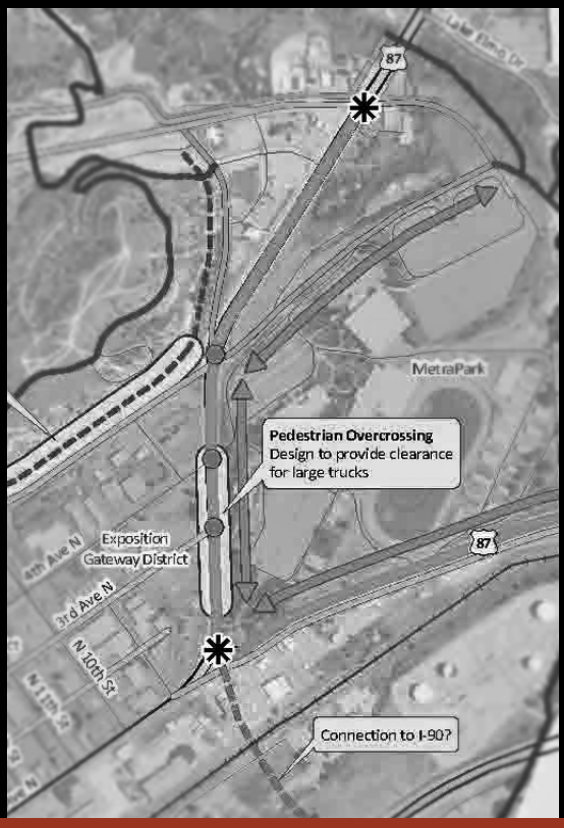
September 2013



City of
Billings

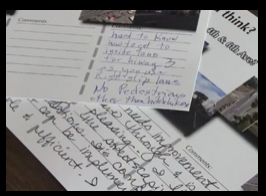
Hospitality Corridor Planning Study

Final Report









FEHR PEERS

Acknowledgements

In addition to the individuals and agencies listed below, the City of Billings is grateful for the efforts of the numerous community members who participated in this process, guiding the direction of the study and reaffirming community commitment to the success of the Billings Hospitality Corridor area.

Project Steering Committee

Scott Walker
City of Billings

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City of Billings

Steve Zeier
East Billings Urban Renewal District

Bill Dutcher
MetraPark

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Montana Department of Transportation

Terry Smith
City of Billings

The preparation of this report has been financed in part through grant(s) from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

1 Planning Context

Figure 1.01 – The main objective of this study is to re-envision the US Highway 87/Main Street/Exposition Drive Corridor as a gateway into central Billings, providing design and phased strategic recommendations to achieve it. (Image source: Google Earth™)

Introduction

This study provides the City of Billings, Yellowstone County, and the Montana Department of Transportation (MDT) with a unique opportunity to re-envision the US Highway 87/Main Street/Exposition Drive Corridor as a gateway into central Billings. The timing of this study is fortuitous, as it follows on the heels of the Exposition Gateway Master Plan, which evaluated ways to revitalize the land uses surrounding the corridor, including creating better linkages between the East Billings Urban Renewal District (EBURD) and MetraPark.

The goal of the Hospitality Corridor Planning Study is to weave vehicular and non-vehicular needs together to provide a cohesive vision for the corridor, providing safe and comfortable travel for a variety of modes and supporting the City's overall vision of revitalizing the Exposition Gateway District and better connecting with MetraPark.

It is important to note that this process included not only City staff, but representatives from EBURD, MDT and MetraPark. While the study resulted in a corridor vision, further engineering analysis will be needed to confirm that the study's recommendations are feasible and address all needs.

This summary document presents study findings arranged in three main parts:

1) ***Planning Context*** *– presenting study objectives, other related plans, existing conditions, and near and long-term trends important to the overall Hospitality Corridor planning area.*
2) ***Design Recommendations*** *– illustrating alternatives considered, proposed improvements for the near-term, proposed improvements for the long-term, and recommended streetscape illustrations.*
3) ***Funding & Implementation*** *– presenting funding sources*

Figure 1.02 – Findings from the recent Exposition Gateway Master Plan were evaluated and integrated with the Hospitality Corridor Planning Study. (Image source: Studio Cascade, Inc.)

and strategies for recommended improvements, plus a draft implementation schedule.

A separate appendix document has also been assembled and delivered to the City, providing additional information on study components and other elements regarding the process and study outcomes.

All sections of this document strive to present information as visually as possible, in most cases using fold-out maps and illustrations.

Process

The City of Billings and its consultant team conducted the Hospitality Corridor Planning Study over the course of nine months, with major milestones/activities listed below:

- *November 2012 – Kickoff advisory committee meeting*
- *December 2012 – Input from Exposition Gateway Master Plan stakeholders, project coordination*
- *January-February 2013 – Literature and background study review*
- *February-March 2013 – Meetings and coordination with MDT*
- *March-April 2013 – Initial alternatives*
- *April 2013 – Concept review with advisory committee*
- *May 2013 – Advisory committee and MDT feedback*
- *June 2013 – Interim and long-term options presented at open house*
- *July-August 2013 – Plan refinement and delivery*

Conditions & Trends

Figures 1.03, 1.04 and 1.05 (fold out pages) illustrate the planning context for this study, show existing conditions along the corridor and future plans for intersections along the corridor from Airport Road to the Lockwood Interchange.

Related Plans & Studies

Over the past decade, numerous plans have been developed which have implications for the Hospitality Corridor. This study works to weave these disparate plans together to provide a cohesive vision for the corridor that provides safe and comfortable travel for a variety of modes. Here's a summary of many of these:

Billings Area I-90 Corridor Planning Study

This MDT study evaluated freeway improvement options on I-90 throughout Billings. Within the Hospitality Corridor study area, it considered short-term improvements to the I-90/Lockwood interchange to widen both off-ramps.

Lockwood Transportation Study

This study evaluated a variety of transportation system improvement concepts in the Lockwood area, including modifying signal timing along US 87 and reconstructing the I-90/Lockwood Road interchange.

6th Avenue/Bench Boulevard Study

This study presented few short-term recommendations, but long-term improvements included consideration of a fly-over connecting 4th Avenue with the 6th Avenue/Bench Boulevard intersection and a roundabout at 1st Avenue/US 87.

MDT Design Standards Document

This document summarizes the minimum MDT standards for urban facilities. Within the study area, Exposition Drive/US 87 is classified as a Principal Arterial, which provides guidance related lane widths, clear zones, and design treatments.

EBURD Master Plan

This plan defined some prototypical streetscape standards, including guidance on lane widths, the presence of street trees, and other modal facilities.

