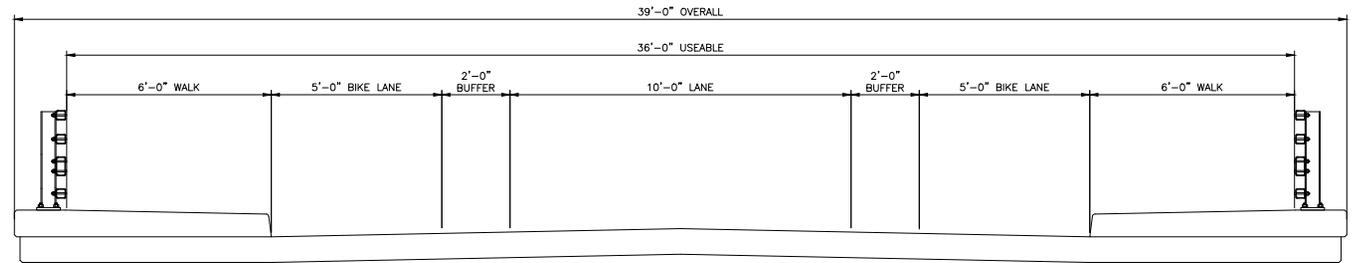
BUFFERED BIKE LANES

PROS:

- Bikes are buffered from vehicles
- Pedestrians and cyclists have separate paths
- Non-motorized users can use both sides of the bridge

CONS:

- Vehicles may use bike lanes as a second lane for passing



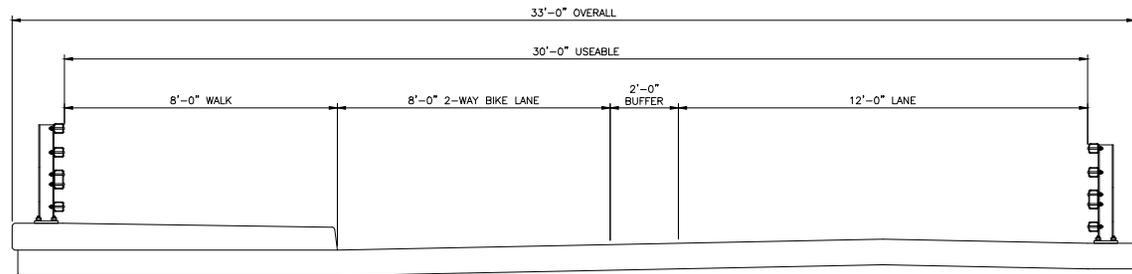
ONE SIDE NON - MOTORIZED - SEPARATE AND BUFFERED

PROS:

- Pedestrians and cyclists have separate paths

CONS:

- Vehicles may use bike lanes as a second lane for passing
- Non-motorized users can only use one side of the bridge



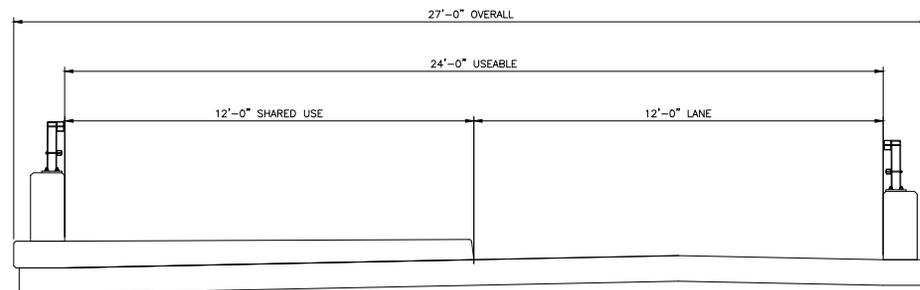
ONE SIDE NON - MOTORIZED

PROS:

- Pedestrians and cyclists are separated from vehicles
- Minimal bridge width

CONS:

- Non-motorized users can only use one side of the bridge



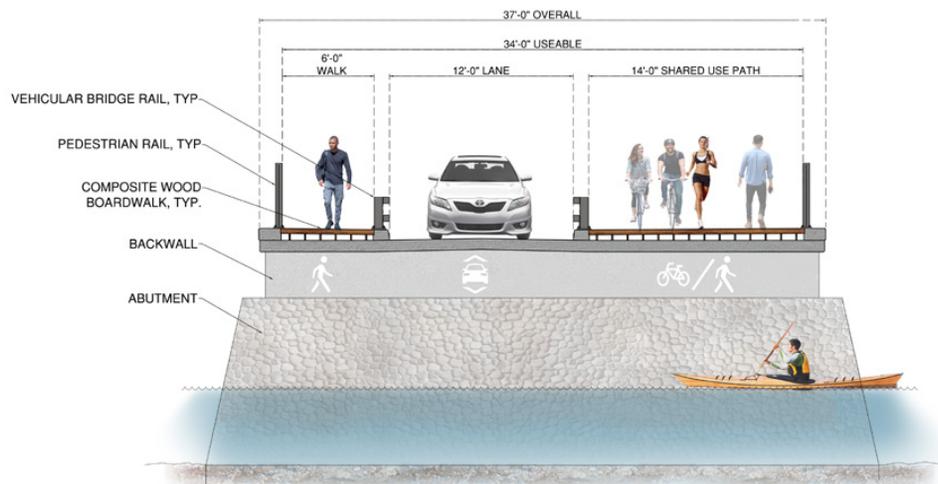
GALLUP LOOP

PROS:

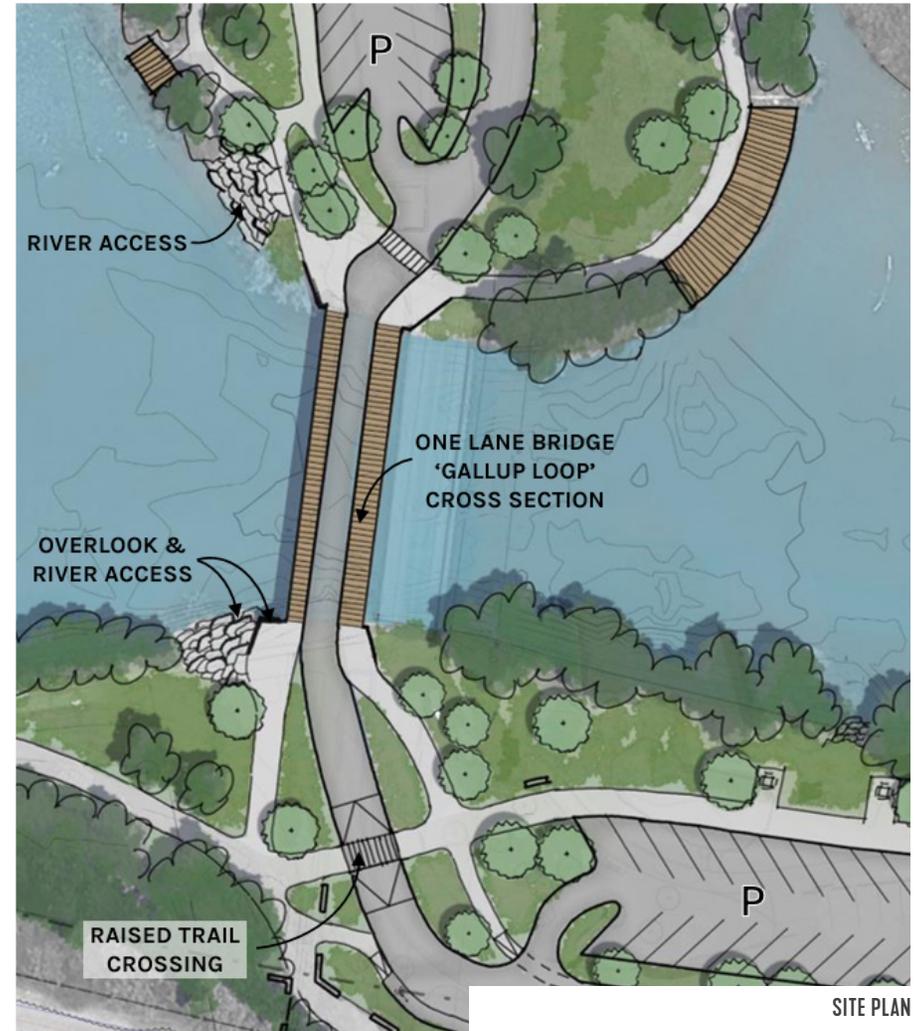
- Pedestrians and cyclists are separated from vehicles
- Minimal bridge width with expanded non-motorized areas

CONS:

- Shared-use path favors the Gallup Loop trail which is not on the best river viewing side



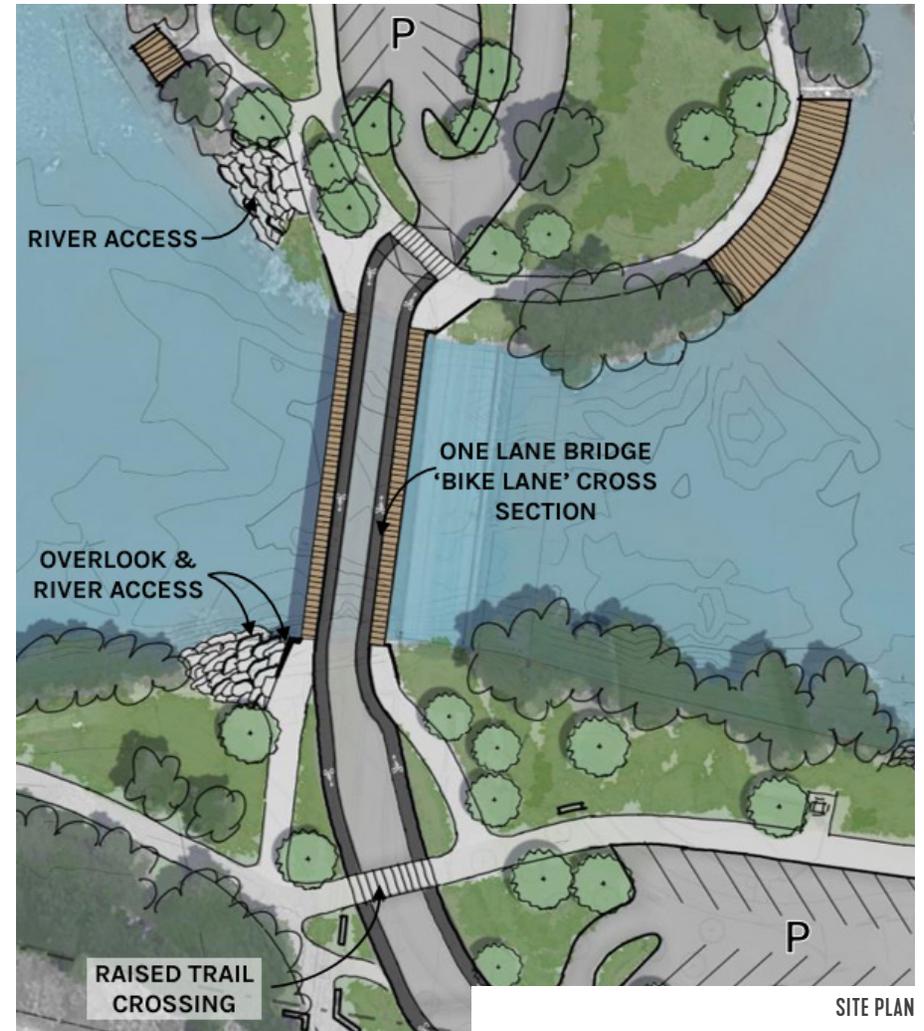
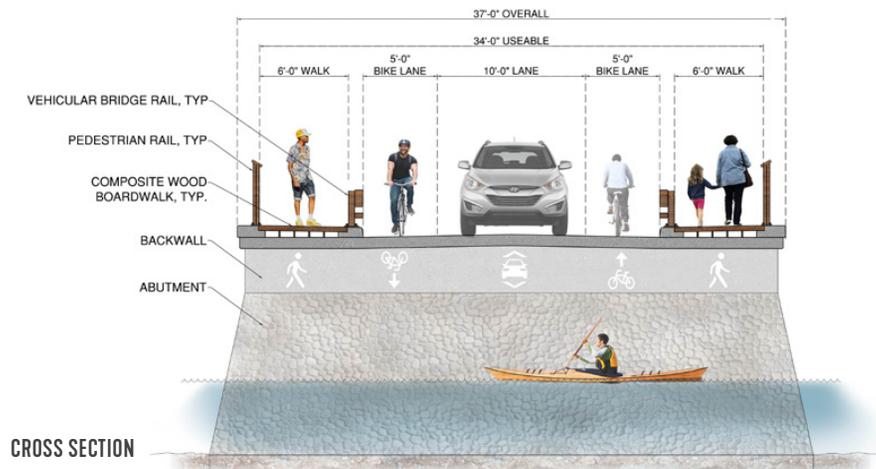
CROSS SECTION



SITE PLAN

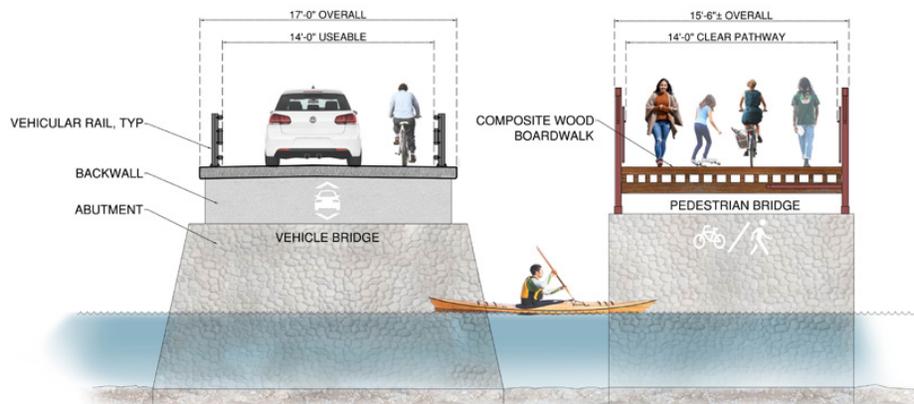
BIKE LANE BRIDGE OPTION

Different one-lane bridge cross sections were developed that explored the allocation of space between vehicles and non-motorists. Options were narrowed down by stakeholders and three were presented to the public. The bike lanes bridge cross section provided an option that physically separated cyclists and pedestrians, but did not offer a lot of additional space for pedestrians. This option was also not selected because it did not provide flexible space for non-motorized users or room for novice bicyclists not wanting to ride in the road.

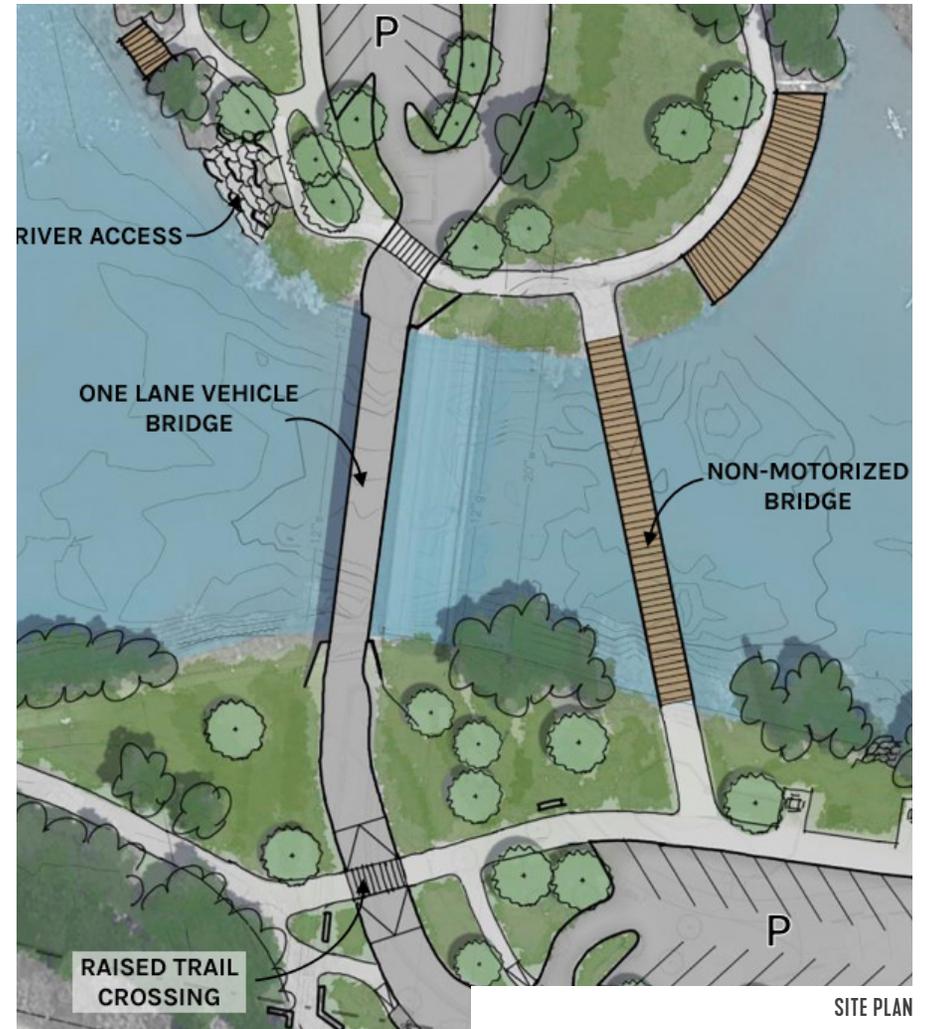


TWO BRIDGE OPTION

Another option explored was for separate vehicular and pedestrian bridges, which provided complete separation between motorists and enhanced the overall experience in this area by providing a more comfortable stopping and viewing area over the river that is away from the noise and congestion of vehicles. Although the two bridge option was similar in cost to the others, the preferred river view to the west would be visually interrupted. This option was also not selected because it would be hard to control pedestrians using the vehicular bridge and the layout of the pedestrian bridge could make for a less direct route for some users.



