



FINAL REPORT



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PROJECT OVERVIEW

The City of Missoula and Missoula Metropolitan Planning Organization (MPO), in collaboration with the Montana Department of Transportation (MDT), developed this plan for Higgins Avenue from Brooks Street to Broadway Street. The overarching goal is to create a street that will serve all users and add to the economic vitality of the corridor.

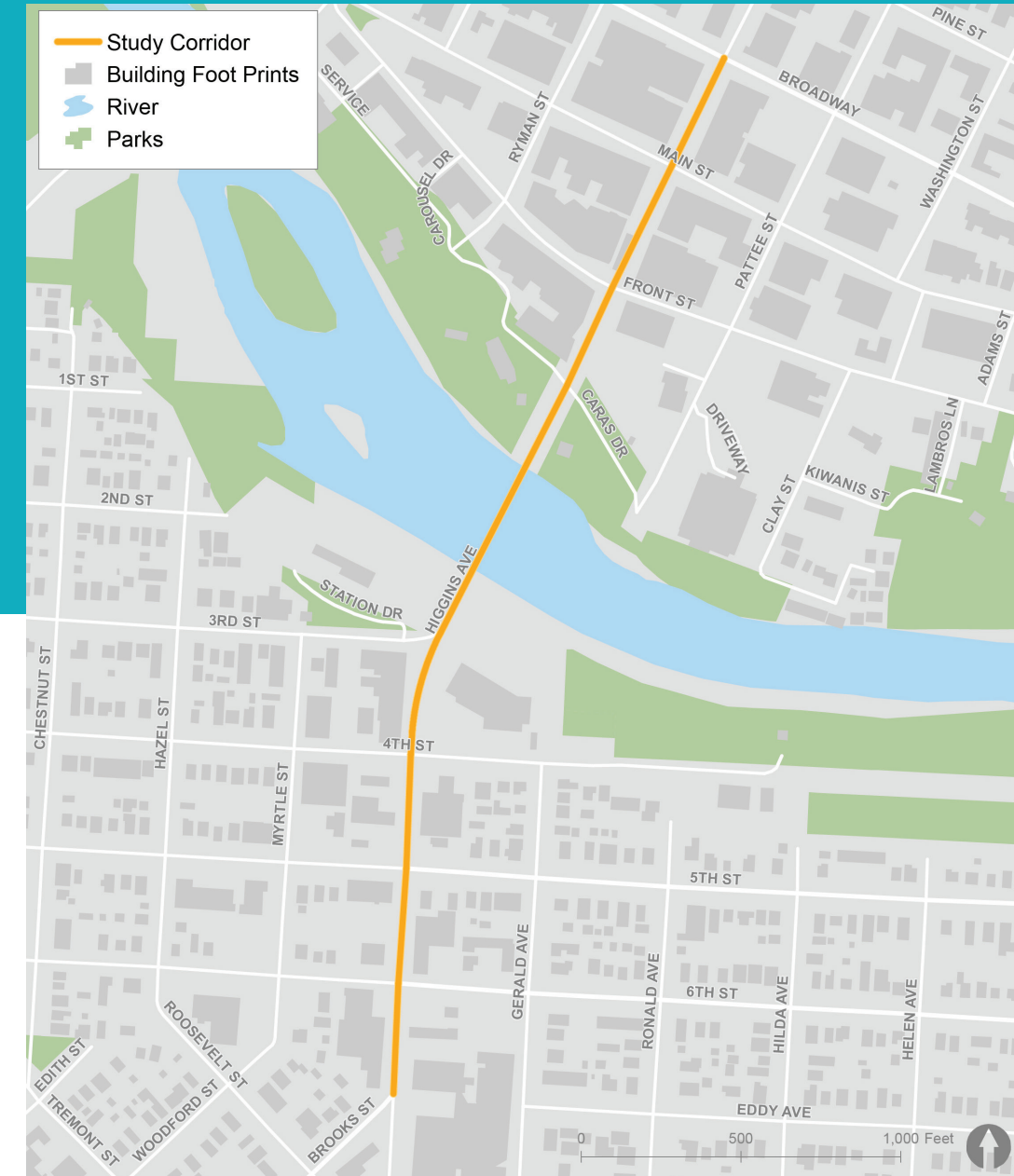


Figure 1 - Study Extents

Envisioned Outcomes

1. A street that is safer for walking, biking, driving, and public transportation.
2. An inviting streetscape that showcases Higgins Avenue as a destination and a gateway to Downtown Missoula.
3. Increased economic activity along the corridor.
4. Create a postcard street as envisioned by the Downtown Master Plan.