Billings Urban Area Long-Range Transportation Plan

This document identifies long-range transportation projects in the region. The plan roughly identifies an east-west trail in the vicinity of the US 87 bridge over the Yellowstone River and potentially bike lanes along US 87. No other improvements along the study corridor were identified.

Billings Area Bikeway and Trail Master Plan

This document does not identify any facilities on Exposition Drive, but defines a proposed long-range bike lane along US 87 east of Exposition Drive, which extends into the county beyond the Lockwood interchange. The plan also hints at a potential future trail crossing the Yellowstone River alongside US 87.

Metra Park Egress Improvements

This study evaluates ways to improve the efficiency of traffic circulation during events at Metra Park. The study recommends revisions to the 6th/Bench Boulevard and 4th Avenue intersections.

"Springboard" opportunity: Gateway Master Plan

The timing of the Hospitality Corridor study is fortuitous, since it follows on the heels of the *Exposition Gateway Master Plan*, an effort that researched ways to revitalize land uses surrounding the US 87 corridor, including better ties between the East Billings Urban Renewal District (EBURD) and MetraPark.

Due to similarities in overall goals, the Hospitality Corridor planning team reviewed findings from the Gateway plan, especially those showing how vehicular and non-motorized needs might work together to help revitalize the entire district – including the Hospitality Corridor.

The diagrams here illustrate many of the concepts generated by the Exposition Gateway Master Plan, particularly those related to the corridor.

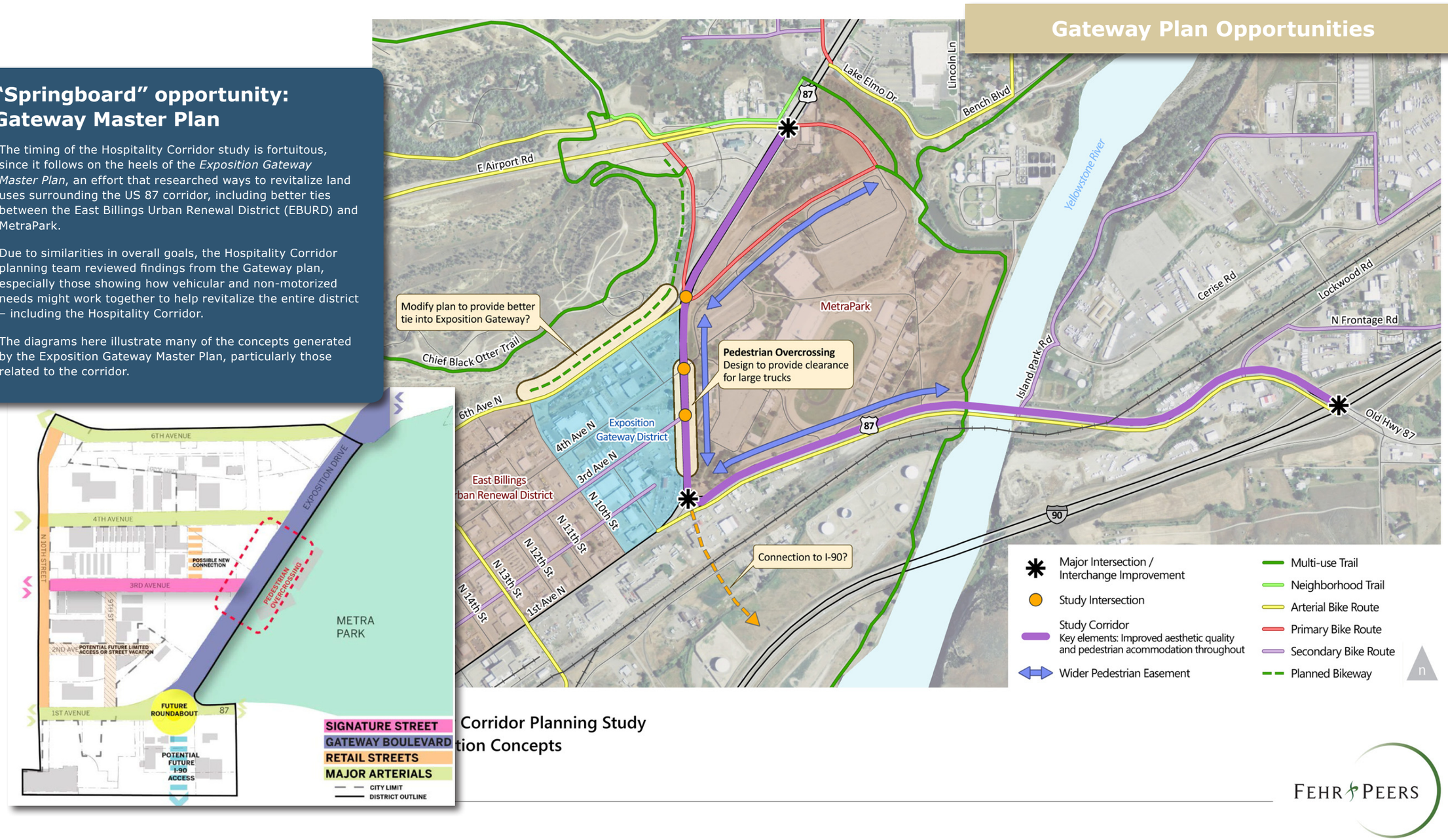


Figure 1.03 – *Ideas and concepts developed for the Exposition Gateway Master Plan, shown here, were reviewed and incorporated into the Hospitality Corridor Planning Study. (Image source: Fehr & Peers)*

Airport Road

This intersection has a large footprint, with a seven lane north-south cross-section and a sweeping southbound right-turn onto Airport Road. The Airport Road intersection has been analyzed in many related studies, most recently in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012). Although it wasn't one of the primary study intersections, it was included in all of the operations analyses completed for that project. For this study, we have taken a deeper look at near-term and long-term options to improve intersection operations.

4th & 6th Avenues

4th and 6th Avenues create a one-way couplet through the Exposition Gateway district. Given the couplet configuration, these two intersections operate as a system (4th Avenue runs eastbound, 6th Avenue runs westbound). As arterials, both 4th and 6th feature full access, signalized intersections with Exposition Drive. These intersections were a focus in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012).

3rd Avenue

This is a T-intersection, where the raised median limits access to 3rd Avenue only by southbound Exposition Drive. No crosswalk is provided. Pedestrians are expected to use the signalized crossing at 4th Avenue.