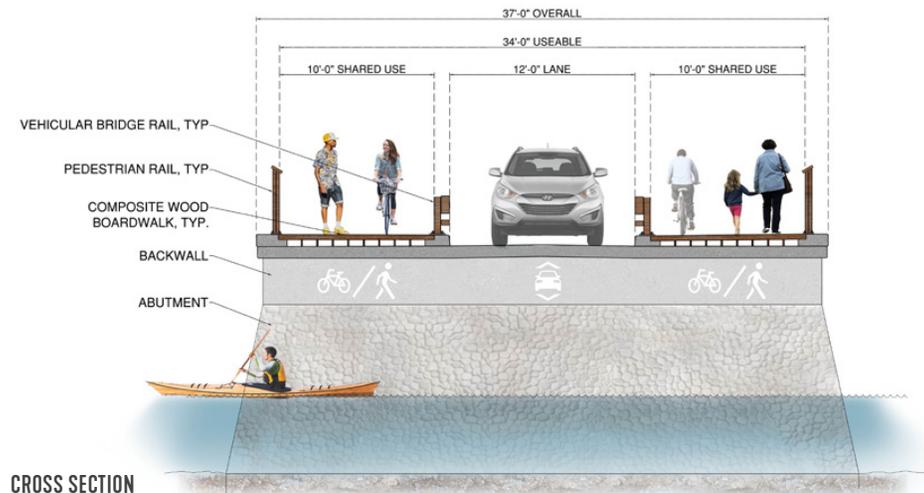
CROSS SECTION



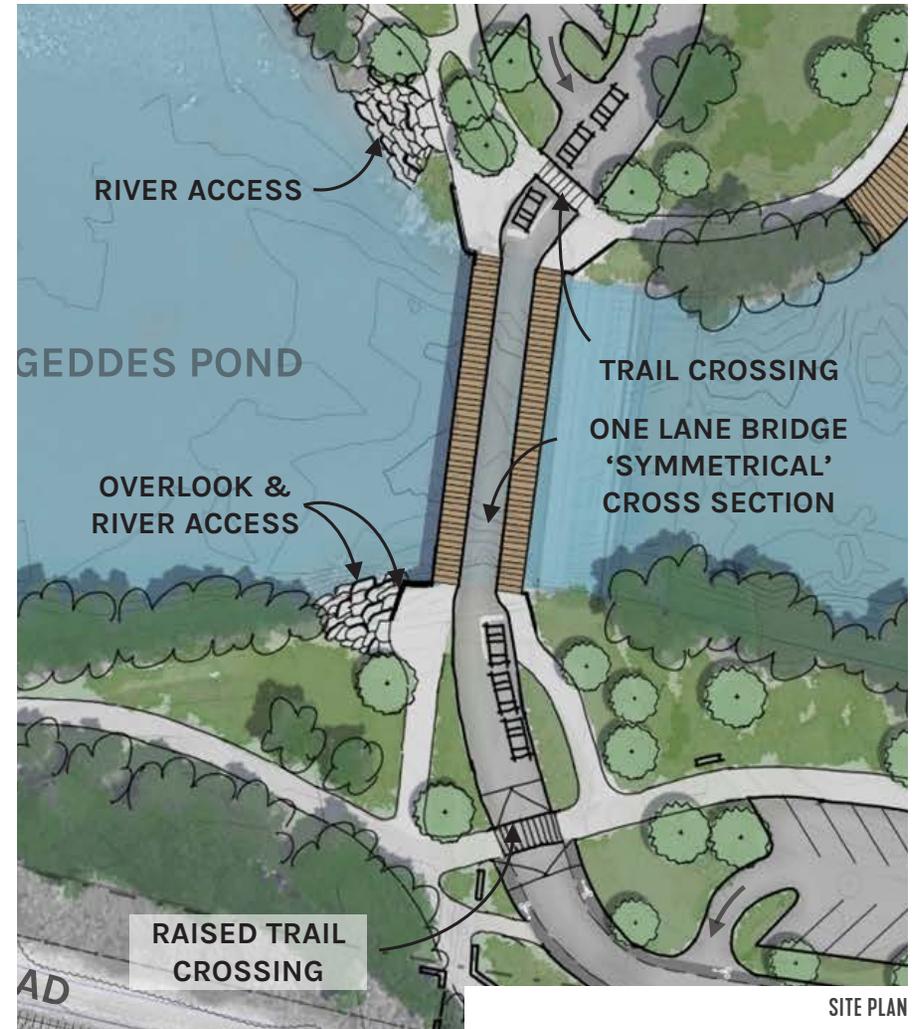
SITE PLAN

RECOMMENDED BRIDGE DESIGN

Based on meetings with the project stakeholders and the public, a the preferred bridge design was the “Symmetrical Bridge Option”, which consists of a single, 12-foot vehicular lane, with symmetrical, 10-foot raised shared-use paths on each side. A rendering of the proposed cross-section is on the following page. This cross section increases the width for non-motorized users approximately 5-feet on each side compared to the existing bridge. This bridge is preferred because it allows for more space for standing on the bridge while also allowing people to pass, it preserves westward views, provides more flexible space for users and allows for users to use the existing route.



CROSS SECTION

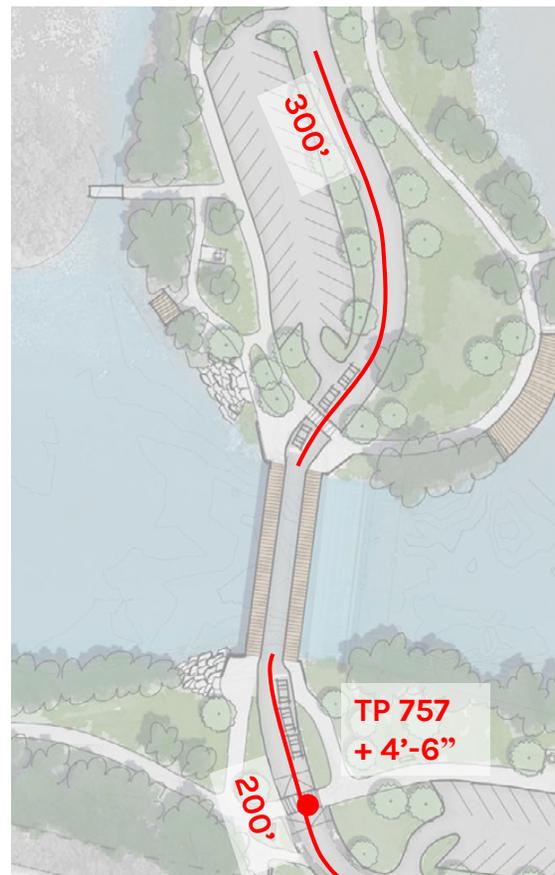


SITE PLAN

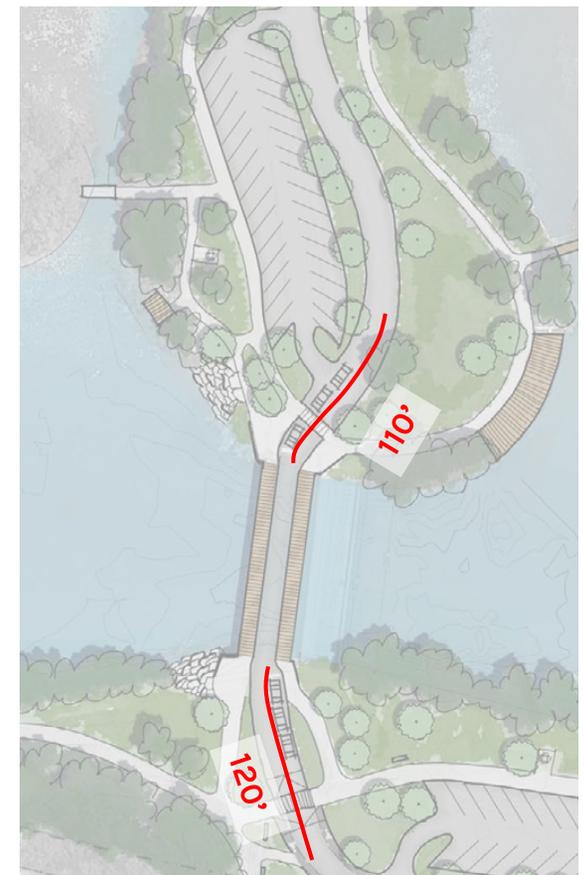
BRIDGE MATERIALITY

From a material perspective, there are three materials that are typically utilized for bridge beams: structural steel, prestressed concrete and glue-laminated timber. In order to achieve the required loading for emergency vehicles the timber beam would need to be more than double in depth resulting in more disturbance/fill and approach work. For example, the trail crossing on the south side would need to be raised 4 1/2-feet and the earthwork required would extend at least-200 feet along the park road.

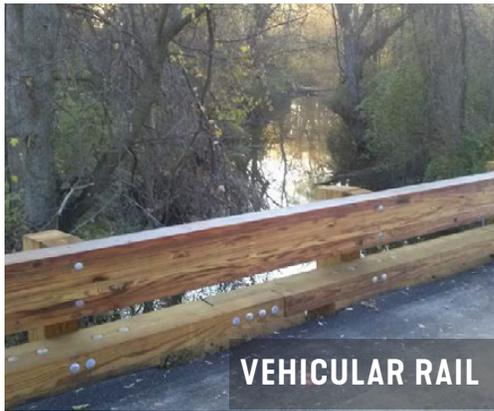
The vehicular bridge should incorporate natural materials so long as their durability and maintenance fits within the park's capacity. A vehicular rail made from timber beams and a composite decking on the non-motorized areas is recommended to provide warm touches of a wooden aesthetic. Part of Gallup Park's identity is the river cobble used on park signage and fence elements. A river cobble veneer on the bridge abutments is preferred to tie the bridge to the existing site.



SITE DISTURBANCE
WOOD BRIDGE



SITE DISTURBANCE
STEEL/CONCRETE BRIDGE



PARK ROAD AND TRAIL

DESIGN DRIVERS

The following design criteria was developed from input received from the community survey and steering committee. These served as the basis of design for the bridge

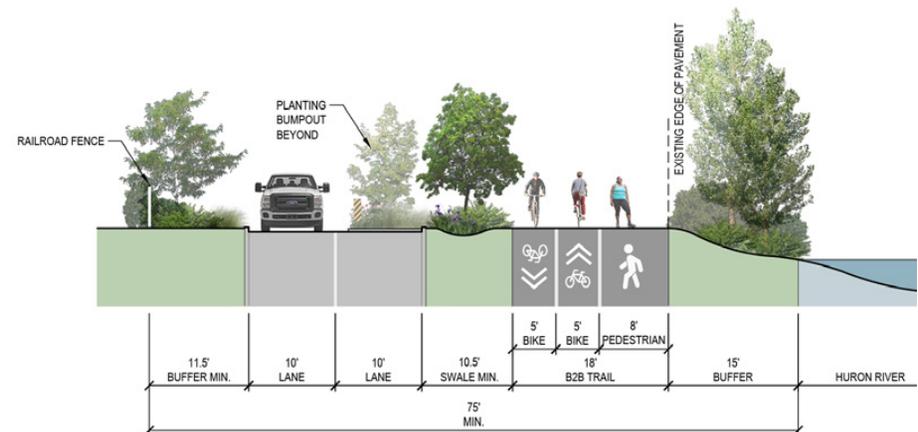
- 1 Increase the Border-to-Border Trail width to 12'-0" minimum to meet current trail standards and accommodate heavy use.
- 2 Provide stormwater management along the trail to align with the City of Ann Arbor's stormwater goals.
- 3 Aim to separate high-speed commuter cyclists from recreational trail users
- 4 Encourage slow vehicle speeds with road design.
- 5 Formalize and stabilize river access points with dedicated access.

DESIGN ALTERNATIVES EXPLORED

During the design process, four park road and Border-to-Border Trail configurations were explored to increase the capacity of the trail and provide different use zones for commuting and novice cyclists as well as other park users. Various traffic calming measures were studied in order to encourage slow vehicle speeds in the area. All options expanded the landscape buffer between the park road and trail to 10-feet, allowing for stormwater collection and shade trees. The options also kept the north side of the trail at its existing location approximately 15-feet from the river, creating a riparian buffer.

COMBINED BORDER-TO-BORDER TRAIL OPTION

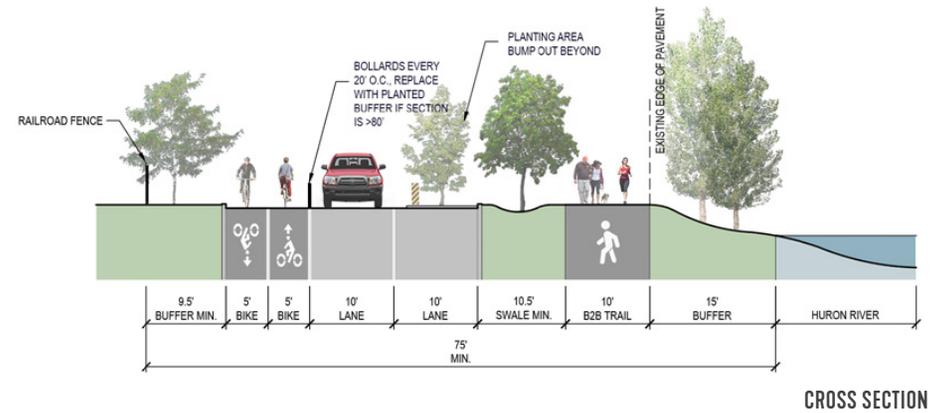
The combined Border-to-Border trail option expanded the existing trail to 18-feet and dedicated different use zones for cyclists and pedestrians. This option raised concerns about users staying in their use zone and included two very wide swaths of pavement. Commuting cyclists would also still desire to ride in the road with this option.



CROSS SECTION

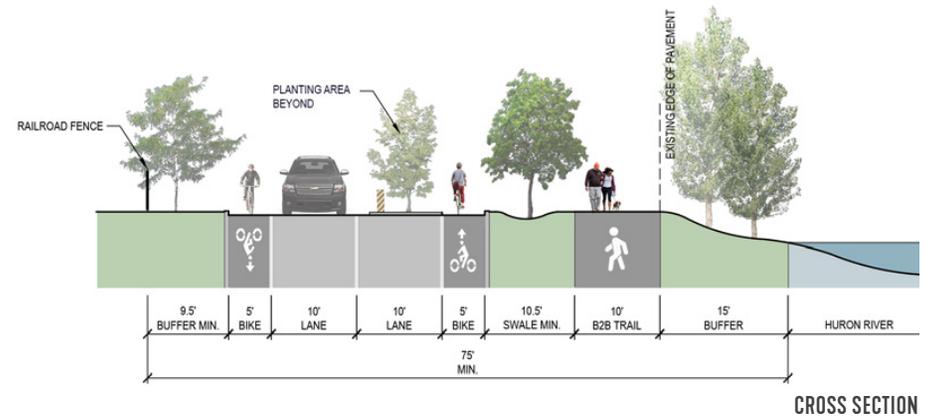
CYCLE TRACK OPTION

The cycle track cross option provides a safe and comfortable area for bicyclists that is physically buffered from vehicle traffic, but directing users to that area would prove difficult and the cross section includes a large surface area of hardscape. Buffered bike lanes would also attract recreational users and therefore would not help in separating commuters and recreational users. Runners may also use the cycle track and it could create confusion as to what is the B2B and what isn't.



BIKE LANE OPTION

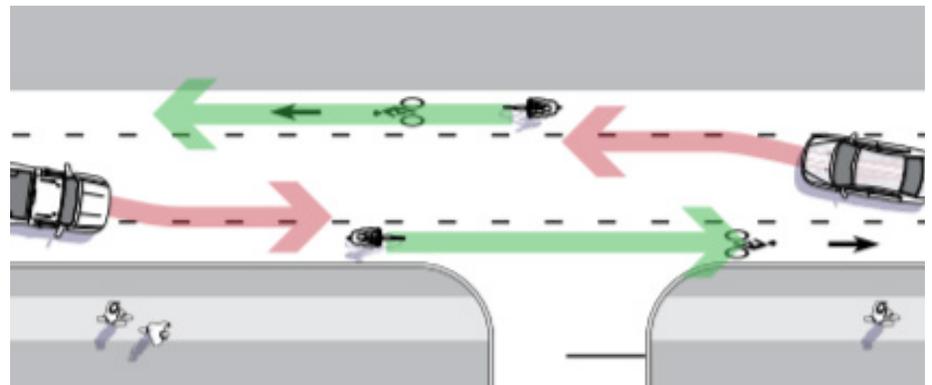
The bike lanes cross section options widens the current park road to provide dedicated bike lanes for cyclists. Traffic calming planting areas provide buffered areas between cyclists and vehicles. This option also includes a large amount of hardscape and may not be as comfortable for novice bicycle users. The volume of traffic and speeds on the park road also didn't warrant dedicated bike lanes.