WHY HIGGINS AVENUE?

Higgins Avenue is the backbone of Downtown Missoula.

The Missoula Community and the Downtown Master Plan recommend transforming Higgins Avenue into a fully multi-modal and safe street, essential for the economic, physical and social health of the entire city. The rehabilitation of Beartracks Bridge includes improved walking and biking access across the Clark Fork River. This plan evaluated means for extending safety, access, and activity beyond the limits of the bridge.



Chief Concerns with Higgins Avenue Today

- Safety
 - 55 crashes/year, including 3.7 bike crashes/year (2010-19)
 - Crash rates range from 3.63 to 9.34 crashes/million vehicle miles traveled
 - No bike lanes south of the river
 - No dedicated left-turn lanes
 - 4 lanes to cross at intersections
- Left-turns prohibited at certain intersections/times of day makes business access challenging
- Transit stops do not meet current accessibility standards

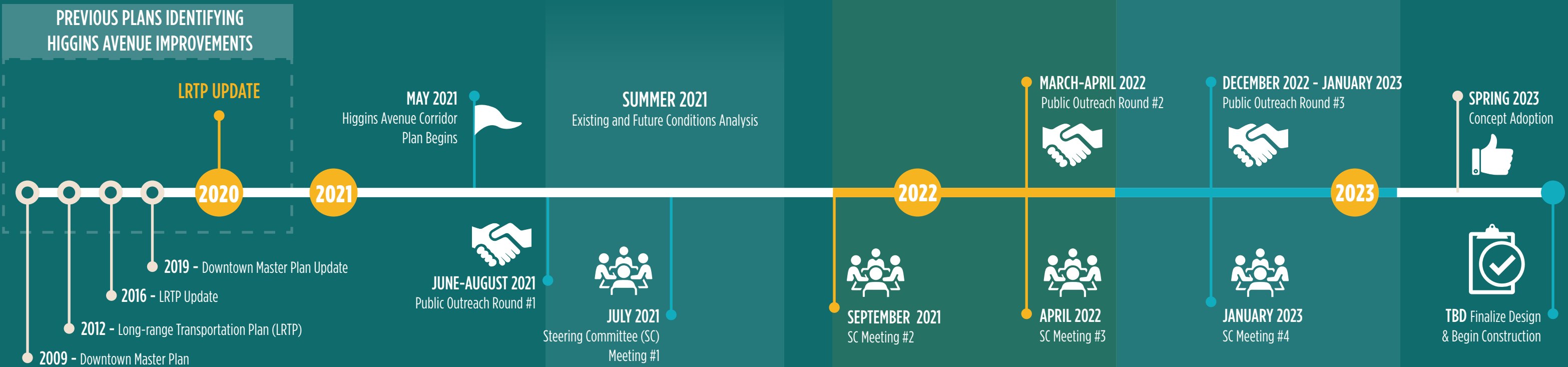
Technical Memorandum #1 in Appendix "A" includes a detailed assessment of existing and projected future no-build conditions.



CONCEPT DEVELOPMENT PROCESS

The project team developed concepts for Higgins Avenue based on existing conditions and community feedback. In the first outreach phase, the project team listened to input about challenges, community interests, and desired outcomes for the corridor. Using this feedback, several options were considered. Three concepts were presented to the public in Spring 2022. Based on this outreach, the project

team identified a preferred concept for Higgins Avenue. This recommendation was confirmed by the Steering Committee. The project team refined the preferred concept and presented it to the public in Winter 2022-23. The figure below shows the overall project timeline, including previously adopted plans that have contained projects to improve multimodal safety on Higgins Avenue.