1st Avenue/Exposition/US 87

This three-legged intersection is the confluence of 1st Avenue, Exposition Drive, and US 87. This intersection accommodates trucks and fast-moving vehicles with its large, sweeping turns. While sidewalks are provided, there are no pedestrian crossings at the intersection. The nearest pedestrian crossing is at 13th Street (to the west) or at 4th Avenue (to the north). Both of these crossing locations are more than 2,000 feet away, adding about 10 minutes of walking time. This intersection has been analyzed in many related studies, most recently in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012).

This intersection was also a focus of the February 2013 *Exposition Gateway Master Plan.*

Lockwood Interchange

The I-90 Lockwood interchange has a diamond configuration. Both on-ramps have a single lane, as does the westbound off-ramp. The eastbound off-ramp includes two lanes. Existing and future year operations, including improvement concepts, were analyzed as part of the Lockwood Transportation Study (2007) and re-examined as a part of this study.

Figure 1.04 – *This graphic summarizes the existing transportation context along the corridor – describing key conditions that helped shape study proposals. (Image source: Fehr & Peers)*

Projected Conditions

Airport Road

Near Term – Main Street approaches will continue to operate at LOS "D" or better, while eastbound and westbound minor approaches will operate at LOS "F" during peak commute times.

Long Term – Over the next few decades, traffic volumes will continue to grow until the Billings Bypass is constructed. Associated with this growth, delays will increase at this intersection. If the Billings Bypass is not constructed by 2033 (the horizon year of the *6th Avenue North/ Bench Boulevard Traffic Report*), this intersection will likely go over-capacity during peak commute hours (LOS F). Construction of the Billings Bypass would divert sufficient volumes for this intersection to continue operations at levels similar to those today.

4th & 6th Avenues

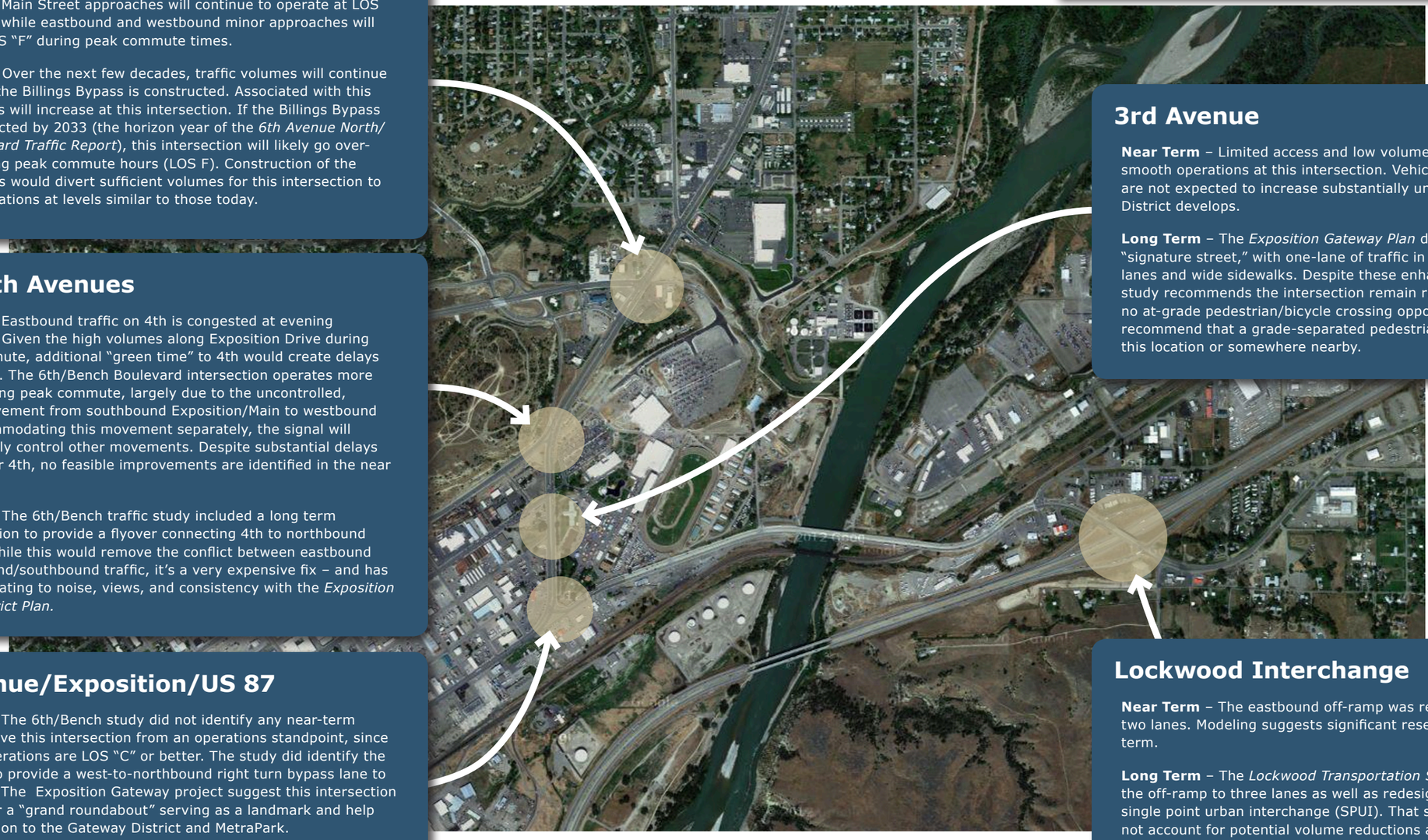
Near Term – Eastbound traffic on 4th is congested at evening peak periods. Given the high volumes along Exposition Drive during evening commute, additional "green time" to 4th would create delays for Exposition. The 6th/Bench Boulevard intersection operates more smoothly during peak commute, largely due to the uncontrolled, sweeping movement from southbound Exposition/Main to westbound 6th. By accommodating this movement separately, the signal will more efficiently control other movements. Despite substantial delays anticipated for 4th, no feasible improvements are identified in the near term.

Long Term – The 6th/Bench traffic study included a long term recommendation to provide a flyover connecting 4th to northbound Exposition. While this would remove the conflict between eastbound and northbound/southbound traffic, it's a very expensive fix – and has challenges relating to noise, views, and consistency with the *Exposition Gateway District Plan.*

1st Avenue/Exposition/US 87

Near Term – The 6th/Bench study did not identify any near-term need to improve this intersection from an operations standpoint, since peak hour operations are LOS "C" or better. The study did identify the opportunity to provide a west-to-northbound right turn bypass lane to improve flow. The Exposition Gateway project suggest this intersection as suitable for a "grand roundabout" serving as a landmark and help attract attention to the Gateway District and MetraPark.

Long Term - The 6th/Bench study identified a roundabout as a potential enhancement for this intersection. The Gateway Plan also identified the potential for a future connection to I-90 from this intersection, but the timeline for such a connection is likely 50 years or more.