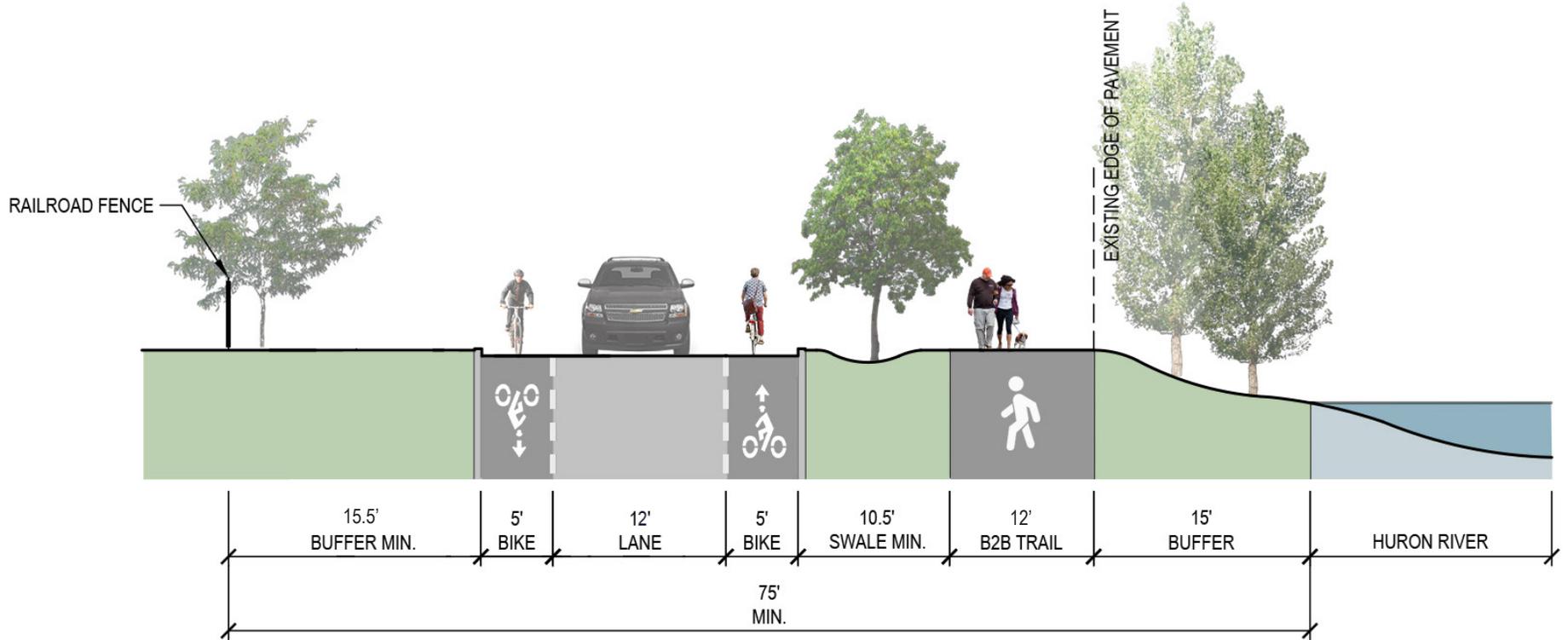
RECOMMENDED ROAD AND TRAIL DESIGN

Advisory bike lanes are a new design approach being installed in various road segments across Ann Arbor and the country. The road provides enough width for two-way traffic but advisory bike lane markings provide priority to cyclists and cause traffic to yield behind bicycle traffic. Because of the low-volume vehicular traffic, advisory bike lanes are most suitable for this area. This design has a reduced pavement width and cost compared to the other options and is largely how the street functions today. This road configuration offers a dedicated area for commuting cyclists and may also include speed humps for additional traffic calming. Additional signage and/or education may be necessary to inform users.

The Border-to-Border Trail is widened from 8-feet to 12-feet to accommodate the trail's heavy use and provide additional space for both pedestrians and novice and leisure cyclists.



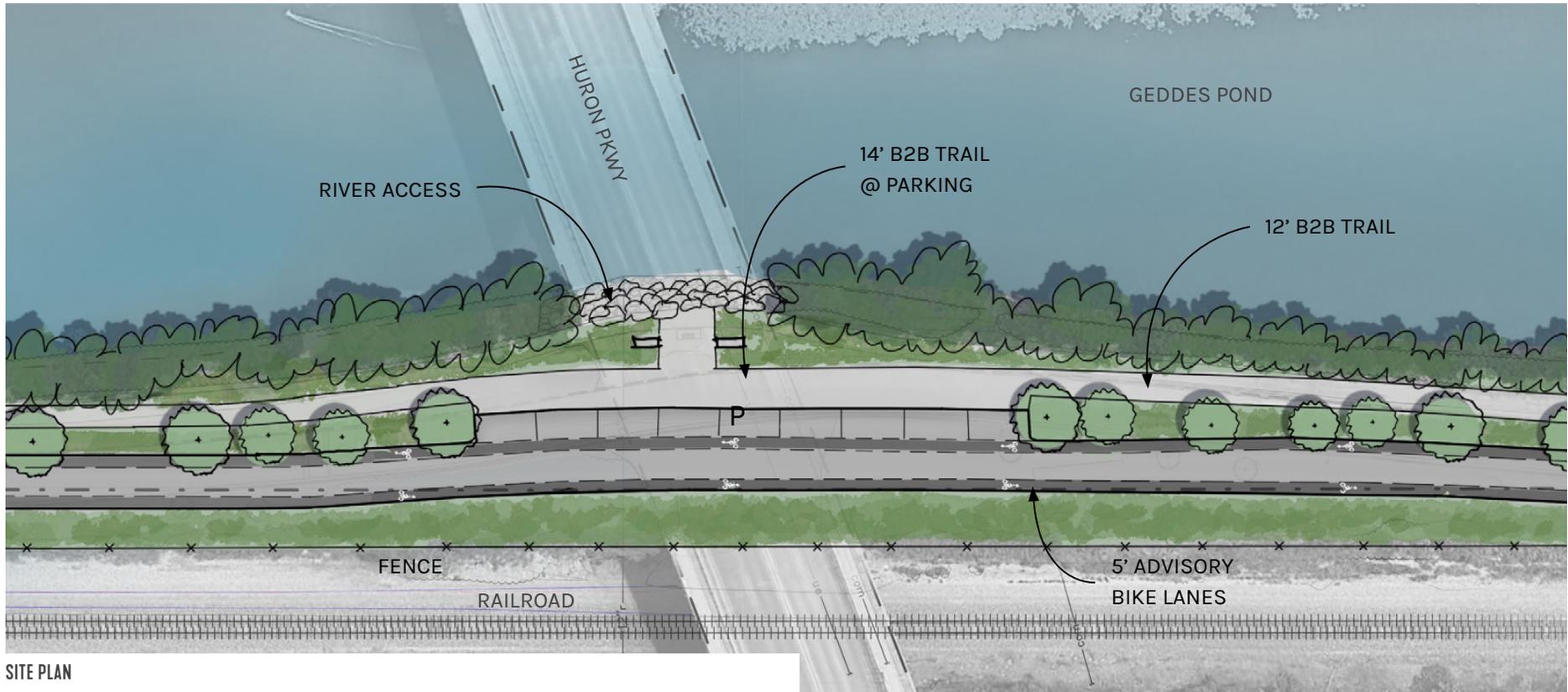
ADVISORY BIKE LANES



CROSS SECTION

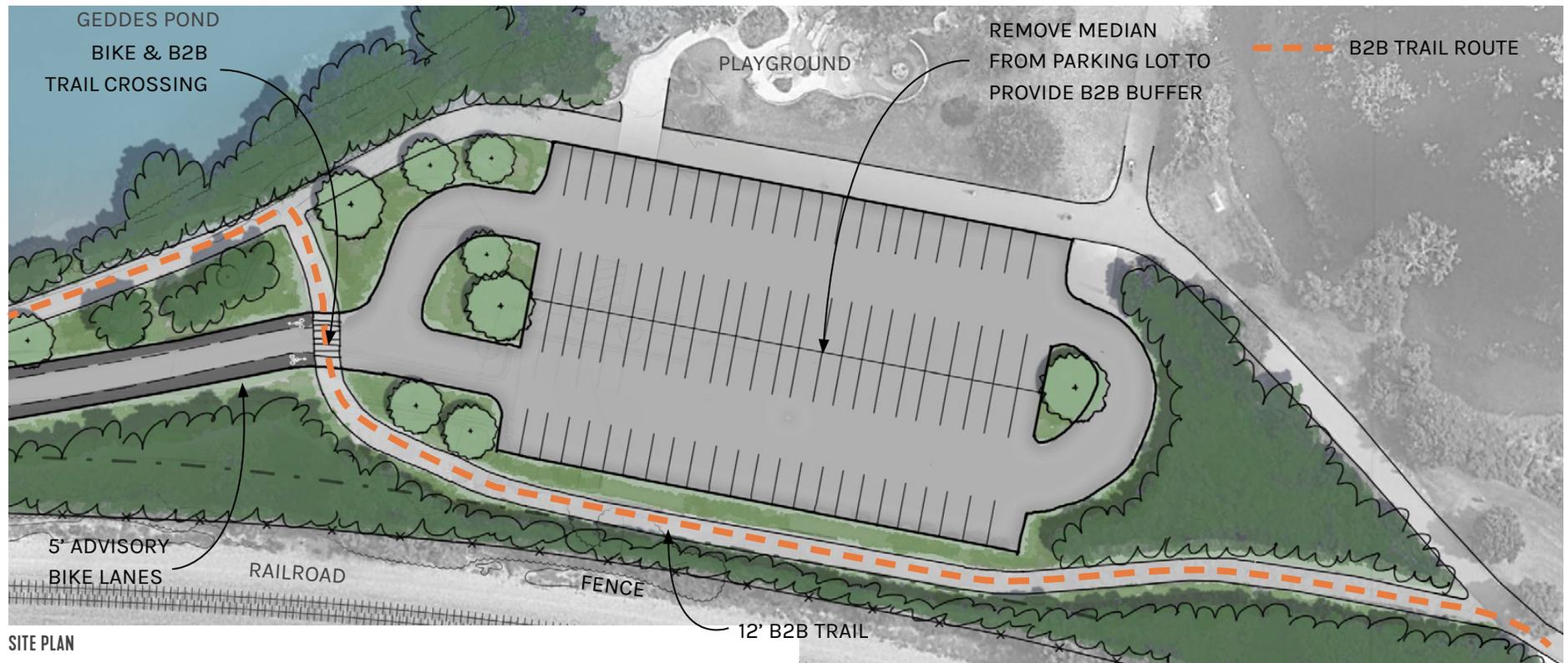
HURON PARKWAY BRIDGE AREA

The park road stretches about 2,000-feet from the vehicular bridge to the east end parking lot. In order to distribute parking along this area, additional parking spaces are provided at the Huron Parkway bridge overpass. This also provides an additional opportunity to calm traffic. A large river access area with steppable stone is included to provide additional fishing and river viewing.



EAST TRAIL CONNECTION

Currently the Border-to-Border Trail is routed north of the parking lot directly between the parking lot and the accessible playground. This area has many users crossing the trail from the parking lot to get to different areas of Gallup Park which creates conflicts with trail users. Removing the landscape median from the current parking lot will allow for enough space to re-route the Border-to-Border Trail south of the parking lot allowing trail users to avoid the parking lot and playground



ENTRY ROAD, PARKING AND TRAIL CROSSING

DESIGN CRITERIA

The following design criteria was developed from input received from the community survey and steering committee. These served as the basis of design for the bridge

- 1 Increase safety of the Border-to-Border crossing and improve the visibility for motorists.
- 2 Incorporate a vehicular turnaround north of the bridge.
- 3 Provide a designated river access point for kayakers and tubers entering and exiting the river to reduce erosion.
- 4 Encourage slow speeds on the bridge and park road by including a yield point at the one-lane bridge.
- 5 Move parking off street to reduce road congestion and increase safety.

DESIGN ALTERNATIVES EXPLORED

Various parking configurations were explored to increase parking supply and non-motorized traffic safety. On-street parking was considered but ultimately created too many conflict points for vehicles and pedestrians.

Another off-street configuration was considered (on page 70) that positioned off-street parking on the north side, to the east of the park road. This again forces many users to cross the road to get to their destinations, especially kayakers and tubers.



**ON-STREET PARKING
OPTION**



**OFF-STREET PARKING
OPTION**

ENTRY ROAD PARKING AND TRAIL CROSSING RECOMMENDED DESIGN

The Gallup Park entry road currently has parking directly on the street, causing congestion on the park road and multiple non-motorized conflicts:

- Pedestrians crossing the street from parking to get the rail/playground.
- Parked cars do not have great visibility of the road
- Bicyclists using the road conflict with pull-in parking

Moving parking off the street removes these conflicts and creates an opportunity for a turnaround point before crossing the bridge. The causeway and area north of the railroad are very narrow. The parking lot design uses an angled and one-way layout in order to minimize the parking footprint and pavement in the area.

The Border-to-Border Trail crossing is shifted south of the bridge to increase visibility and a tabled crossing is included to further encourage traffic calming in the area. Multiple new designated river access points are proposed for tubers and kayakers to reduce erosion happening at current informal entry and exit points. Additional river access points are included east of the bridge for fishing and river viewing.



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03

COST SUMMARY AND PHASING



COST SUMMARY

Depending on available funding, the vehicular bridge, park road and trail projects could be phased or built as one complete project. If phased separately, the vehicular bridge and required approach work is estimated to be approximately **\$2.3 million**. The park road, trail and parking lot project is estimated to be approximately **\$4.5 million** for a total of **\$6.8 million**.

BRIDGE DETAILED COST ESTIMATE

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
BRIDGE APPROACH					
0001	Pavement (roadway) Removal	1,935	SF	\$2.00	\$3,870.00
0002	Backfill, Select	130	CY	\$19.61	\$2,549.30
0003	Aggregate Base, 6"	215	SY	\$12.00	\$2,580.00
0004	HMA, Roadway Approach (6")	75	Ton	\$120.00	\$9,000.00
Bridge Approach Total					\$17,999.30
BRIDGE REPLACEMENT					
0005	Structures, Rem	1	LSUM	\$200,000.00	\$200,000.00
0006	Backfill, Structure, CIP	400	CY	\$26.50	\$10,600.00
0007	Excavation, Fdn	700	CY	\$15.00	\$10,500.00
0008	Pile Driving Equipment, Furn	1	LSUM	\$80,000.00	\$80,000.00
0009	Pile, Steel, Furn and Driven, 12 inch	3,300	FT	\$31.50	\$103,950.00
0010	Pile Point, Steel	80	EA	\$175.00	\$14,000.00
0011	Bridge Ltg, Oper and Maintain	175	CYD	\$1.96	\$343.00
0012	Expansion Joint Device	76	FT	\$199.72	\$15,178.72
0013	Reinforcement, Steel, Epoxy Coated	83,500	LB	\$1.19	\$99,365.00

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0014	Substructure Conc	310	CY	\$470.00	\$145,700.00
0015	Superstructure Conc, Form, Finish, and Cure, Night Casting	1	LSUM	\$125,000.00	\$125,000.00
0016	Superstructure Conc, Night Casting, High Performance	175	CY	\$215.00	\$37,625.00
0017	Bearing, Elastomeric, 1 1/2 inch	9,216	SIN	\$1.06	\$9,768.96
0018	Prest Conc Box Beam, Furn, 27 inch	840	FT	\$210.00	\$176,400.00
0019	Prest Conc Box Beam, Erect, 27 inch	840	FT	\$15.00	\$12,600.00
0020	_ Wood Decking, Composite	2,800	SF	\$50.00	\$140,000.00
0021	_ Bridge Railing, Aesthetic Timber, Pedestrian	280	FT	\$125.00	\$35,000.00
0022	_ Bridge Railing, Timber, Vehicular	280	FT	\$95.00	\$26,600.00
0023	_ Cobblestone Facing	750	SF	\$45.00	\$33,750.00
Bridge Replacement Total					\$1,276,380.68
BRIDGE SUBTOTAL					\$1,294,379.98
Contingency at Schematic Design (25%)					\$323,595.00
Subtotal					\$1,617,974.98
General Conditions* (20%)					\$323,595.00
Construction Inspection (12%)					\$194,157.00
Engineering Fees (12%)					\$194,157.00
Bridge Estimate Total					\$2,329,883.96