PUBLIC OUTREACH



The concept development process engaged with surrounding property owners, businesses, neighborhood residents, and the general public, in addition to regular coordination with MDT and partner agencies and organizations. The resulting concept is a direct outcome of the responses the project team heard through these outreach efforts.

Outreach was conducted through the following means:



PRELIMINARY CONCEPTS

Alternative concepts were presented to the public in Spring 2022. Several options were considered, however, the ones shown below were advanced for further analysis as they best met the project's objectives while taking into account feedback from the public. The concepts were split out based on whether they were north or south of the Beartracks Bridge.

There were three options for north of the bridge:

- No-Build - Higgins remains the same as it is today (i.e., four lanes with painted bike lanes)
- Concept A - Three lanes with raised bike lanes
- Concept B - Four lanes with raised bike lanes

Public Outreach Process

The project team obtained engaged the public and business owners throughout the life of the project. As shown on the schedule in the previous page, specific efforts were made at three key points in the project. These three rounds of engagement are summarized as follows. For more detailed information on each round of outreach and its results, please see Appendix "B."

| Round # | Purpose | Efforts | Key Results |
|---------|---|---|--|
| 1 | Gather community input regarding needs, desires, and opportunities along the corridor | <ul style="list-style-type: none"> • Tabling at community events • Online survey • Door-to-door business canvassing • One-on-one and small group meetings with businesses and organizations • Steering Committee meeting | <p>Community priorities included:</p> <ul style="list-style-type: none"> • Pedestrian safety • Bicyclist safety • On-street parking • Allowing left-turns • Access to public transportation • Protect the "vibe" and aesthetic of Downtown and the Hip Strip |
| 2 | Gather community feedback on several proposed corridor alternatives | <ul style="list-style-type: none"> • Virtual open house • Live virtual presentation • In-person open houses • One-on-one and small group meetings with businesses and organizations • Steering Committee meeting | <p>Features liked by the community:</p> <ul style="list-style-type: none"> • Improved safety • Left-turn lanes • Minimizing parking impacts • Raised bike lanes • Maintaining landscaping/furnishing zones <p>Features the community was concerned about:</p> <ul style="list-style-type: none"> • Painted bike lanes • Conflicts between different user groups • Parking (loss of parking and/or how it is managed) • Congestion • Construction impacts • Snow storage |
| 3 | Gathering community feedback on the preferred alternative | <ul style="list-style-type: none"> • Virtual open house • In-person open houses and presentations • One-on-one and small group meetings with businesses and organizations • Steering Committee meeting | <ul style="list-style-type: none"> • Majority of participants supported the preferred concept (see page 10 for more information). |

There were four options for south of the bridge:

- No-Build - Higgins remains the same as it is today (i.e., four lanes with no bike lanes)
- Concept A - Three lanes with painted bike lanes
- Concept B - Three lane with raised bike lanes
- Concept C - Two lanes with dedicated bus lane

Technical Memorandum #2 in Appendix "C" documents these concepts and the project team's evaluation of them.

PREFERRED CONCEPT

HIGGINS AVENUE NORTH OF THE RIVER: DOWNTOWN



Figure 2 - Preferred Concept - North of the River

Based on public outreach, and the expected safety and economic benefits of the multimodal improvements, the City of Missoula and Missoula MPO selected a preferred concept from the preliminary concepts described in the preceding section. When presented with the alternatives (including a no-build alternative), the selected concept was the preferred choice of nearly 75% of respondents for Higgins Avenue north of the river and about 55% of respondents for Higgins Avenue south of the river.