3rd Avenue

Near Term – Limited access and low volumes along 3rd will maintain smooth operations at this intersection. Vehicle and pedestrian volumes are not expected to increase substantially until the Exposition Gateway District develops.

Long Term – The *Exposition Gateway Plan* designates 3rd as a "signature street," with one-lane of traffic in each direction plus bike lanes and wide sidewalks. Despite these enhancements along 3rd, the study recommends the intersection remain right-in/right-out only with no at-grade pedestrian/bicycle crossing opportunities. The study does recommend that a grade-separated pedestrian crossing be considered at this location or somewhere nearby.

Lockwood Interchange

Near Term – The eastbound off-ramp was recently re-striped to include two lanes. Modeling suggests significant reserve capacity in the near term.

Long Term – The *Lockwood Transportation Study* evaluated widening the off-ramp to three lanes as well as redesigning the interchange as a single point urban interchange (SPUI). That study's future forecasts did not account for potential volume reductions associated with the Billings Bypass project. With the bypass in place, eastbound off-ramp widening is sufficient.

Figure 1.05 – *This graphic summarizes projected trends based on practical assumptions and adopted policy conditions. "Near Term" changes may be expected to occur between 1-10 years; "Long Term" changes are likely beyond 10 years. (Image source: Fehr & Peers)*

Design Recommendations

Figure 2.01 – To achieve long-range community goals, this study recommends solutions supporting a full range of transportation modes, allowing the Hospitality Corridor to develop as a more engaging, active part of the city. (Image source: High Plains Architects)

Introduction

This section presents design recommendations for the Hospitality Corridor Planning Study, illustrating alternatives considered, proposed improvements for the near-term, proposed improvements for the long-term, and recommended streetscape elements.

As with the rest of this summary document, findings are presented as maps and drawings with brief written descriptions as introduction; more detailed analysis and technical information may be found within the appendix document.

Alternative Concepts

(Considered, not recommended)

Figures 2.03 and 2.04 present options that were **initially** considered as Hospitality Corridor concepts. Both focus on enhancing the environment for multi-modal travel and served as a springboard for the proposed concepts described in the following section. The concepts differ primarily in the treatment at 1st Avenue/Exposition Drive.

Alternative A (Figure 2.03) envisioned a more extensive remake of the corridor, including a grand roundabout at the intersection of 1st/US 87/Exposition Drive. Pedestrian crossings of the corridor were to be provided at three points:

- *A HAWK [1] signal at 3rd Avenue that would be upgraded to a grade-separated crossing at a later date.*
- *A HAWK signal south of METRA Park to provide access across US 87 east of Exposition Drive.*
- *A full access signal at the intersection of 10th Street and 1st Avenue.*

1 A HAWK beacon (High-Intensity Activated crossWalK beacon) is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is officially known as a "pedestrian hybrid beacon." The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Research has shown motorists' compliance with the HAWK beacon at up to 97%, higher than with traditional un-signaled crossings.

Figure 2.02 – Long-term recommendations for the corridor include a "signature" roundabout at 1st Avenue/US 87. Such a feature would address multiple goals for the corridor, but would require coordination and funding from MDT and other agencies. (Image source: Fehr & Peers, Sanderson-Stewart)

Alternative B (Figure 2.04) provided a lower-cost alternative hinged around upgrading the existing signal at the intersection of 1st/US 87/Exposition Drive to include a marked pedestrian crossing with signal phasing and minor beautification treatments. Additional pedestrian crossing opportunities would be provided at the following locations:

- *A HAWK signal at 3rd Avenue that would be upgraded to a grade-separated crossing at a later date.*
- *A HAWK signal at the intersection of 10th Street and 1st Avenue.*

It is important to note that while the HAWK signal is an innovative treatment to provide safer at-grade pedestrian crossings, it was ultimately taken out of the proposed set of improvements due to concerns about its potential impacts to traffic operations on State-owned routes.

Proposed Improvements

To facilitate implementation, the planning study team sorted recommendations into two main categories: near-term (0-5 years) and long-term (5 years or more).

Near-term projects (Figure 2.05) list efforts seen as relatively easy to implement that would enhance the streetscape and help improve pedestrian safety. These improvements include intersection enhancements that fit within the existing rights of way, as well as beginning work on an improved pedestrian realm, including relocating the fence at MetraPark to provide a wider multi-use path.

Long-term projects (Figure 2.06) list efforts that are more transformative, implementing some of the recommendations from the Gateway master plan and requiring a higher level of investment over a longer period of time. Projects like the grade-separated pedestrian crossing of Exposition Drive and the "signature" roundabout at 1st Avenue/Exposition Drive/US 87 are included, requiring multi-agency coordination and funding from MDT and other partners.

Streetscape Elements

The images provided in Figure 2.07 show streetscape elements that should be considered in the ultimate Hospitality Corridor design. Note that these drawings are intended to convey feature types versus specific, localized designs. Proposed elements include:

Corridor Wide

- *Street trees*
- *Buffered sidewalks and trails*
- *Decorative furnishings (benches, rubbish bins, and bicycle parking)*
- *Signage and wayfinding tailored to multiple scales*

Signature Treatments at Key Locations

- *Signalized pedestrian-automated crossings*
- *Grand roundabout that accommodates trucks and heavy traffic volumes on the corridor*
- *Grade-separated pedestrian crossing (In the event a pedestrian overpass is constructed that would land on any part of MetraPark property, the Board of County Commissioners and MetraPark will have the power to determine egress and ingress to any such structure.)*

Alternative A

This scheme envisioned a more extensive remake of the corridor, including a grand roundabout at the intersection of 1st/US 87/Exposition Drive. Pedestrian crossings of the corridor were to be provided at three points, including 3rd Avenue, a signal south of METRA Park, and at the intersection of 10th Street and 1st Avenue.