PARK ROAD AND TRAIL DETAILED COST ESTIMATE

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
PARK ROAD AND PARKING SITE PREPARATIONS, REMOVALS					
0024	Clearing	4	AC	\$5,000.00	\$20,000.00
0025	Tree Removal (6" and larger)	40	EA	\$500.00	\$20,000.00
0026	Pavement (roadway) Removal	112,000	SF	\$2.00	\$224,000.00
Site Preparations, Removals Total					\$264,000.00
PARK ROAD AND PARKING SITE PREPARATIONS, PAVING					
0027	Erosion control, Silt Fence	3,000	LF	\$5.00	\$15,000.00
0028	Grading/Earthwork	5,000	CY	\$10.00	\$50,000.00
0029	Traffic Control	1	LS	\$20,000.00	\$20,000.00
0030	Geotextile Stabilization	10,000	SY	\$2.00	\$20,000.00
0031	Tree Protection	20	EA	\$250.00	\$5,000.00
Site Preparations, Paving Total					\$110,000.00
PARK ROAD AND PARKING PAVING					
0032	Roadway/Path Final Grading	6,000	LF	\$5.00	\$30,000.00
0033	Parking Lot Final Grading	7,100	SY	\$5.00	\$35,500.00
0034	Aggregate Base, 10"	13,600	SY	\$18.00	\$244,800.00
0035	HMA, Roadway & Parking (6")	4,425	Ton	\$120.00	\$531,000.00
0036	Straight Curb	6,700	LF	\$25.00	\$167,500.00
0037	Gutter spillways	25	EA	\$1,000.00	\$25,000.00
0038	Pavement Marking	1	LS	\$5,000.00	\$5,000.00
0039	Riprap (each spillway)	20	EA	\$500.00	\$10,000.00
Paving Total					\$1,048,800.00

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
PARK ROAD MISCELLANEOUS					
0040	New Overlook @ Causeway	1	EA	\$50,000.00	\$50,000.00
0041	River Access Along Path	6	EA	\$2,000.00	\$12,000.00
0042	Tube & Kayak Launch (N & S Sides)	1	EA	\$25,000.00	\$25,000.00
0043	Stacked Stone Overlook at Huron Pkwy	1	EA	\$25,000.00	\$25,000.00
0044	Drainage	1	EA	\$50,000.00	\$50,000.00
Park Road Miscellaneous Total					\$162,000.00
PARK ROAD LANDSCAPE & FURNISHINGS					
0045	Canopy Trees	100	EA	\$400.00	\$40,000.00
0046	Planting Bed	133,146	SF	\$4.00	\$532,584.00
0047	Plant Soil (Bioswale 9" depth)	2,440	SY	\$22.00	\$53,680.00
0048	Benches	12	EA	\$2,500.00	\$30,000.00
0049	Bike Racks	6	EA	\$800.00	\$4,800.00
0050	Trash Receptacles	3	EA	\$2,000.00	\$6,000.00
0051	Water Fountains	2	EA	\$5,000.00	\$10,000.00
0052	Picnic Tables	4	EA	\$5,000.00	\$20,000.00
Landscape & Furnishings Total					\$697,064.00
PARK ROAD & PARKING IMPROVEMENTS					\$2,281,864.00
Contingency at Schematic Design (25%)					\$570,466.00
Subtotal					\$2,852,330.00
General Conditions* (20%)					\$570,466.00
Construction Inspection (12%)					\$342,279.60
Engineering Fees (12%)					\$372,099.60
Park Road & Parking Estimate Total					\$4,170,355.20

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
B2B TRAIL GRANT ELIGIBLE					
0027	Pavement (path) Removal	28,000	SF	\$1.10	\$30,800.00
0035	Aggregate Base, 6"	2,800	SY	\$12.00	\$33,600.00
0038	HMA, Path (3")	995	Ton	\$120.00	\$119,400.00
0042	Signage/Kiosk	1	LS	\$15,000.00	\$15,000.00
Grant Eligible Total					\$294,800.00
B2B TRAIL GRANT ELIGIBLE IMPROVEMENTS					\$198,800.00
Contingency at Schematic Design (25%)					\$49,700.00
Subtotal					\$248,500.00
General Conditions* (20%)					\$49,700.00
Construction Inspection (12%)					\$29,820.00
Engineering Fees (12%)					\$29,820.00
B2B Trail Grand Eligible Estimate Total					\$357,840.00

BRIDGE, PARK ROAD & B2B TRAIL TOTAL	\$6,795,079.16
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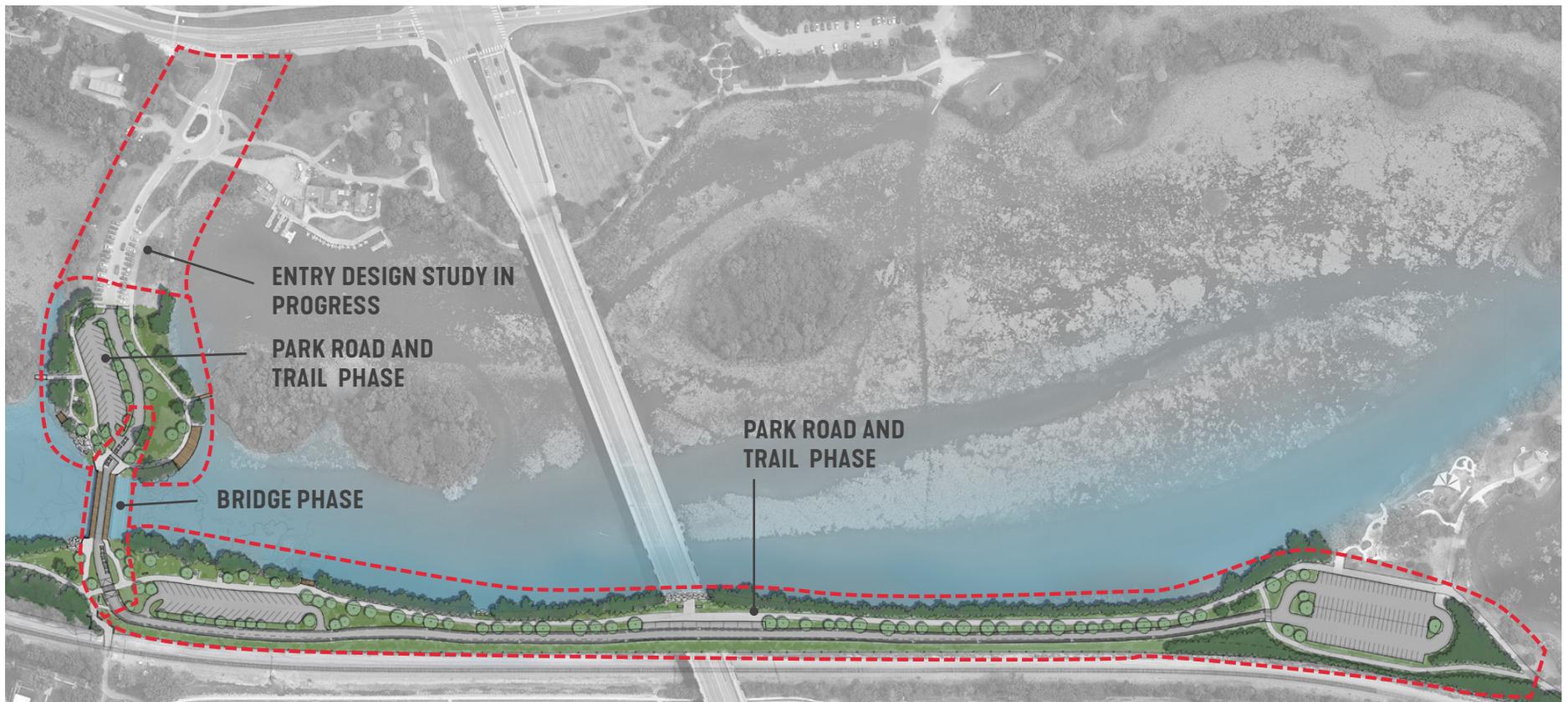
Notes: Estimate does not include Escalation and Playground Replacement

Estimate does not include Lighting or Inspections by City/State engineering or regulatory agencies. (i.e. railroad inspector)

*General Conditions Generally Includes: Mobilization, Staking/Layout, Bonding/Insurance, Permits, Testing and Site management**

**Site Management Generally Includes: Trailer/office, Office/Administration, Superintendent, Temporary Utilities, Safety Measures, Security, Signage, Cleanup/Dumpster

PHASING PLAN



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APPENDIX A

OUTREACH



STEERING COMMITTEE MEETING #1

The project team met with various City of Ann Arbor and Washtenaw County representatives at Gallup Park on August 5, 2020. The purpose of this meeting was to establish design criteria for the vehicular bridge, park road and trail. Attendees were given a brief project overview and summary of the ongoing initial public outreach survey. They then participated in three "post-it" exercises to initiate conversation and begin to organize project goals. The following boards are answers the steering committee gave when asked "It would be great if..." for the three major project elements.

STEERING COMMITTEE MEMBERS

City of Ann Arbor

- Hillary Hanzel, Park Planner
- Adam Fercho, Park Planner
- Mike Nearing, Engineer
- Scott Spooner, Park Operations Manager
- Cheryl Saam, Gallup & Argo Liveries Manager
- Cynthia Redinger, Transportation Engineer
- Heather Seyfarth, Planner

Washtenaw County Parks & Recreation

- Peter Sanderson, Park Planner

IT WOULD BE GREAT IF...

VEHICLE BRIDGE

Was unique & felt special

Was affordable & easy to construct & maintain

stop bridge jumpers

Keep charming

GATEWAY- Iconic.

- Wasn't made of wood.

- WAS ADA-compliant.

Felt like a gateway into the park

Had better sight distance

SIGNATURE PIECE - ART

clear load bearing signs - buses, trucks

ADA

SAFETY - visual @ crossings/turn

- clear-spanned the river.

- can accommodate heavier trucks safely.

- had better sight distance/vertical alignment.

Felt secure when driving over it (no scary sounds)

better visibility for non-veh. users

wider walk/bike paths

WOODEN SURFACE IS NOT GREAT IN SNOW

overlook / seating opportunities

- Was 2 lanes wide ... better for emergency access.

SAFETY MEASURES REGARDING PEOPLE JUMPING OFF BRIDGE

Limit/spread out conflict points

traffic light?

ONE LARGE PED/BIKE LANE INSTEAD OF TWO SMALL LANES

WASTING FROM PARKING/TUBERS-

- had better separation from the B2b Trails.

Opportunities to stand/sit on bridge & take in views

Wider "lanes" for non-veh. users

Too Slippery

PUBLIC TRANSIT - BUS PASSAGE

MAINTAIN'S PARK FEELING

Human/park scale (not too big/intrusive)

KEEP AESTHETIC

MORE NON-MOTO FRIENDLY

trees in river catch on structure

CAPACITY FOR LARGE VEHICLES

BIKE/PED CAPACITY ↑ ON BOTH SIDES

SPOT FOR STANDING + LOOKING @ RIVER

NO TRAFFIC SIGNAL - CONSIDERS FUTURE MAINTENANCE ACCESS (PARKING, etc.)

SLOWS TRAFFIC W/O BACKUP

IT WOULD BE GREAT IF...

B2B TRAIL

- Was wider through the Park area

WIDEN

- The B2B Trail had more separation from the parking areas

IMPROVE INTERFACE W/BRIDGE/ROAD

WAYFINDING - KNOW WHATS WHERE...

GALLUP IDENTITY / PLANNING

SUSTAINABILITY ELEMENTS

B2B TRAIL HEAD AREA

FEEL SEPARATE FROM ROAD/BRIDGE.

Separate commuter bikes from peds & recreation

Wider path - 10' min but maybe more due to winds

LOOKED MORE INVITING

Provision for higher speed through bikes

MORE SEPARATION FROM ROAD

Wider trail

Ped/Bike Counters (TAP)

Bike commuters over speed

But for from road/cars Visual & safety

Better offset & sightlines at bridge crossing. Stop signs?

LESS TURF?

ADA Compliance @ crossings

CONSIDER OPENING RIVER VIEWS

Separate trail from road

Signs & distance

Connections & views to river. More park-like experience

IMPROVE CAPACITY WALKERS/ROGS VS. BIKES

Change trail crossing at 1 late bridge

More break out points to river

More shade trees on swim side

Consider shy distance.

Crossing @ moved to improve sight distance

Areas to pull off trail and stop at views, others.

IT WOULD BE GREAT IF...

PARK ROAD

Trees or
Vegetation
buffer
between
path

ADA Compliance
& better
way finding

Experiential

- Separate parking
from the road.

turn
around
before
the bridge

Narrower
to
encourage
slower
speeds

Traffic calming
elements include
hor. deflection.
Eg. Pinch points

SEPARATE
VEHICLES AND
TUBERS exiting
TOWER.

- remove bumper
blocks from
roadway

SUSTAINABLE
ELEMENTS
(EV)

More
meandering
/interesting
alignment

Consider on-
street bike
facilities to
ease congestion

Protective of kids
running onto Road

DROP OFF
AREA

More views
of the
River

On pavement
Art to
create places
instead of
just a through

PEDESTRIAN
SAFETY/
DRIVER
VISIBILITY

FLOODING/
DRAINAGE
(POTHOLES)

WALKWAY
AROUND
PARKING

No
speed
bumps

Bridge
congestion

EASE OF
MAINTENANCE
(SNOW)

More
parking

Keep
traffic
slow

More trees
between
road + path

Signage
(Keep going
for pavilions)

stop
bridge
jumpers

Separate
bikes/walkers
on bridge

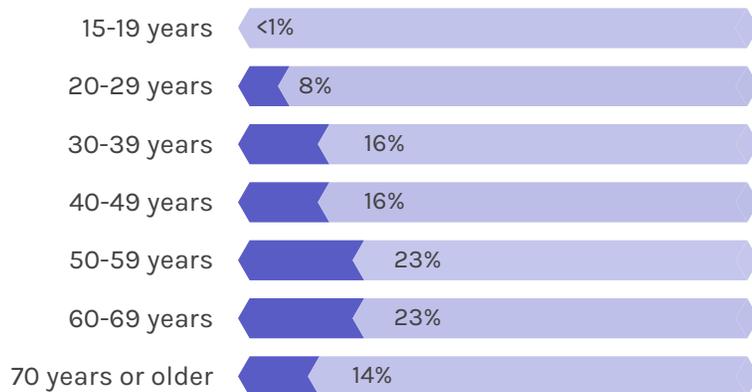
IMPROVED TRAFFIC
CALMING (NO SPEED
BUMPS)
INTEGRATED STORM
WATER MANAGEMENT
LESS TURF GRASS
MORE PARKING?
Narrow Road

INITIAL PUBLIC INFORMATION GATHERING

The initial outreach to the community was done through an online survey. The community survey was open from July 25, 2020 to August 13, 2020 and was distributed online through the Ann Arbor Open City Hall portal and advertised through the City’s social media channels and GovDelivery notification system. Signs advertising the survey were also posted at Gallup Park along the Border-to-Border Trail in order to reach a wide demographic of park users. The survey was used to gather a wide range of community input, and this information was considered during design development. The survey had 576 responses.

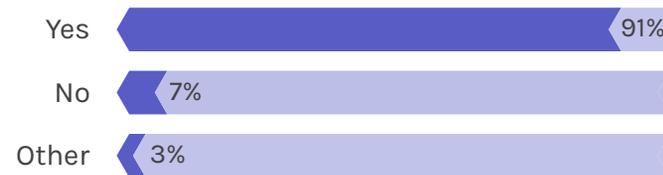
RESPONSE DEMOGRAPHICS

The below graph displays the average age of respondents taking the community survey. The largest respondent groups were 50-59 (23%) and 60-69 (23%).



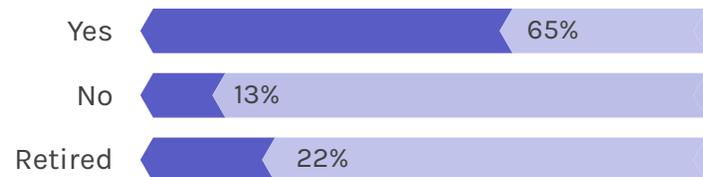
LIVE IN ANN ARBOR

The graph below shows that 91% of respondents live in the City of Ann Arbor.



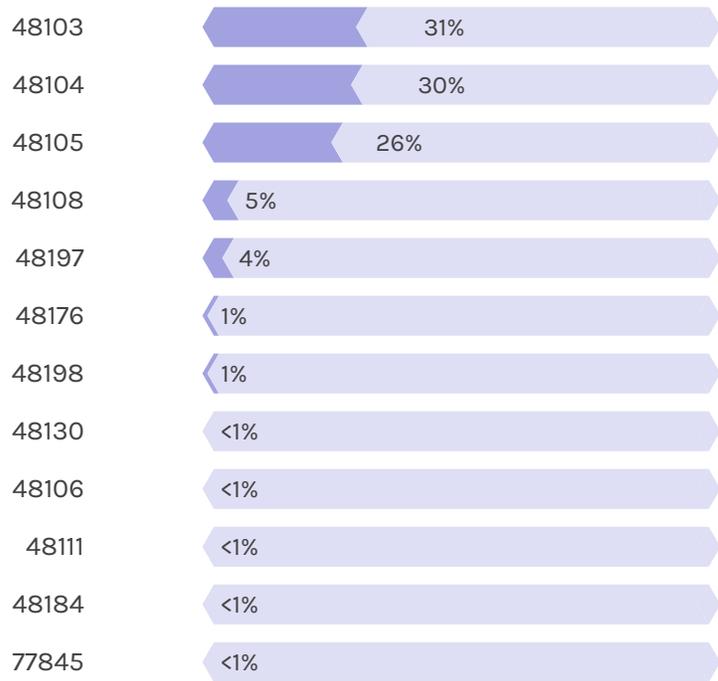
WORK IN ANN ARBOR

65% of respondents work in the City of Ann Arbor and 22% are retired.