PREFERRED CONCEPT FOR 75% OF RESPONDENTS FOR NORTH OF THE RIVER

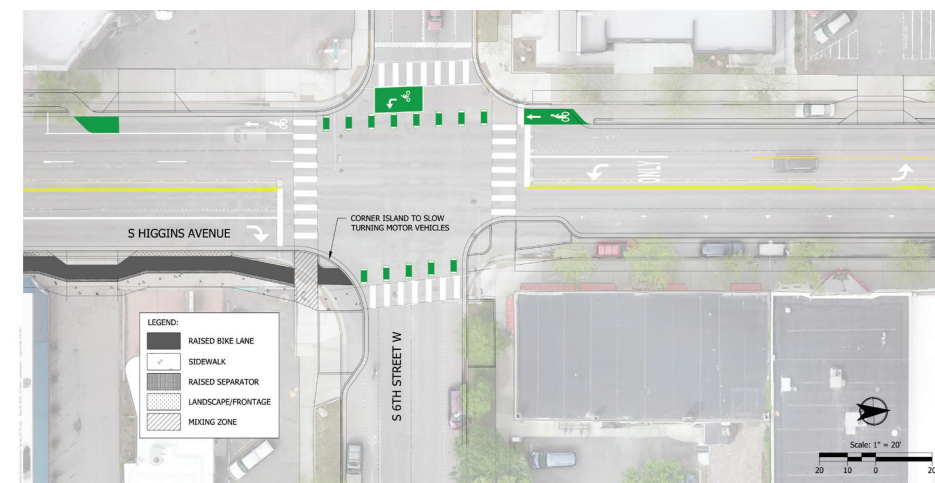
HIGGINS AVENUE SOUTH OF THE RIVER: HIP STRIP



Figure 3 - Preferred Concept - South of the River

The preferred concept would reconfigure Higgins Avenue to have 3-lanes (one lane in each direction, plus a center turn lane) with on-street parking and raised bike lanes. Figures 2 and 3 illustrate the preferred concept north and south of the Clark Fork River. Appendix "D" contains a conceptual drawing of the preferred concept, showing the expected lane configurations, intersection treatments, and other features of the concept throughout the entire corridor.

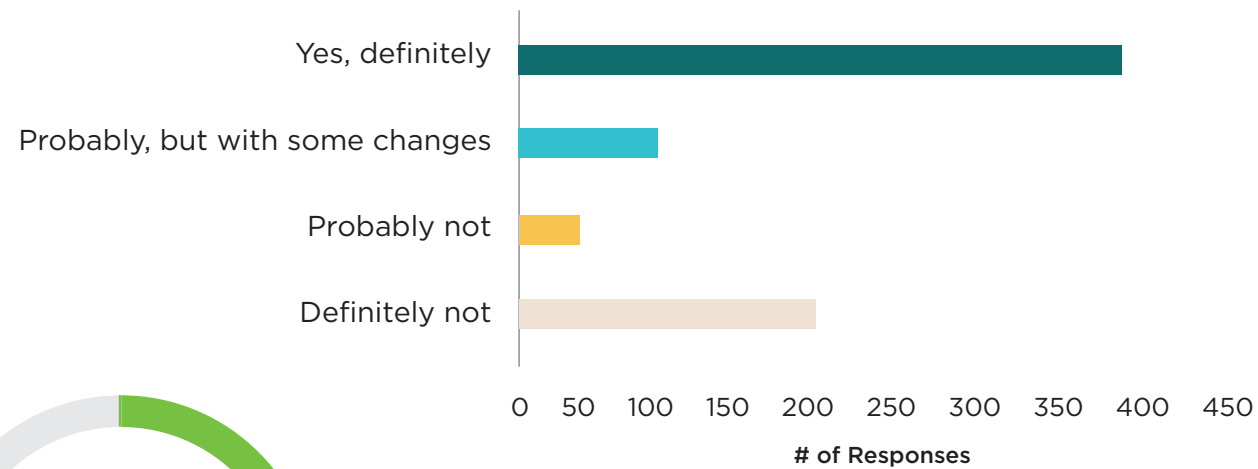
PREFERRED CONCEPT FOR 55% OF RESPONDENTS FOR SOUTH OF THE RIVER



The preferred concept features intersection treatments designed to further separate people biking from motor vehicles and to slow turning motor vehicles.

Community Feedback on Preferred Concept

Would you support the City and MDT building the preferred concept?