Alternatives Considered

HAWK Pedestrian Crossing

Signal with Pedestrian Phase

Pedestrian Overcrossing

Roundabout

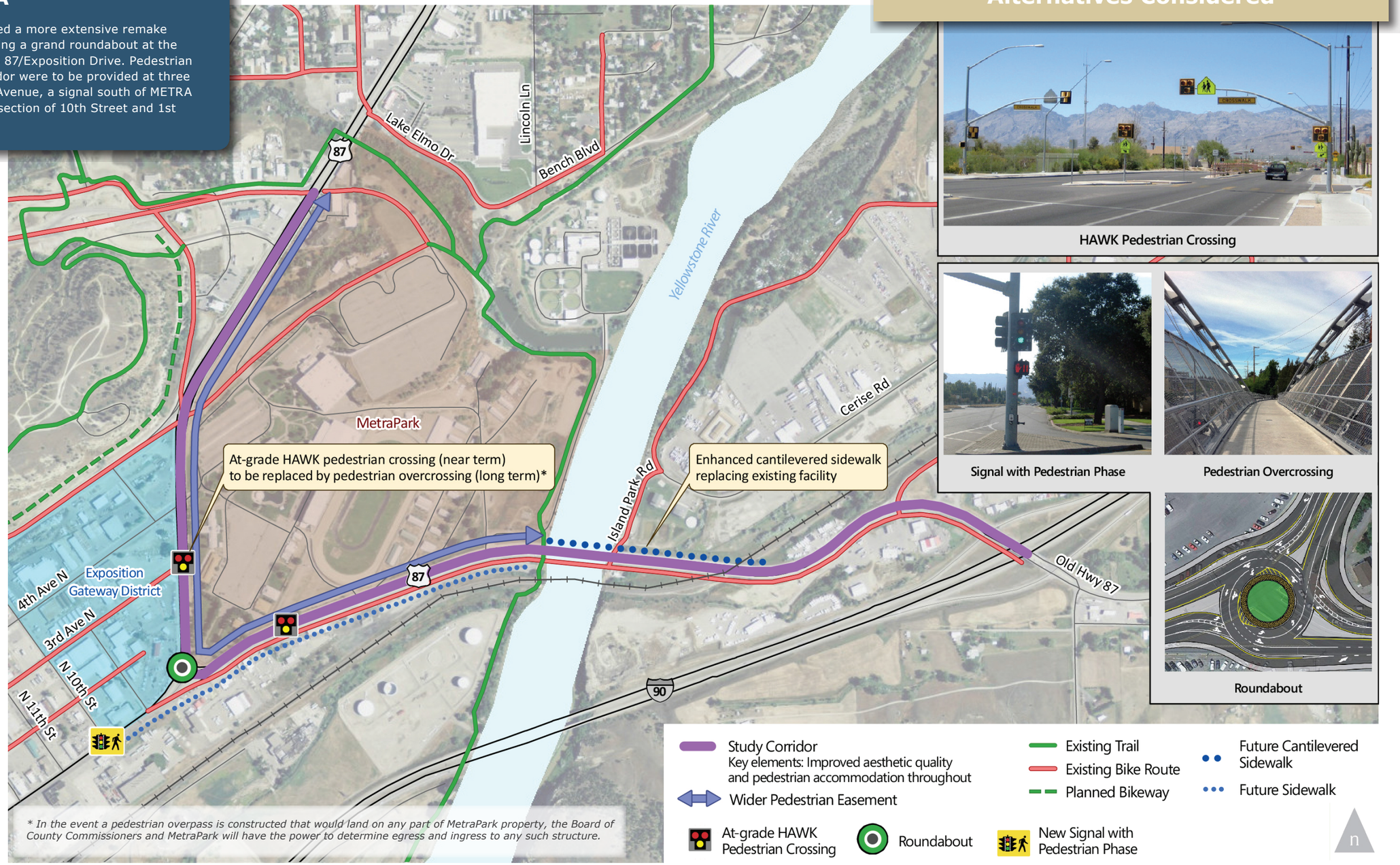
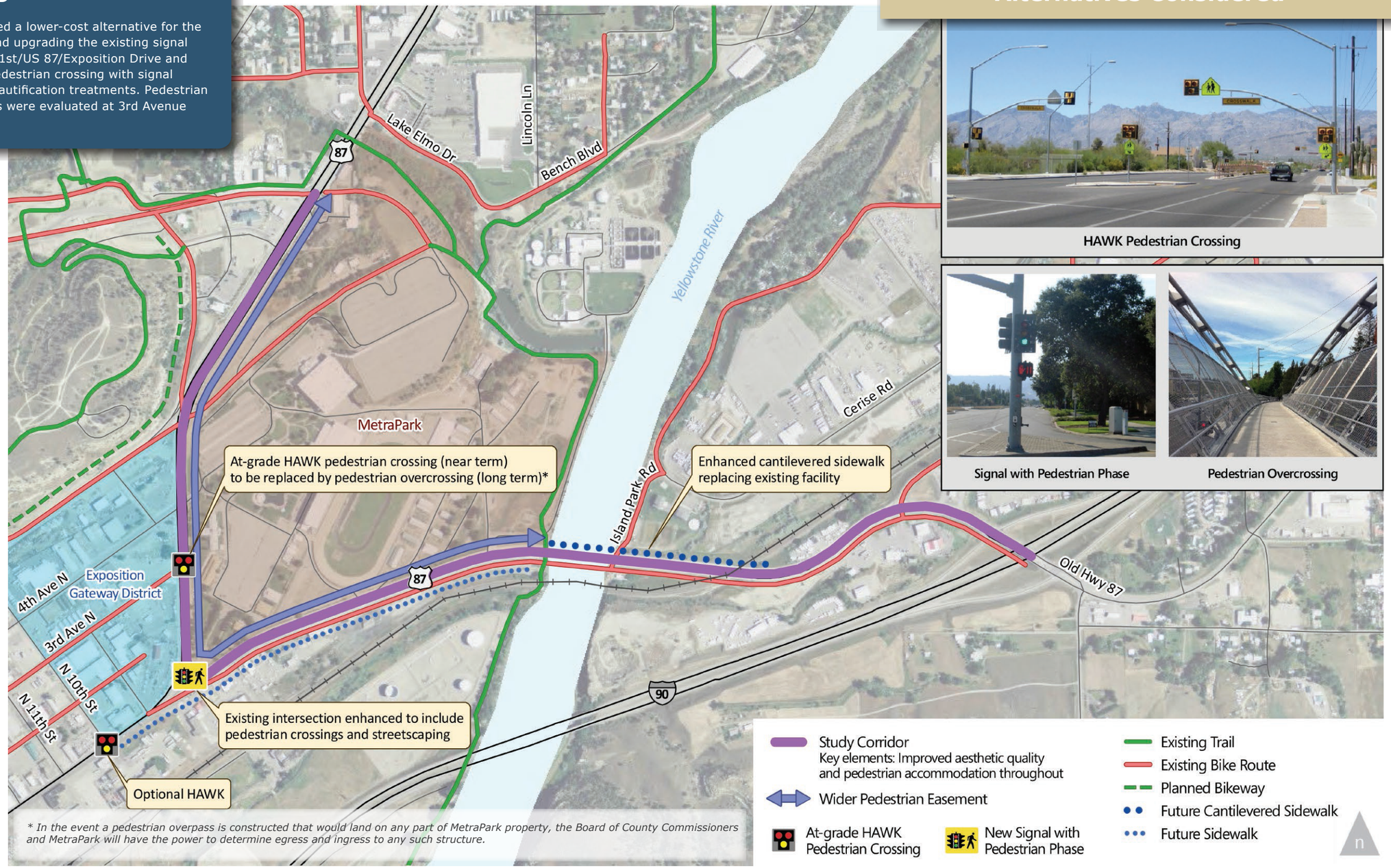


Figure 2.03 – *This illustration shows the range of improvements evaluated under "Alternative A", proposing a fairly extensive re-make of the corridor environment. (Image source: Fehr & Peers, Sanderson-Stewart)*

Alternative B

This scheme envisioned a lower-cost alternative for the corridor, hinged around upgrading the existing signal at the intersection of 1st/US 87/Exposition Drive and including a marked pedestrian crossing with signal phasing and minor beautification treatments. Pedestrian crossing opportunities were evaluated at 3rd Avenue and at 10th and 1st.