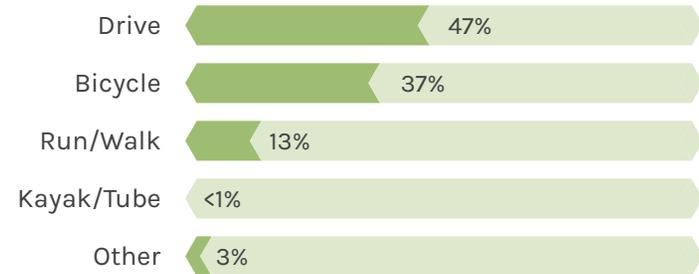
ZIP CODES

The graph below displays respondents zip codes. The largest zip code group was 48103 (33%) followed by 48104 (30%) and 48105 (26%).



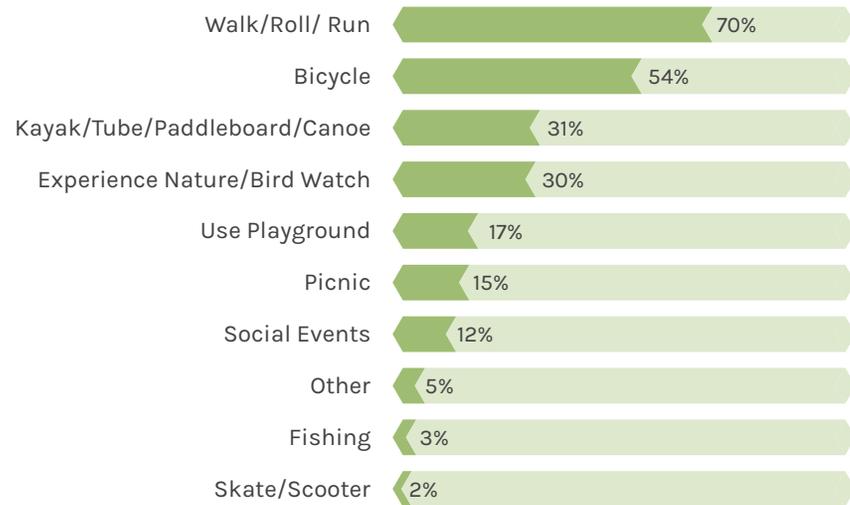
TRAVEL TO PARK

When asked, “Think of the past few times you’ve visited Gallup Park. How did you get to the park?”, most respondents answered drive (47%), but over half of the respondents did not drive to the park. Cycling was the second most popular mode of transportation (37%).



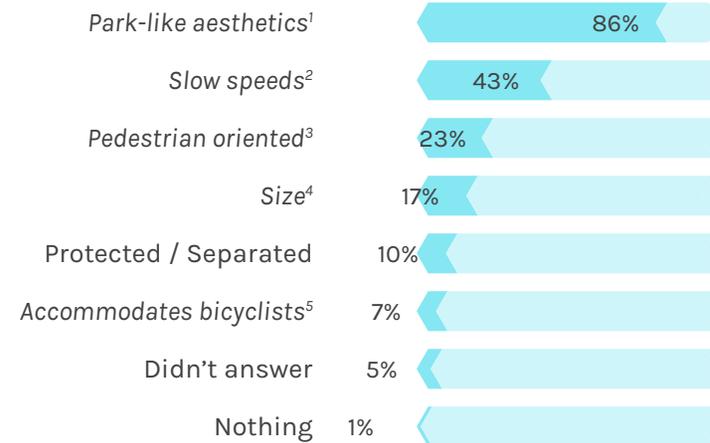
PARK USE

When asked, “Why do you typically visit Gallup Park?”, Walk/Roll/Run was the top answer (70%) followed by Bicycle (54%). This is strong evidence that most respondents are coming to use the Border-to-Border and Gallup Park trails. (Respondents could choose more than one answer.)



VEHICLE BRIDGE: LIKE

When asked, “What do you like about the existing bridge?”, most of the responses mentioned the existing park-like aesthetics (approximately 89%). Approximately 44% of respondents like the slow speeds of the current bridge.

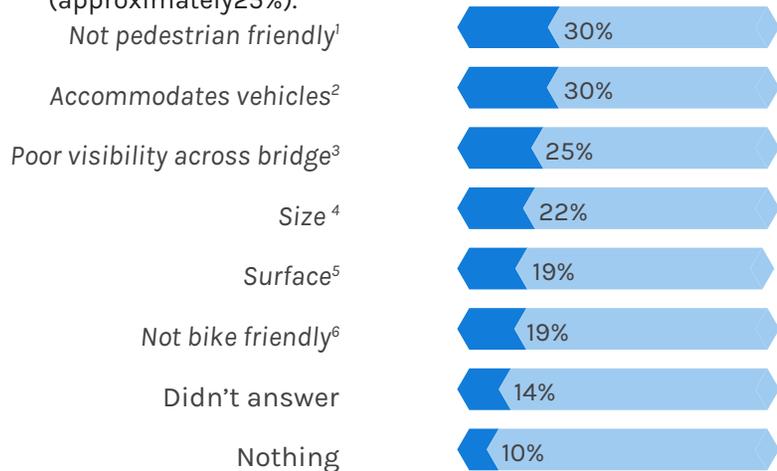


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

- 1. charm, aesthetics, natural, character, feel, unique, quaint, look, park, rustic, wood
- 2. speed, slow, traffic
- 3. pedestrian, walk, path
- 4. small, size, single lane, one lane, narrow
- 5. bike, bicycle

VEHICLE BRIDGE: DON'T LIKE

When asked, “What don’t you like about the existing bridge?”, approximately 30% of respondents answered that it is not pedestrian friendly. Respondents also did not like that the bridge accommodates vehicles (approximately 26%) and the poor visibility across the bridge (approximately 25%).

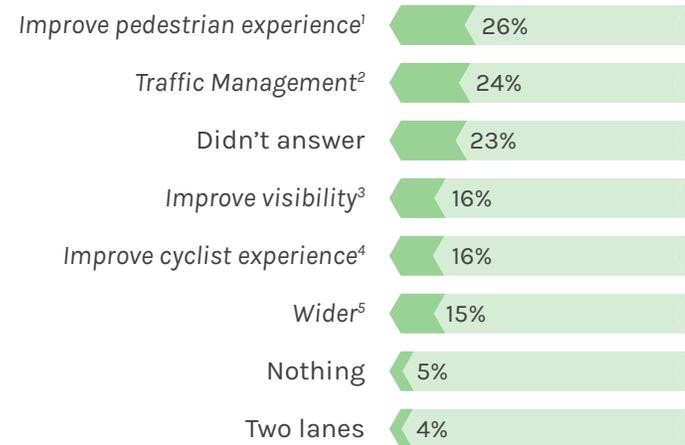


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. pedestrian, walk, path
2. car, vehicle, traffic
3. see, cross, visibility
4. small, size, single lane, one lane, narrow
5. surface, repair, boards, slip, wood
6. bike, bicycle

VEHICLE BRIDGE: MORE ENJOYABLE

When asked, “Think about the last time you crossed over the Gallup Bridge. What would make it more enjoyable?”, the top responses were to improve the pedestrian experience (approximately 26%) and better traffic management (approximately 25%).

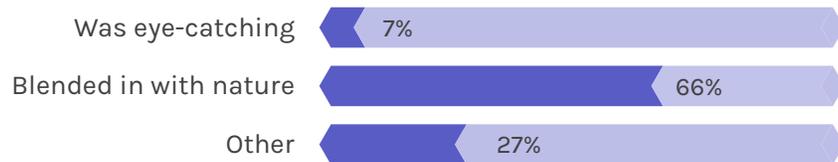


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. pedestrian, walk, path
2. car, vehicle, traffic
3. see, cross, visibility
4. bike, bicycle
5. wide, space, room

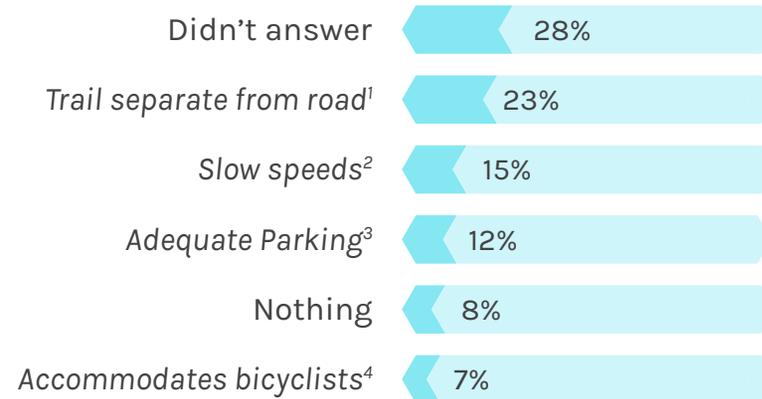
BRIDGE: PREFERENCE

66% of respondents would prefer if the new bridge blended in with nature. Only 7% prefer the new bridge to be eye catching.



PARK ROAD: LIKE

When asked, “What do you like about the adjacent park road?”, approximately 23% of respondents mentioned that it is separated from the trail. Slow speeds were the next mentioned response (about 15%).

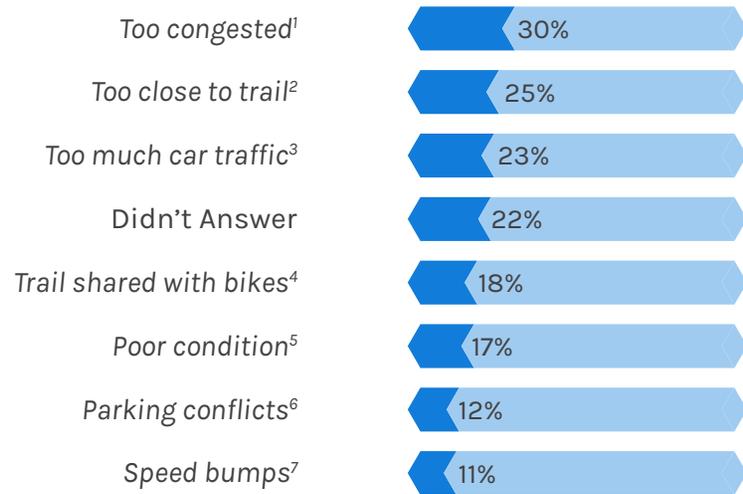


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. pedestrian, walk, path, trail, B2B
2. car, vehicle, traffic, speed bump
3. parking
4. bike, bicycle

PARK ROAD: DON'T LIKE

When asked, “What don’t you like about the adjacent park road?”, approximately 30% respondents answered that it is too congested. Respondents also mentioned it is too close to the trail (approximately 25%) and that there is too much car traffic (approximately 23%).

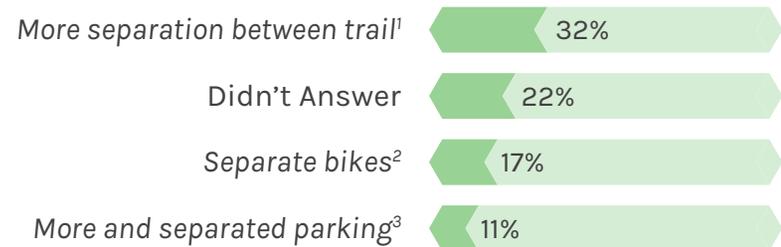


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

- 1. wide, space, room, congested, narrow, people, pedestrian
- 2. walk, path, trail
- 3. car, vehicle, traffic
- 4. bike, bicycle
- 5. potholes, condition, pavement
- 6. parking
- 7. speed, slow

PARK ROAD: MORE ENJOYABLE

When asked, “What would make this section of the park road more enjoyable?”, the top responses mentioned more separation between the trail (approximately 33%). Separation between bikes and pedestrians would also make the park road more enjoyable (approximately 22%).



Percentages are qualitative in nature and were deduced from respondent answers including the words below:

- 1. walk, path, trail, pedestrian
- 2. bike, bicycle
- 3. parking

B2B TRAIL: LIKE

When asked, “What do you like about this section of the Border-to-Border Trail?”, the top answer was being adjacent to the river (approximately 37%). Approximately 5% of respondents like that the trail connects to the Border-to-Border and the park loop.

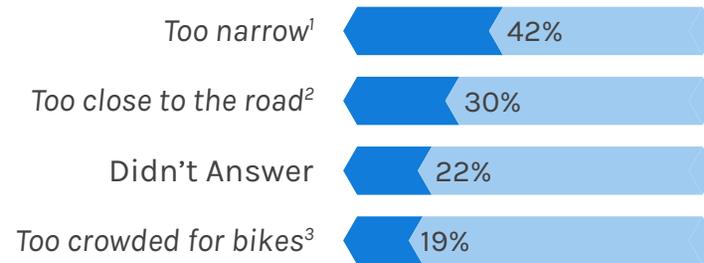


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. river, water, view
2. path, trail
3. walk
4. bike, bicycle

B2B TRAIL: DON'T LIKE

When asked, “What don't you like about this section of the Border-to-Border trail?”, approximately 43% of respondents answered that the trail is too narrow. Answers also reflected the trail is too close to the road (approximately 30%).

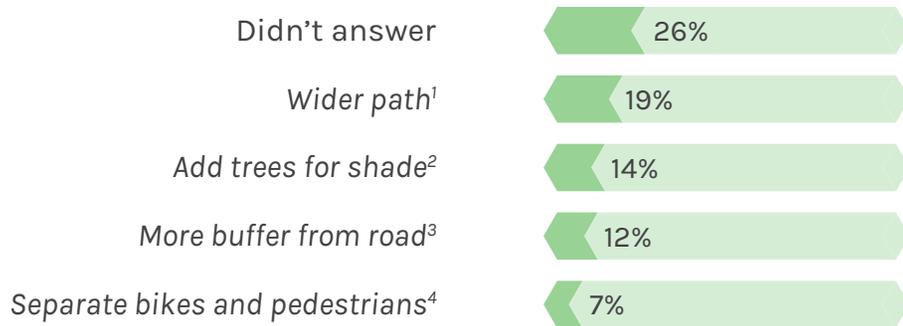


Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. congested, crowded, pedestrians, narrow, walking
2. road, car
3. bike, bicycle,

B2B TRAIL: MORE ENJOYABLE

When asked, “Think about the last time you were on this section of the Border-to-Border Trail. What would make it more enjoyable?”, approximately 19% of respondents mentioned a wider path. Trees and shade were also included in approximately 14% of the responses. 26% of respondents did not answer the question but this could be due to that it was the last one in the survey.



Percentages are qualitative in nature and were deduced from respondent answers including the words below:

1. wider
2. trees, shade
3. road
4. separate

MAPPING: LIKES/CONCERNS

Respondents were asked to participate in a mapping exercise where they placed a green or red dot for places in the project area that they like and are concerned about and comment why. A total of 472 concerns were placed in the project area and a total of 259 likes were placed.