66%

of respondents definitely or probably would support the concept



LIKES

- Raised bike lanes (61%)
- Left-turn lanes (59%)
- Shorter crossings (41%)



CONCERNS

- Increased congestion (57%)
- Loss of Parking Spaces (43%)

Business Owners Feedback



LIKES

- Allowing left-turns/providing a turn lane
- Improving safety
- Separating travel modes

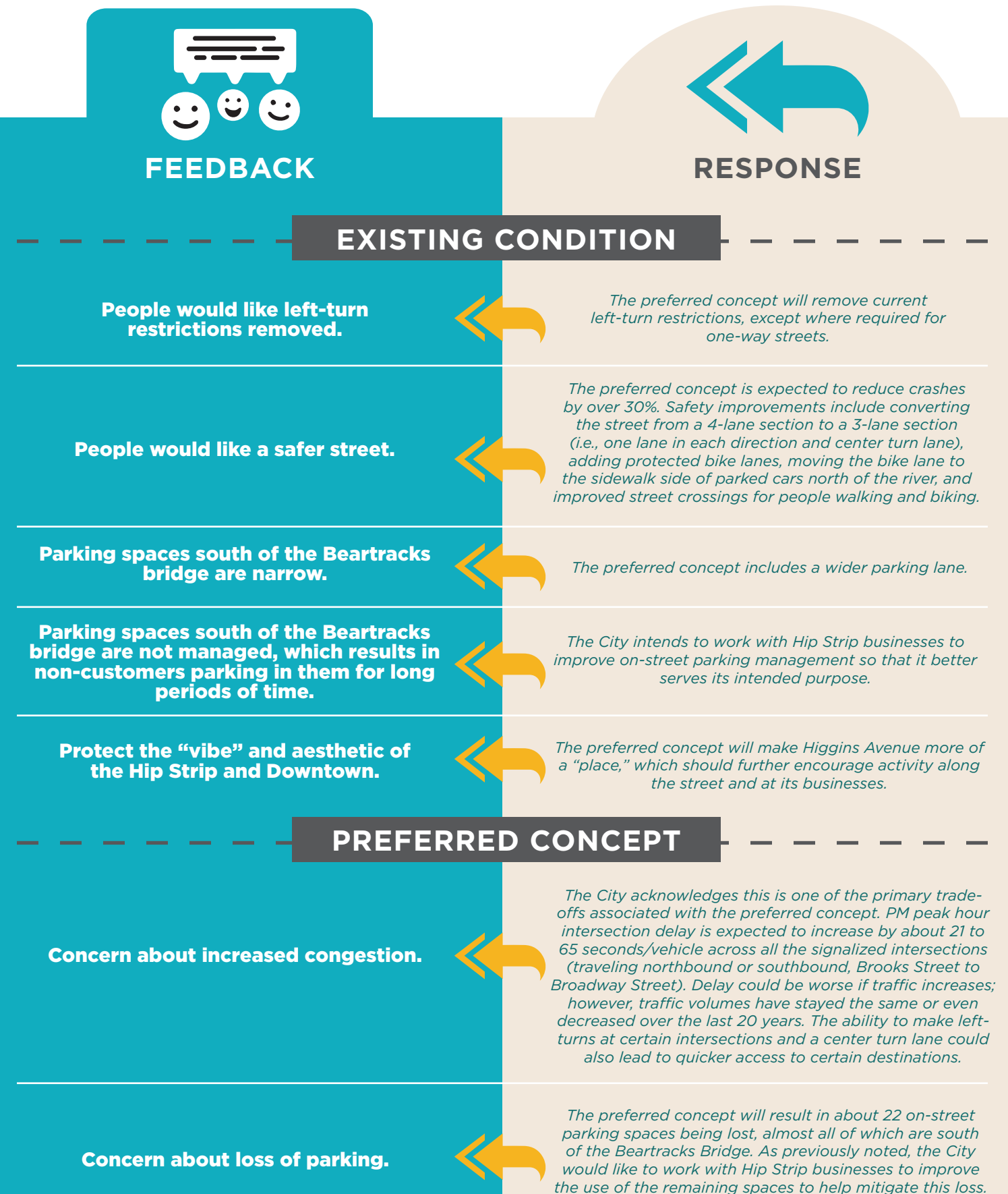


CONCERNS

- Parking Management and Supply
- Congestion
- Construction Impacts

Key Themes and Responses

The following summarizes key themes from the public outreach and how they are addressed in the preferred concept. Appendix "C" contains summaries of each round of public engagement.





FEEDBACK

Businesses are concerned about construction impacts.