Alternatives Considered

HAWK Pedestrian Crossing

Signal with Pedestrian Phase

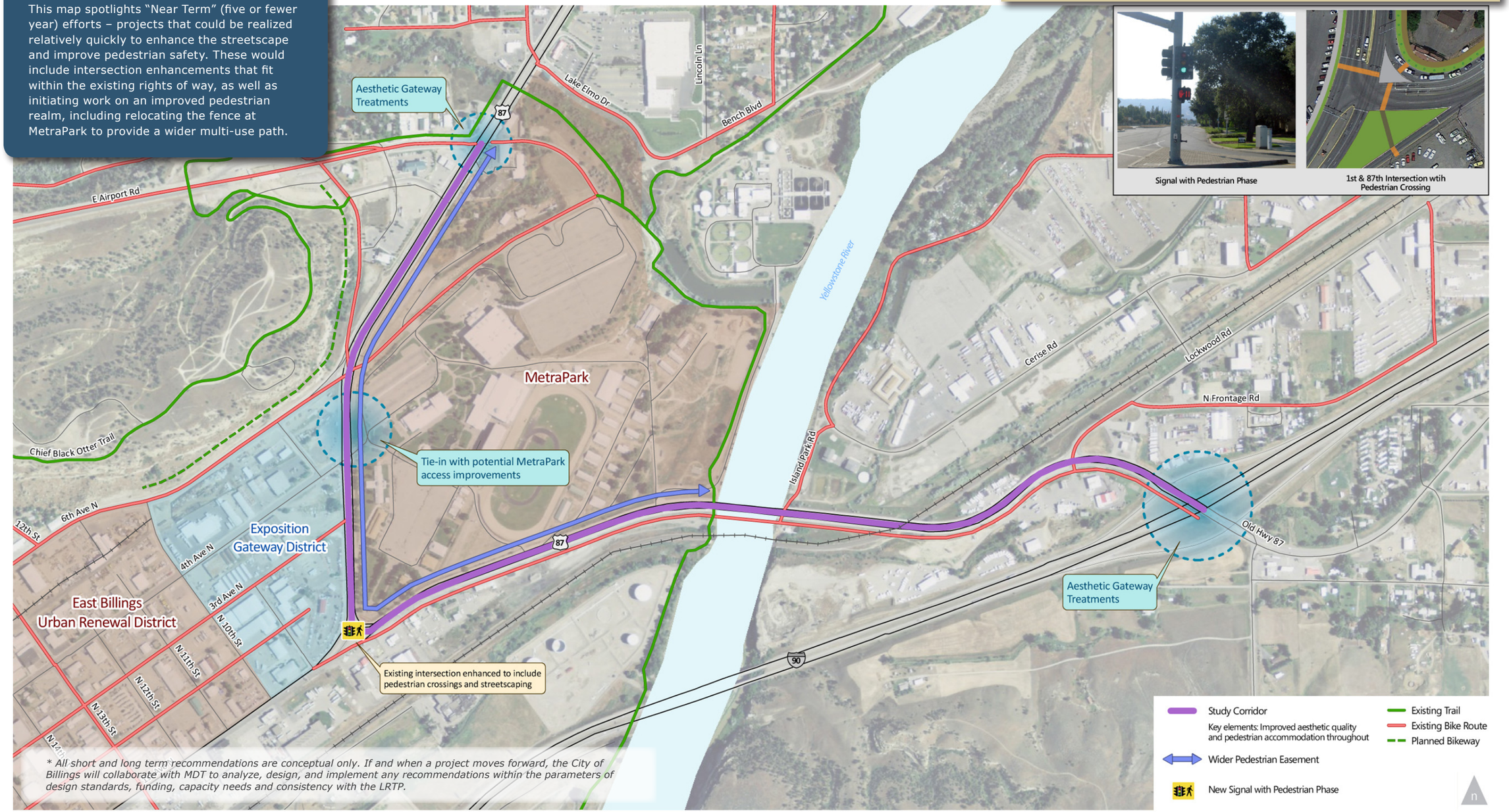
Pedestrian Overcrossing

Figure 2.04 – *This illustration shows the range of improvements evaluated under "Alternative B", proposing a lower-cost, simplified set of upgrades for the corridor environment. (Image source: Fehr & Peers)*

Near-term projects *

This map spotlights "Near Term" (five or fewer year) efforts – projects that could be realized relatively quickly to enhance the streetscape and improve pedestrian safety. These would include intersection enhancements that fit within the existing rights of way, as well as initiating work on an improved pedestrian realm, including relocating the fence at MetraPark to provide a wider multi-use path.