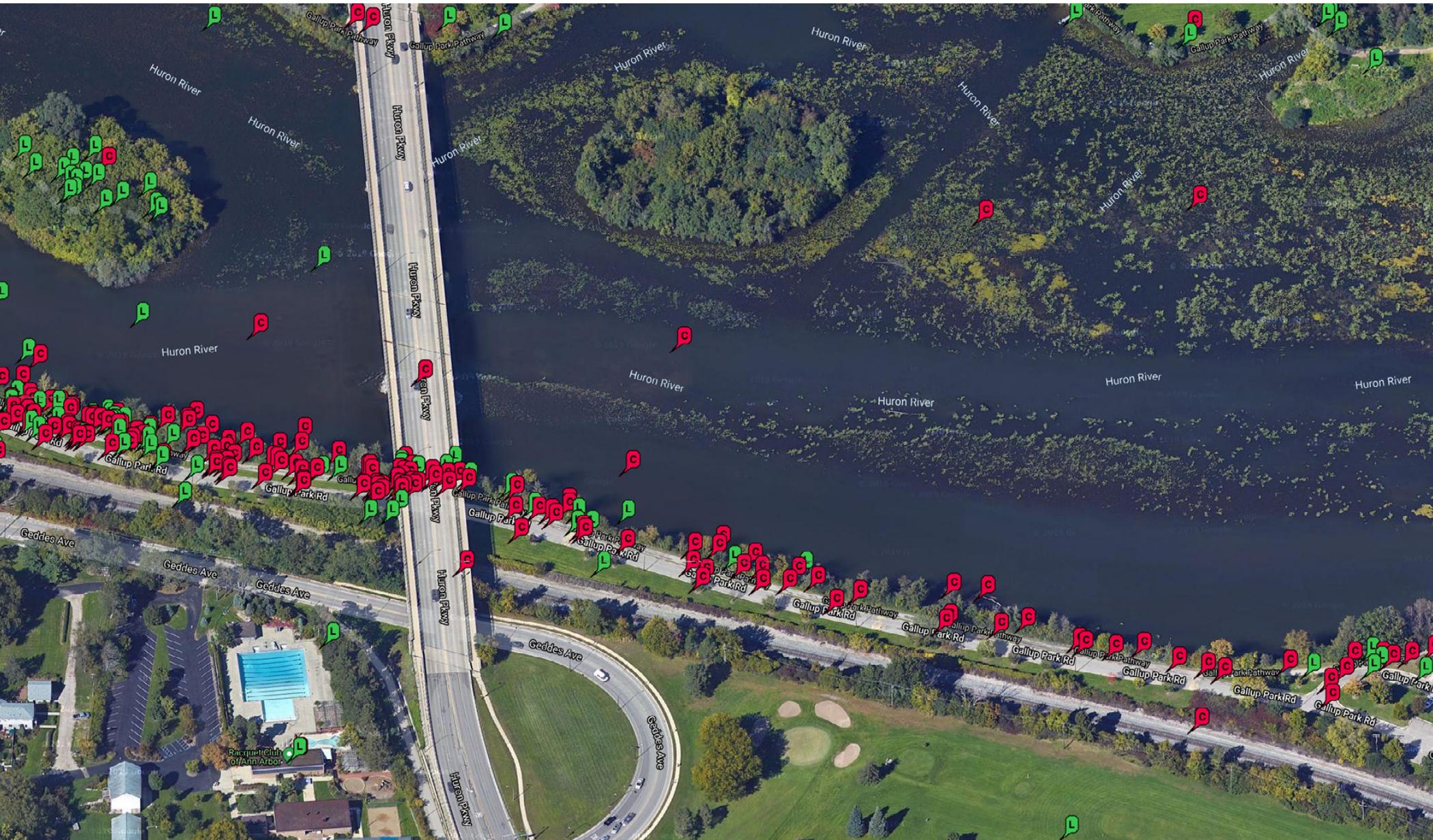
LIKES

- The aesthetics of the bridge and the view it provides
- Open space near the parking area
- The proximity of the trail to the river
- Crossing under the Huron Parkway bridge

CONCERNS

- The visibility of the trail crossing from the vehicular bridge
- Congestion and crossing at parking areas
- Condition of the park road
- Not enough room on the trail
- No shade



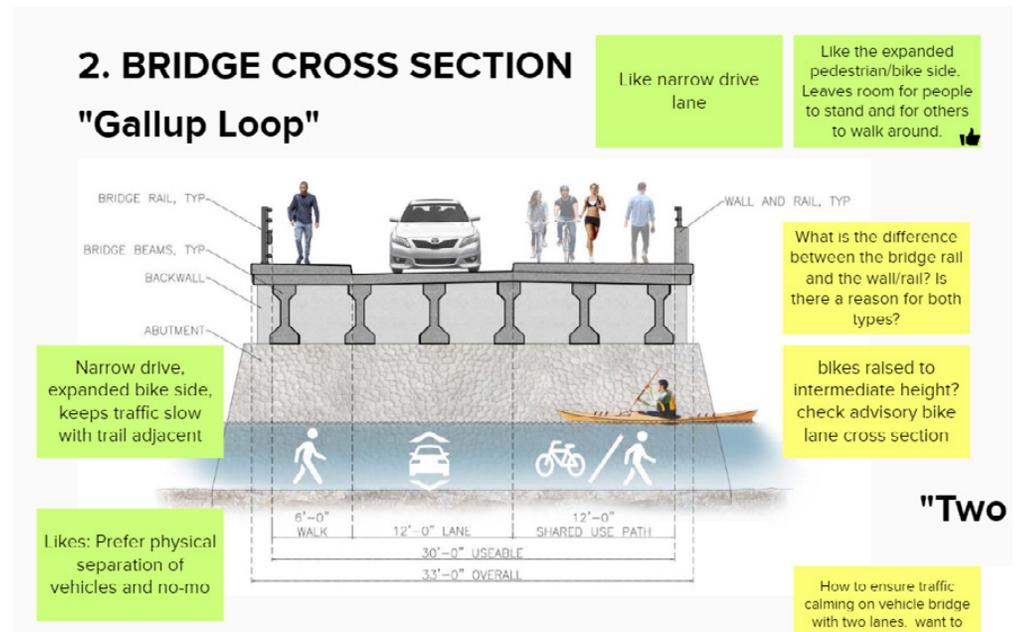


STEERING COMMITTEE MEETING #2

The steering committee met virtually on September 23, 2020 to review and provide feedback on various design options for the Gallup Park Bridge, Road and Trail. A virtual whiteboard session allowed attendees to engage and add commentary on the different alternatives.

BRIDGE CROSS SECTION OPTIONS

The steering committee provided feedback on three bridge design options. The comments provided support of a bridge with a narrow vehicular lane for traffic calming and physical separation between motorized and non-motorized users. The steering committee also advocated for an improved non-motorized experience by providing space to stop and view the river. Concerns about driver confusion and a wider drive potentially becoming a two-lane road were expressed about the Symmetrical bridge option. The two bridge option was also supported, but there were concerns about providing more infrastructure than needed.



"Two Bridges"

Concerns: Does the vehicular bridge need to be this wide?

Concerns: Is this more infrastructure than we need?

like improved experience on separate bridges

How to ensure traffic calming on vehicle bridge with two lanes. want to slow cars before ped/bike crossings ahead

Concerns: Already mentioned the concern about driver confusion

Love the two bridge option, but concerned about cost.

I am against Core -10 weathering steel. We have had some issues with those recently

Concerns: Might feel uncomfortable to boat or float under all of this close structure.

Too much bridge or man made structure?

pedestrian sidewalks

Likes

Likes

BRIDGE BEAMS, TYP

BACKWALL

ABUTMENT

VEHICLE BRIDGE

PEDESTRIAN BRIDGE

20'-0" USEABLE
23'-0" OVERALL

14'-0" CLEAR
15'-6"± OVERALL

"Symmetrical"

wide enough for people to think it's two lanes

Forces bike traffic into the road. May not be comfortable for as many users.

Seems most like other bridges. Ease of use

people in cars will make it a 2-way bridge

drive will feel wide even with bike lanes

Concerns: Already mentioned the concern about driver confusion

Concerns

pedestrian sidewalks seem narrow, guess this should have been a pink concern

Are AAFD anticipating responding from the bridge? If not, I don't understand why they would need 20' on a one-way facility.

BRIDGE BEAMS, TYP

BACKWALL

ABUTMENT

6'-0" WALK

5'-0" BIKE LANE

10'-0" LANE

5'-0" BIKE LANE

6'-0" WALK

32'-0" USEABLE

35'-0" OVERALL

BRIDGE ALIGNMENT OPTIONS

A specific preference for the bridge alignment was not determined. However, there was strong support for off-street parking on the north side of the bridge, which cannot be achieved with a skewed alignment west of the existing bridge.

WEST OF EXISTING



IN-PLACE



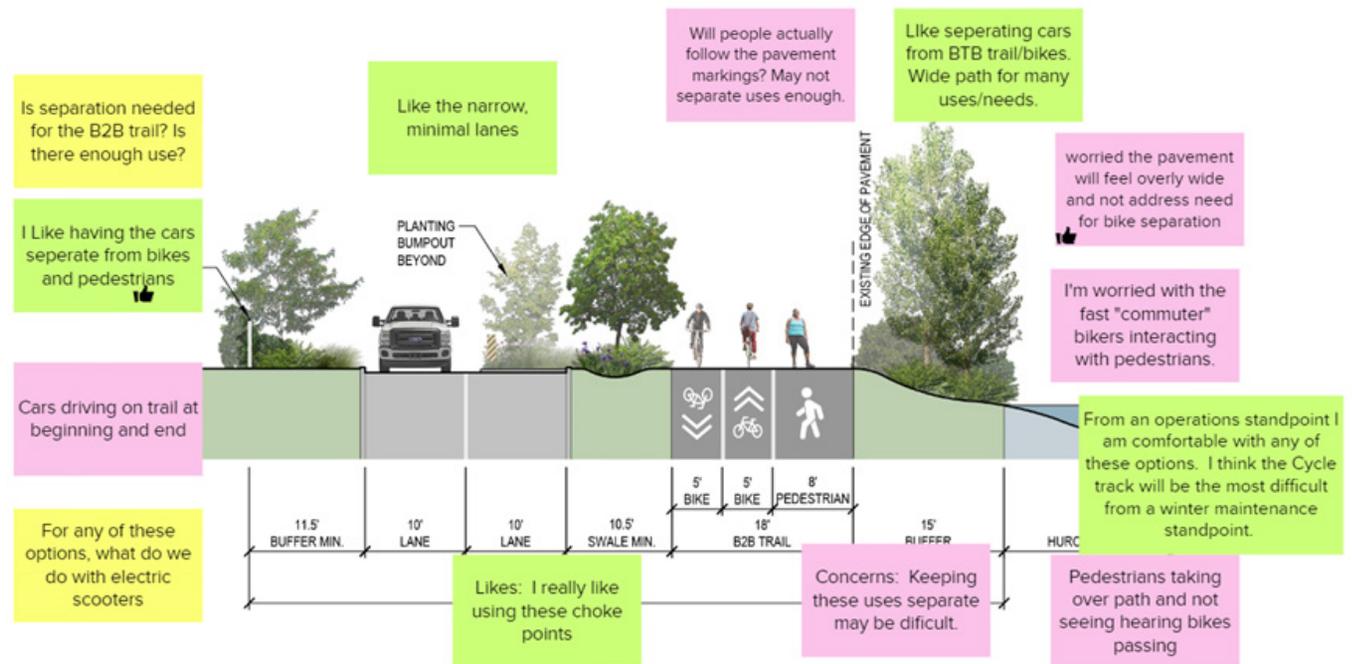
SKewed



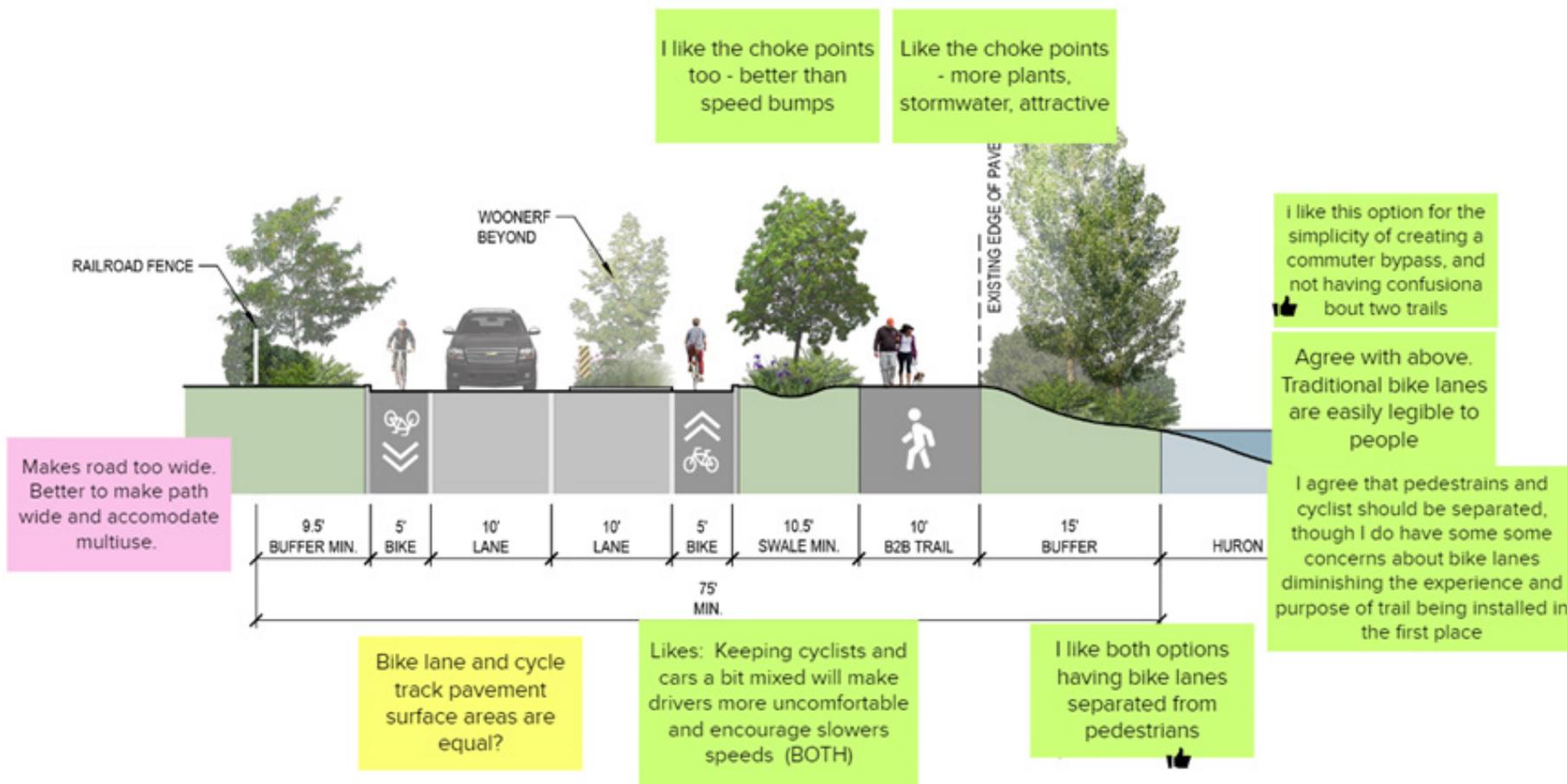
PARK ROAD AND TRAIL CROSS SECTION OPTIONS

The steering committee favored narrow vehicular lanes and using planting bump outs as choke points for traffic calming on the park road. Preferred options for the Border-to-Border Trail provided physical separation between pedestrians and commuter cyclists. The Combined Border-to-Border option drew concerns of enforcing pavement markings for different modes of travel, the interaction between commuter cyclists and pedestrians, and the trail being overly wide. Concerns of wayfinding and the confusion of having two paths were expressed about the Cycle Track option.