RESPONSE

The City acknowledges that construction in downtown has been hard on affected businesses. There will be impacts from this project while it is being constructed. **The City is committed to working with businesses and contractors to mitigate these impacts.** This includes coordinating construction schedules with other downtown projects to minimize disruption. Due to deteriorating pavement condition and inaccessible cross slopes, Higgins Avenue may likely need to be rebuilt in the future regardless of this project, especially south of the Beartracks Bridge. Implementing the preferred concept will address these deficiencies, too, preempting the need for another major maintenance project.

Will the intersection treatments be the same as those on Higgins north of Broadway?

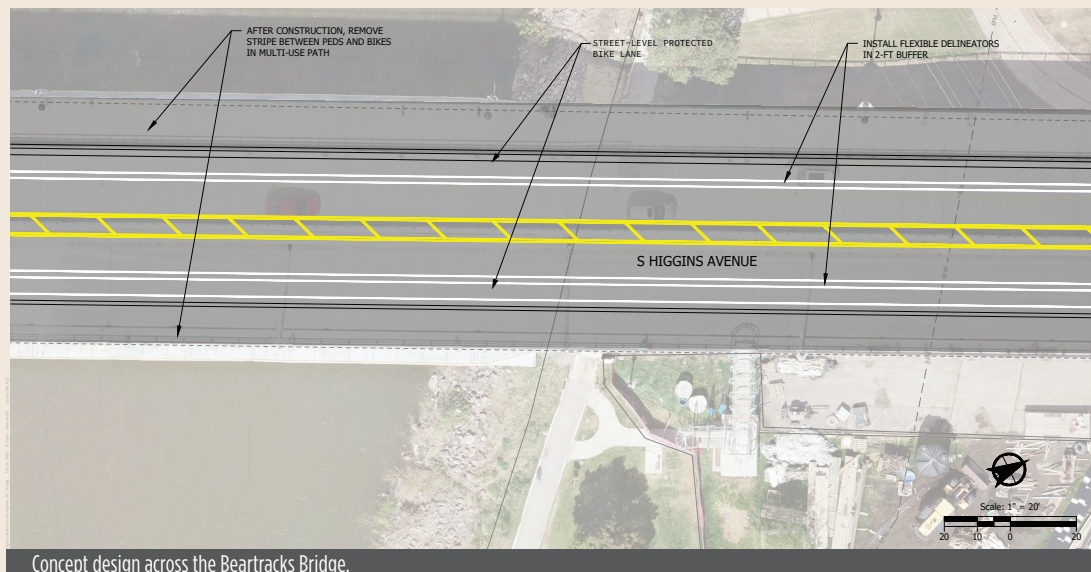
No, the City intends to use lessons learned from the raised bike lanes north of Broadway to improve the intersection treatments on this section of Higgins Avenue. Potential intersection treatments include bike signals and protected intersection elements to slow turning motor vehicles and better separate people biking and walking from motor vehicles.

Higgins Avenue from Brooks Street to 5th Street is also US 12 and a designated freight route, how will that traffic be handled?

Higgins Avenue will remain 4 lanes between Brooks Street and 6th Street to facilitate vehicles traveling the US 12 section of Higgins Avenue. The concept design accommodates larger freight vehicles at the intersections on this section of US 12.

What does this project mean for the recent investment in the Beartracks Bridge?

The preferred concept makes use of the newly expanded bridge deck. The striped out center lane can help facilitate emergency vehicle access into and out of downtown.



Providing a street-level protected bike lane across the bridge will separate people walking and biking and alleviate congestion on the shared-use paths, which have proven to be very popular, especially in the summer. The bridge could also be converted back to a 4-lane section if ever desired with minimal effort (e.g., removing and replacing striping).

Concept design across the Beartracks Bridge.



\$7.90 - Expected return on every \$1 of public investment in the project¹

Key Accomplishments of the Preferred Concept

- Left-turn lanes at intersections and driveways will reduce crashes and improve access to local businesses.
- Raised bike lanes will reduce the potential for crashes and improve conditions for people biking.
- Improves bus stop accessibility.
- Improves business access for people biking, walking, taking transit, and driving.
- Increases multimodal transportation options to maintain people-moving capacity.
- Improves roadway condition.
- Improves lighting and streetscape.
- Invests in downtown infrastructure.