Proposed Improvements: Near-Term



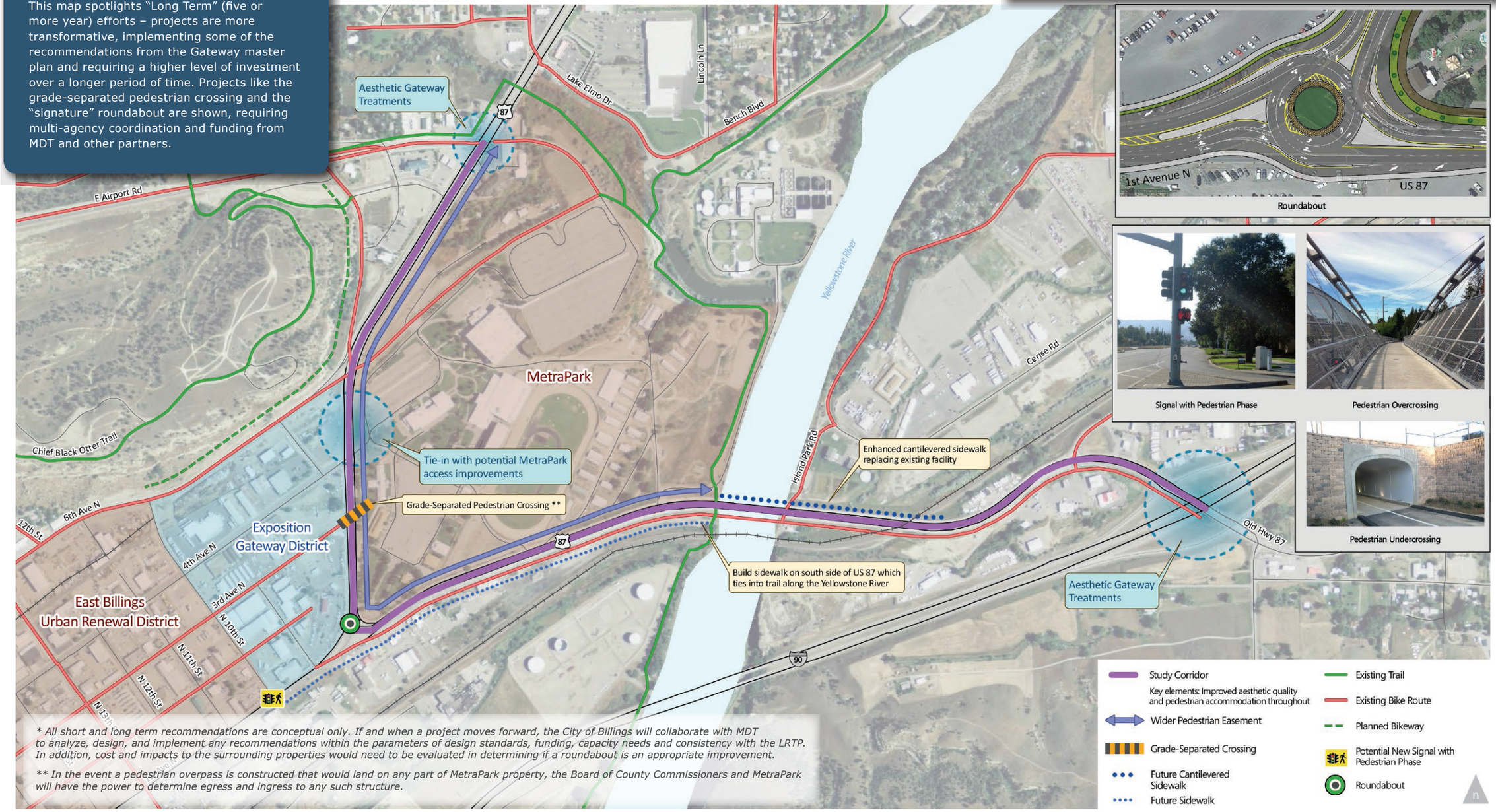
** All short and long term recommendations are conceptual only. If and when a project moves forward, the City of Billings will collaborate with MDT to analyze, design, and implement any recommendations within the parameters of design standards, funding, capacity needs and consistency with the LRTP.*

Figure 2.05 – *This illustration shows the range of near-term improvements proposed to address Hospitality Corridor goals. (Image source: Fehr & Peers)*

Long-term projects *

This map spotlights "Long Term" (five or more year) efforts – projects are more transformative, implementing some of the recommendations from the Gateway master plan and requiring a higher level of investment over a longer period of time. Projects like the grade-separated pedestrian crossing and the "signature" roundabout are shown, requiring multi-agency coordination and funding from MDT and other partners.