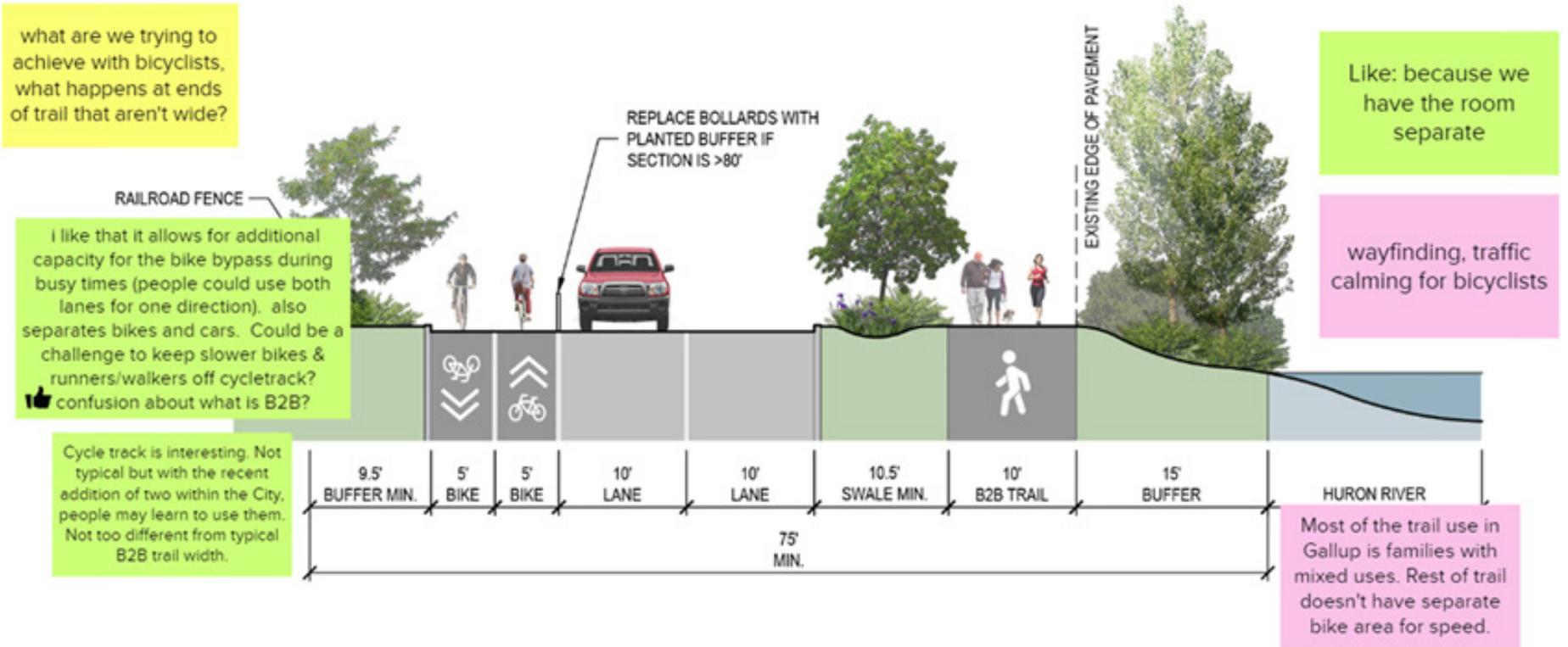
COMBINED BORDER-TO-BORDER TRAIL



BIKE LANES

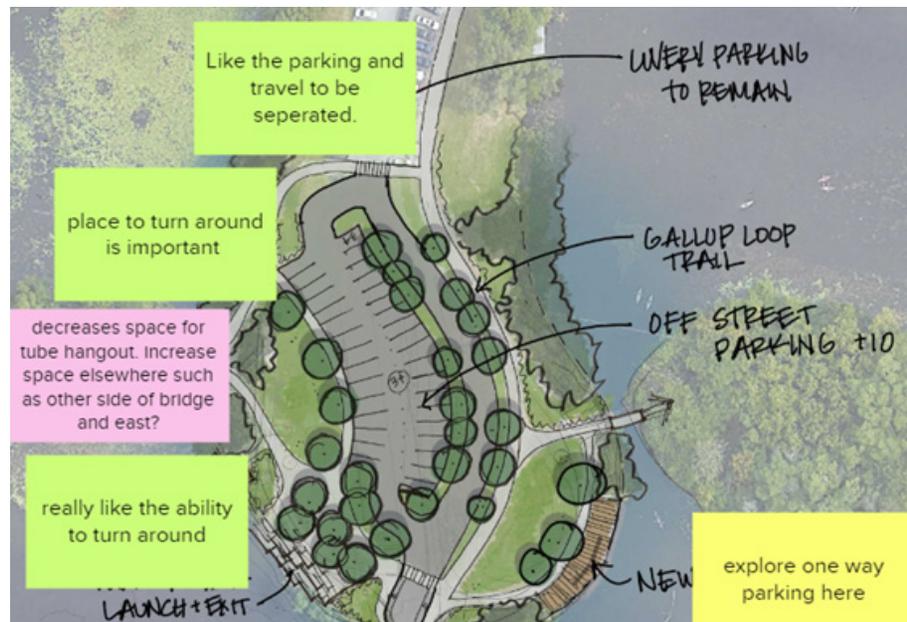


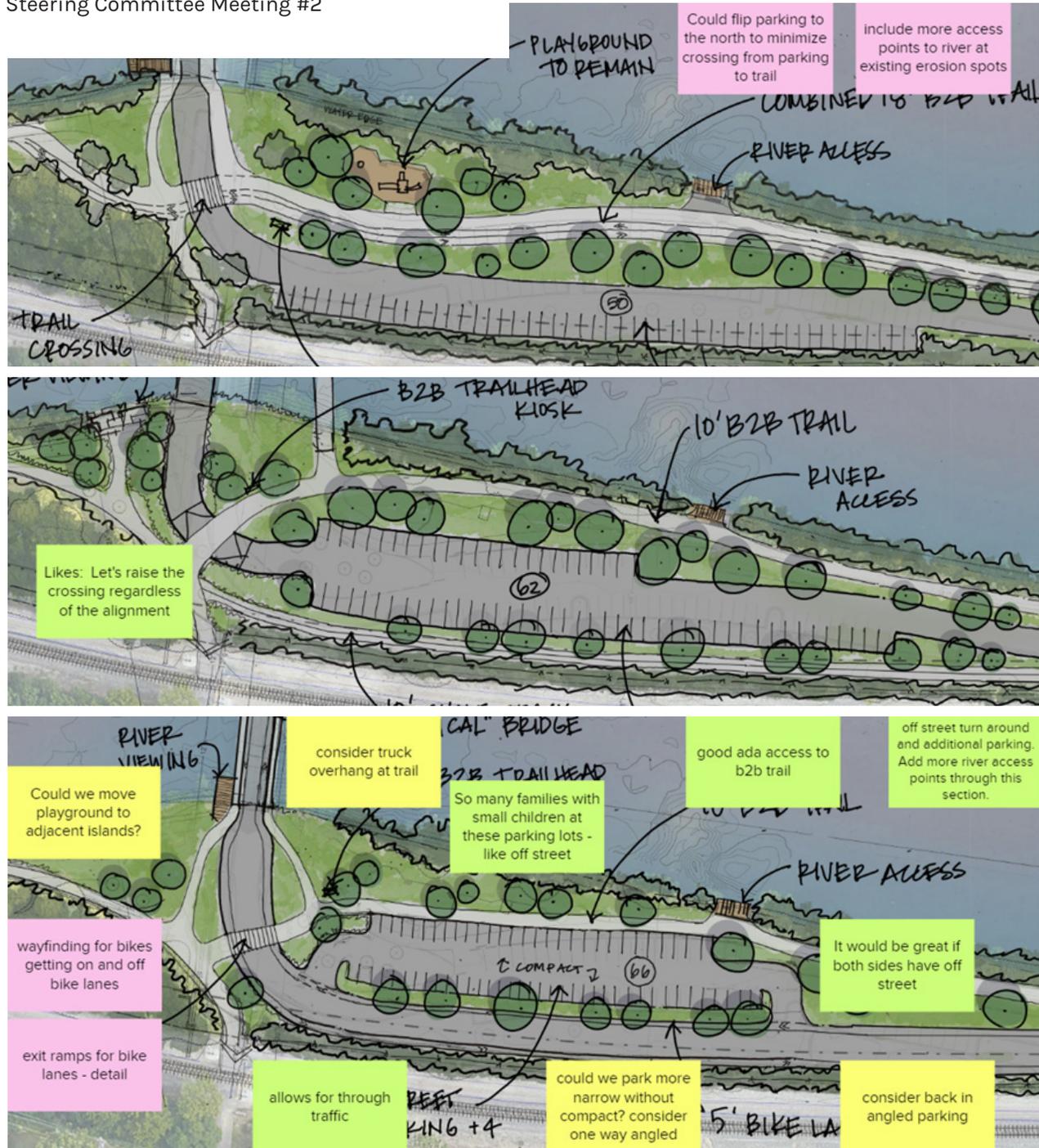
CYCLE TRACK



PARKING OPTIONS

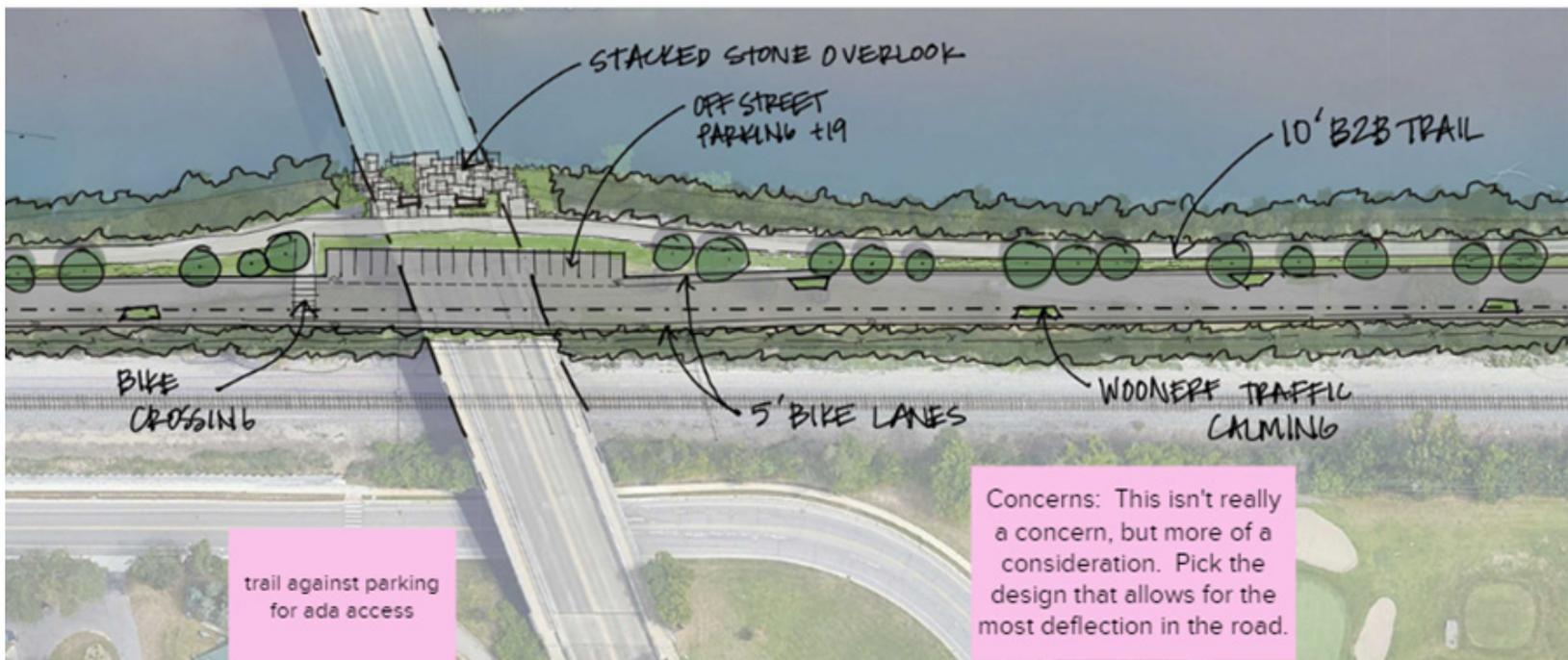
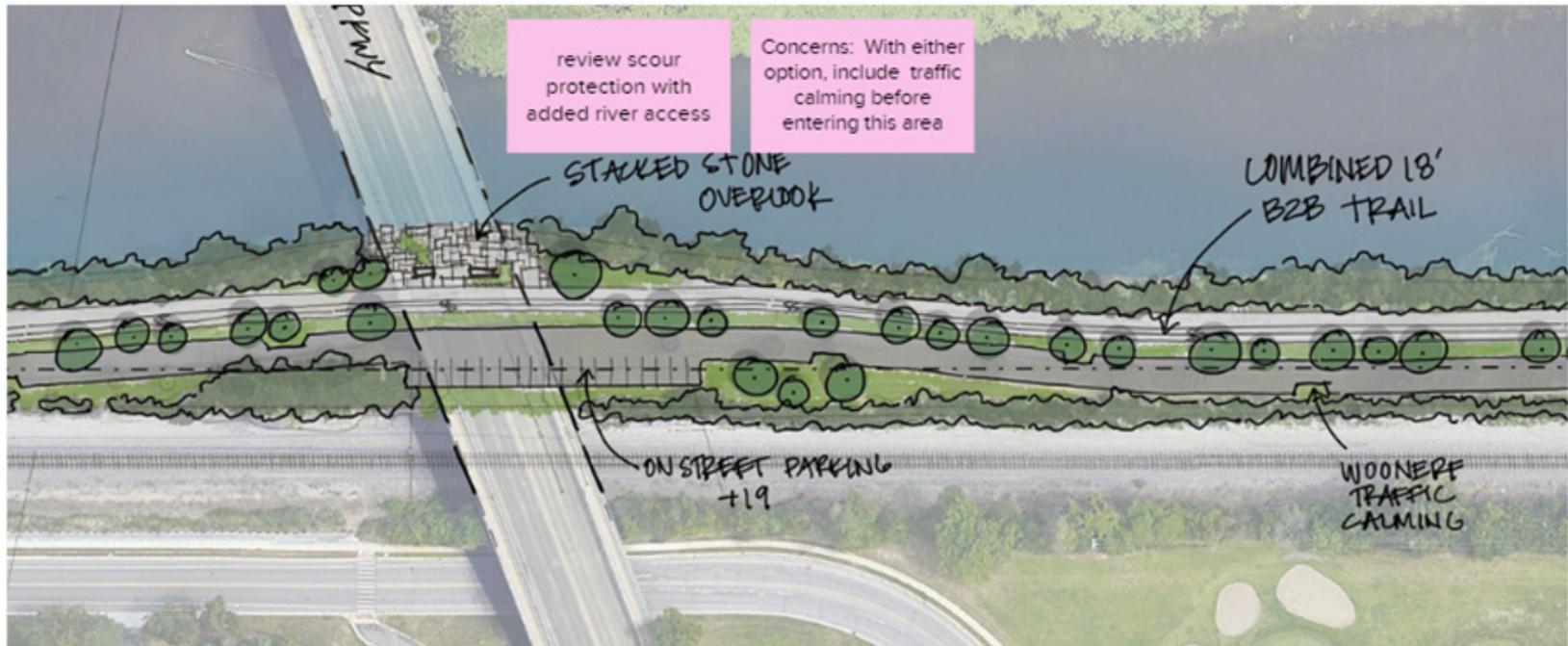
The steering committee prefers travel lanes and parking to be separate. Providing off-street parking north of the bridge was favored because it provides a turnaround before the bridge. South of the bridge, parking directly adjacent to the Border-to-Border Trail was favored because it provides ADA access. Off-street parking on the south side was also preferred given the popularity of children and families. Concerns were expressed about incorporating parking in the MDOT railroad right-of-way area.





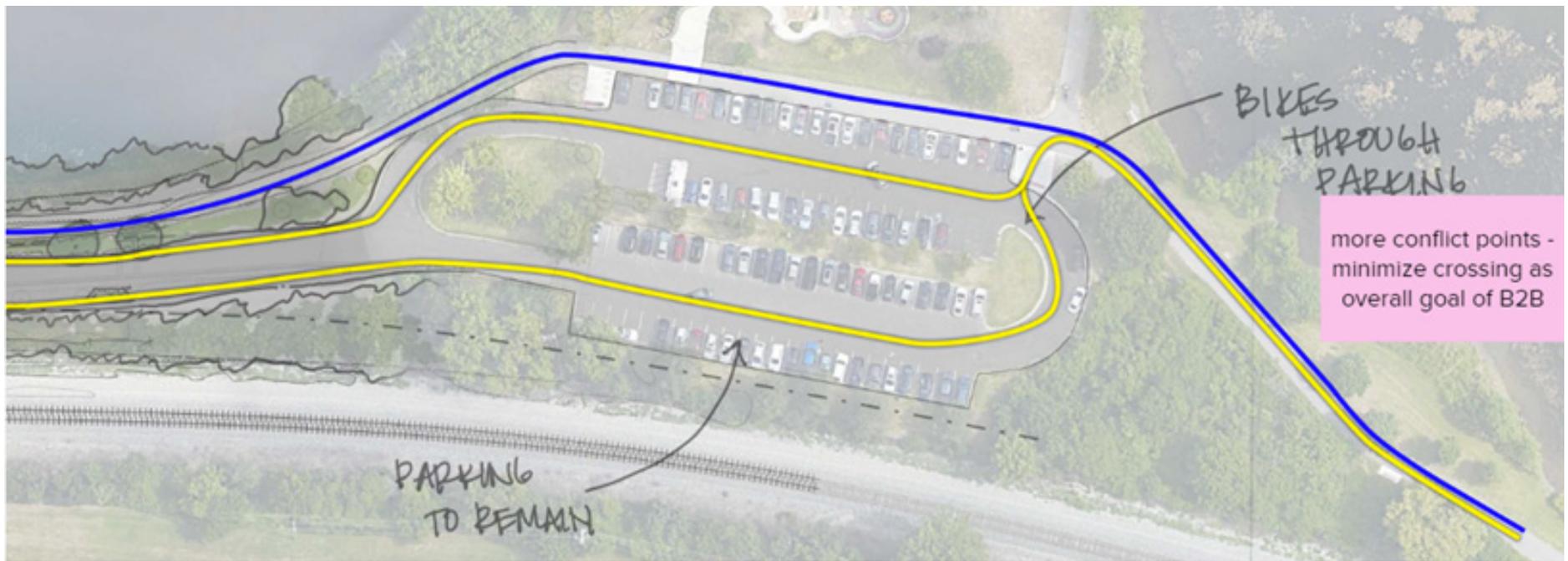
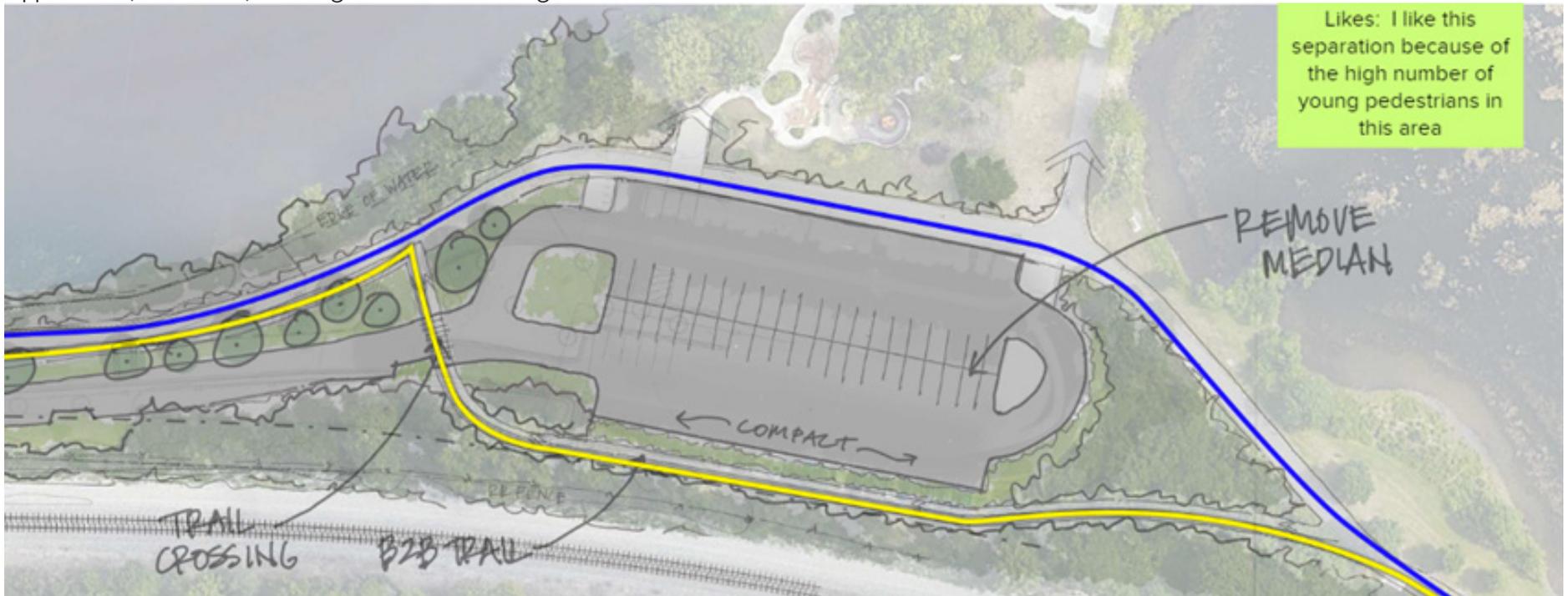
HURON PARKWAY DESTINATION

The steering committee prefers parking directly adjacent to the Border-to-Border Trail for ADA access. Concerns about parking within the MDOT railroad right-of-way were expressed. The steering committee also discussed if creating a destination at the Huron Parkway Bridge is necessary or desired and suggest reviewing the community survey to provide evidence.