Key Tradeoffs of the Preferred Concept

- Delay and queuing are expected to increase (see Key Themes and Responses for more details)
- Increased delay may affect bus timing in PM peak period
- Moderate parking impacts (about 22 spaces may be lost, almost entirely south of the bridge)

¹ (calculated for RAISE grant application considering safety, congestion, environmental, health, and maintenance costs and benefits)

IMPLEMENTING THE CONCEPT



Implementing the Concept

The final design will need to address the following considerations:

- **Access management** – The final design should work with property owners to:
 - Combine driveways when a property has multiple accesses onto Higgins Avenue or has access onto a side street or two adjacent driveways to multiple properties into one shared driveway.
 - Redesign wide driveways to meet City standards.
- **Before-after data** – MDT has requested the City evaluate the effects of the project on traffic patterns and operations by collecting before and after data through the following means along Higgins Avenue, as well, to evaluate the potential effects of re-routed traffic, at other downtown signals:
 - Probe-based automated traffic signal performance measures (ATSPM) (e.g., INRIX)
 - Streetlight, or other similar provider, data
 - Multimodal turning movement counts
- **Business/property owner communication** – The City will:
 - Seek to coordinate construction with other downtown projects to minimize disruptions to adjacent businesses.
 - Maintain regular communication with businesses and property owners as the project moves forward.
- **Environmental** – Key environmental considerations include:
 - Preserving existing healthy trees to the extent possible, including the suspended system in front of the Merc Building.
 - Providing stormwater drainage to City standards, which will improve the quality of the stormwater reaching the groundwater.
- **MDT final design coordination** – The City and MDT will need to further coordinate on the following design details:
 - How heavy vehicles will be accommodated at US 12 intersections (see Appendix “D” for turning movement templates for critical movements).

- Whether to provide bike signals or rely on protected intersection treatments where heavy right-turns cross the bike lane at 6th Street, Brooks Street, Main Street, and Front Street.
- The treatment to separate the bike lanes from the motor vehicle lanes over the Beartracks Bridge.
- **Parking** – Parking related considerations include:
 - Developing a parking management plan for the Hip Strip section of Higgins Avenue.
 - Evaluating the need for parking restrictions near alleys and driveways to provide adequate sight distance.
- **Roadway reconstruction** – In order to provide accessible cross-slopes for people using mobility devices to cross Higgins Avenue, as well as to provide adequate stormwater drainage, Higgins Avenue will likely need to be fully reconstructed.
- **Signal timing** – The preferred concept recommends a 90-second cycle length south of the river, along with protected left-turn phasing at all seven signals along the corridor, which will require retiming these signals.
 - MDT has noted that signals in downtown Missoula have not been re-timed since 2010. Given shifting traffic patterns and potential changes to Front Street and Main Street, MDT has requested the City initiate a project to re-time 22 signals in downtown Missoula.
- **Signal upgrades** – All signals will need to be upgraded to current MDT standards, including detection and communications infrastructure. This will include equipment that is able to be integrated into MDT’s forthcoming detector-based ATSPM system. This change may allow for more flexible signal timing plans.
- **Transit** – The final location and design of bus stops will need to be coordinated with Mountain Line and adjacent property owners.

Estimated Cost

The following table summarizes the planning-level cost estimates for the preferred concept. The cost estimate assumes a full reconstruction of the roadway, except for the Beartracks Bridge.



| ITEM | COST |
|---------------------------------|--------------------|
| Project Engineering | \$1,100,000 |
| Construction | \$4,100,000 |
| Contingency | \$1,500,000 |
| Construction Support/Management | \$660,000 |
| Indirect Costs | \$600,000 |
| Inflation | \$450,000 |
| TOTAL | \$8,410,000 |

More details on the cost estimate are found in Appendix “F.”

WHAT’S NEXT?

The City and MPO will actively seek opportunities to fund the final design and construction of the preferred concept. To minimize the length of downtown construction impacts, the City’s goal is to obtain funding for this concept, as well as for other planned downtown projects (e.g., the Front/Main Two-Way Restoration project) so that they can be constructed simultaneously.