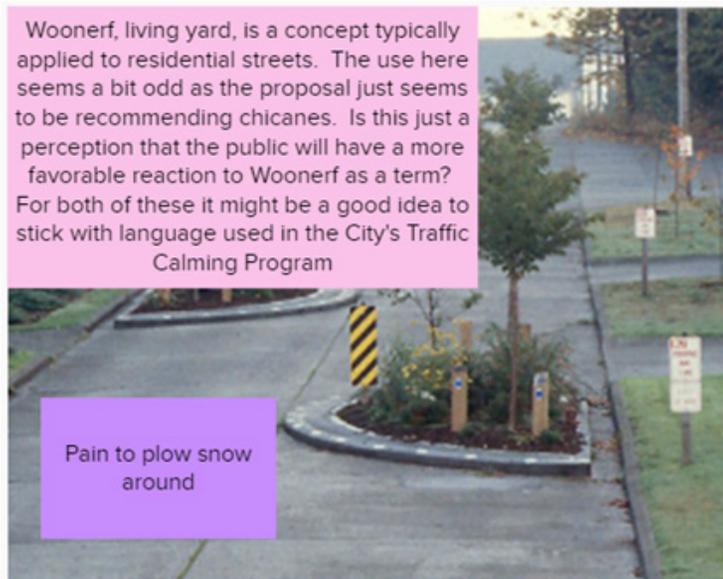
EAST END PARKING LOT

The steering committee prefers to route the Border-to-Border Trail south of the existing parking lot to avoid conflict with the universal access playground entrance. Routing cyclists through the parking lot drew concerns about providing clear wayfinding.



TRAFFIC CALMING MEASURES

Comments provided in the Park Road and Trail Cross sections reveal a preference for Chicanes (Woonerf) as a traffic calming method because of added aesthetics and stormwater management. Chicanes are a recommended method included in the City of Ann Arbor Traffic Calming Guidebook.

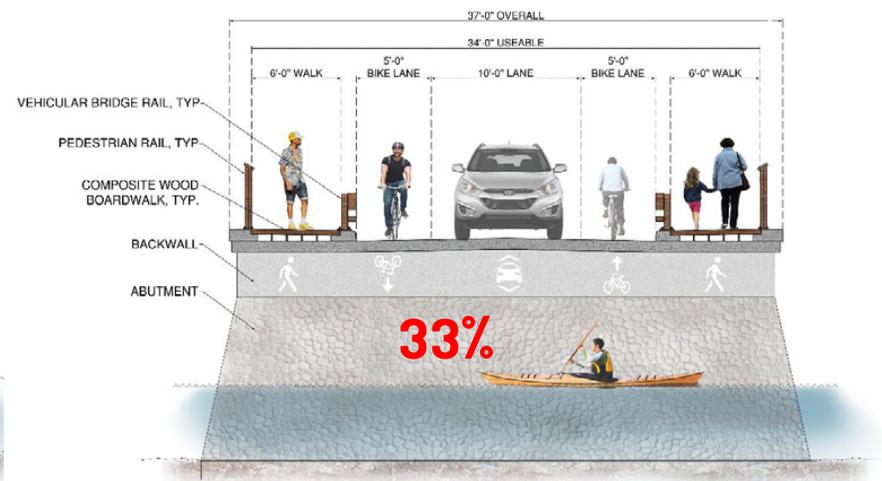
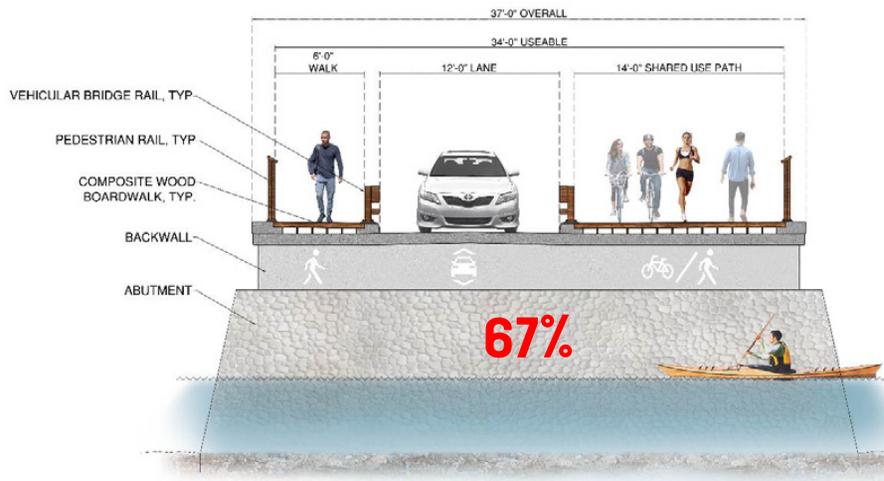


VIRTUAL PUBLIC OPEN HOUSE

Once design options were vetted by the project team and steering committee, the designs were presented, via Zoom, to approximately 12 public participants for feedback. Overall, the options were well received, but the Gallup Loop bridge and Bike Lane road ad trail options did not receive any votes in the following polls.

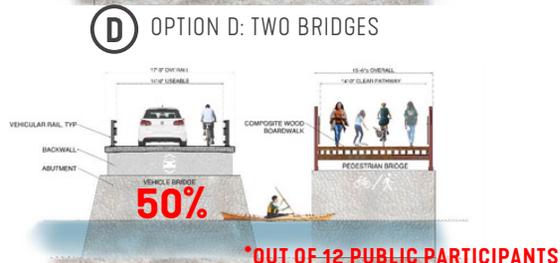
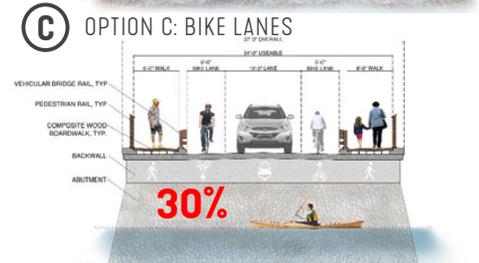
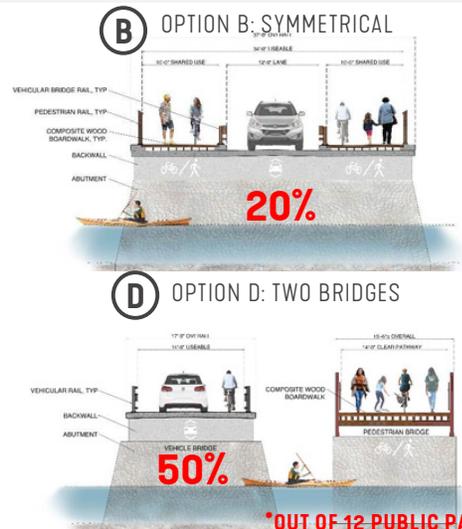
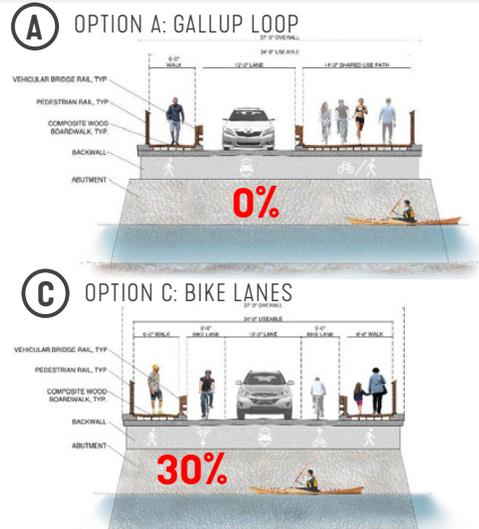
VEHICLE BRIDGE WHICH IS MOST IMPORTANT TO YOU? PUBLIC MEETING POLL RESPONSE*

- A** VEHICLES SEPARATED FROM CYCLISTS AND PEDESTRIANS **B** PEDESTRIANS SEPARATED FROM CYCLISTS AND VEHICLES

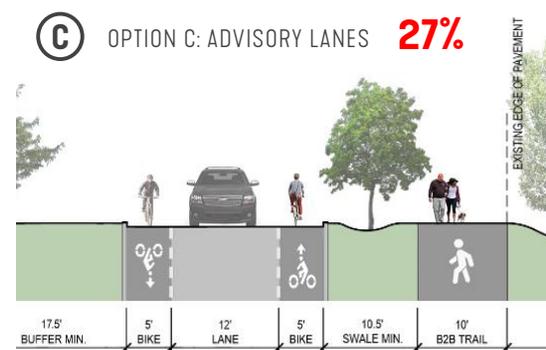
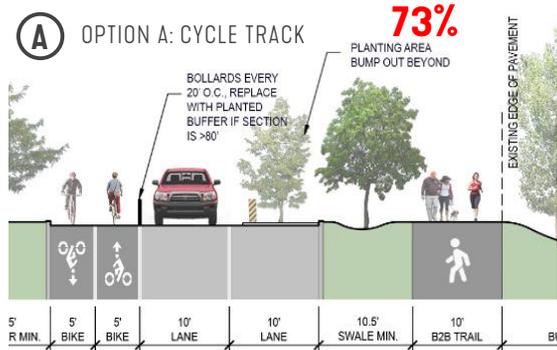
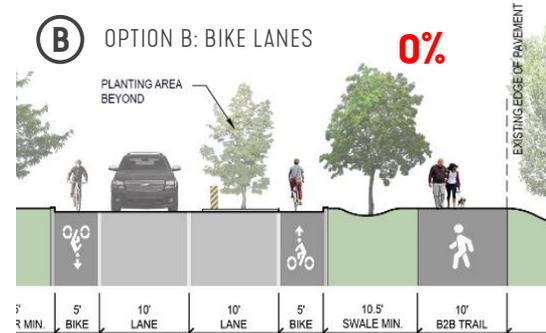


***OUT OF 12 PUBLIC PARTICIPANTS**

VEHICLE BRIDGE WHICH BRIDGE OPTION DO YOU PREFER? PUBLIC MEETING POLL RESPONSE*



PARK ROAD & TRAIL WHICH OPTION DO YOU PREFER? PUBLIC MEETING POLL RESPONSE* *OUT OF 12 PUBLIC PARTICIPANTS

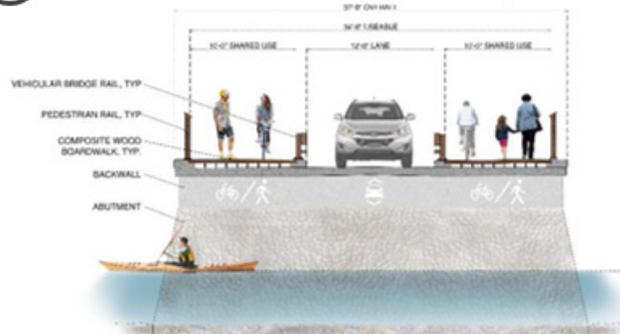


STEERING COMMITTEE MEETING #3

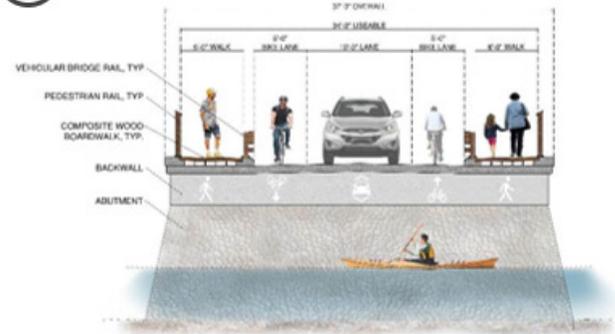
After meeting with the public, the project team reconvened with the steering committee to receive final input and direction. The team met virtually on December 7, 2020. Multiple polls were asked in order to gauge consensus.

VEHICLE BRIDGE WHICH BRIDGE OPTION DO YOU PREFER? STEERING COMMITTEE MEETING POLL RESPONSE

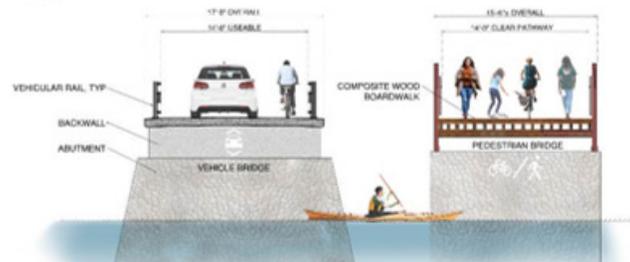
A OPTION A: SYMMETRICAL **8**



B OPTION B: BIKE LANES **1**



C OPTION C: TWO BRIDGES **1**



VEHICLE BRIDGE

WHAT BRIDGE MATERIAL DO YOU PREFER?

STEERING COMMITTEE MEETING POLL RESPONSE

A OPTION A: WOOD **1**

B OPTION B: CONCRETE/STEEL **9**



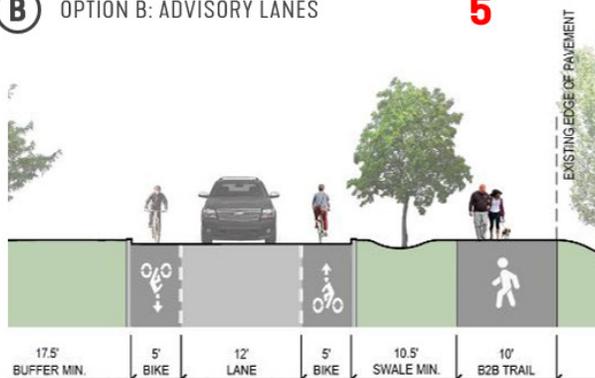
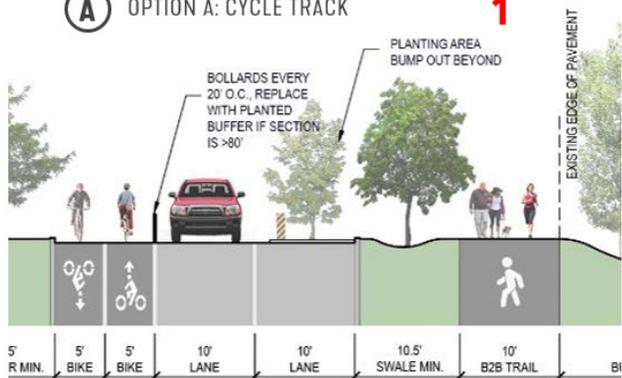
PARK ROAD & TRAIL

WHICH OPTION DO YOU PREFER?

STEERING COMMITTEE MEETING POLL RESPONSE

A OPTION A: CYCLE TRACK **1**

B OPTION B: ADVISORY LANES **5**



MDOT COORDINATION MEETING

Once a preferred design was established, the project team met with MDOT representatives to review the proposed site plan. MDOT representatives communicated various requests for the project. The first requirement is to keep the existing fence north of the railroad in place. If construction activity is to cross south of the fence, a Permit to Enter will be required. MDOT representatives also requested that any encroachment into the railroad right-of-way be limited to what is currently found in the park with an overall goal of keeping users as far from the tracks as possible.

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Design a Better Future

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