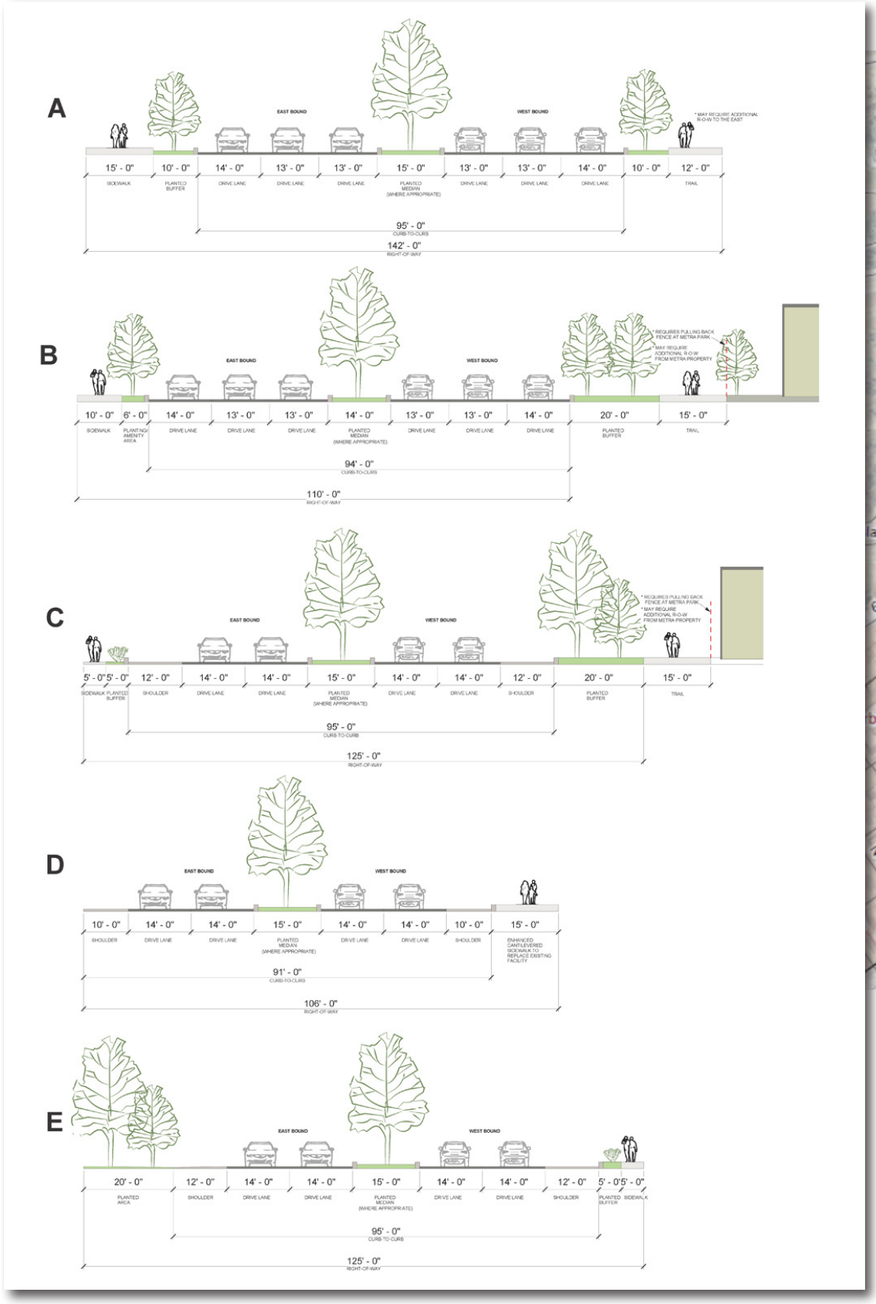
Proposed Improvements: Long-Term

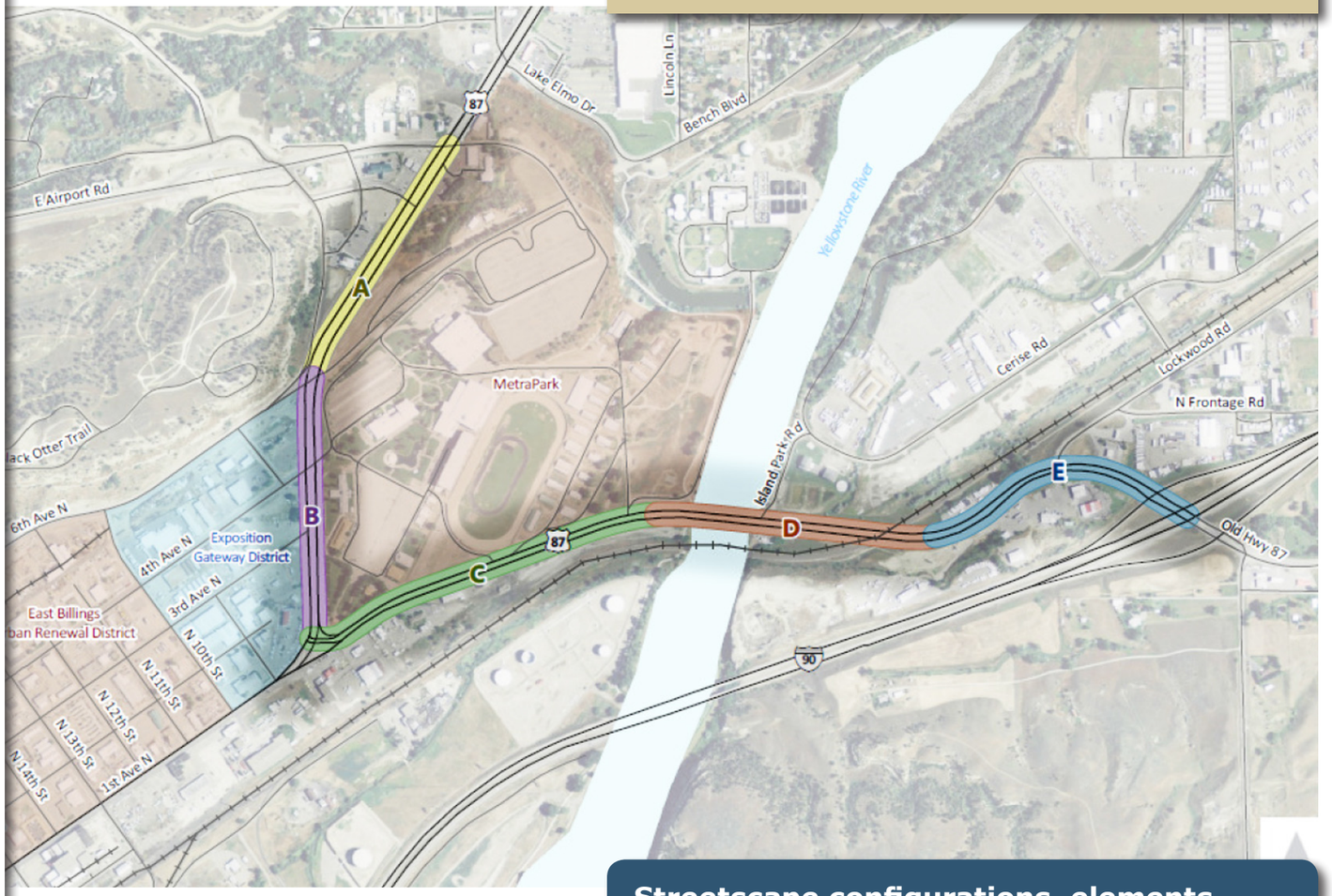


** All short and long term recommendations are conceptual only. If and when a project moves forward, the City of Billings will collaborate with MDT to analyze, design, and implement any recommendations within the parameters of design standards, funding, capacity needs and consistency with the LRTP. In addition, cost and impacts to the surrounding properties would need to be evaluated in determining if a roundabout is an appropriate improvement.*

*** In the event a pedestrian overpass is constructed that would land on any part of MetraPark property, the Board of County Commissioners and MetraPark will have the power to determine egress and ingress to any such structure.*

Figure 2.06 – *This illustration shows the range of long-term improvements proposed to address Hospitality Corridor goals. (Image source: Fehr & Peers, Sanderson-Stewart)*





Streetscape configurations, elements

Tying together the near and long-term corridor concepts, the Hospitality Corridor project team developed street designs appropriate to key segments along the Hospitality Corridor. Segments (map above) were identified based on characteristics such as surrounding land uses and physical constraints. At left, streetscape sections are presented, recommending configurations for each of the map segments.

Figure 2.07 – *This graphic presents concept-level configurations for roadway and streetscape elements along the Hospitality Corridor. Street section types (A-E) are keyed to the corridor map above. (Image source: Fehr & Peers)*

Character, Local Context

These images show how other communities have implemented the types of streetscape elements recommended for the Billings Hospitality Corridor. From pedestrian bridges, to roundabouts, to wayfinding features, the potential exists to create elements that not only add beauty and function to the corridor, but are uniquely suited to Billings and its overall objectives.

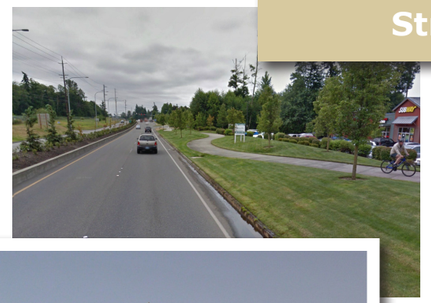


Figure 2.08 – *These images show how streetscape elements can be designed to fill a wide range of functional and aesthetic needs. (Images source: Fehr & Peers)*

Funding & Implementation

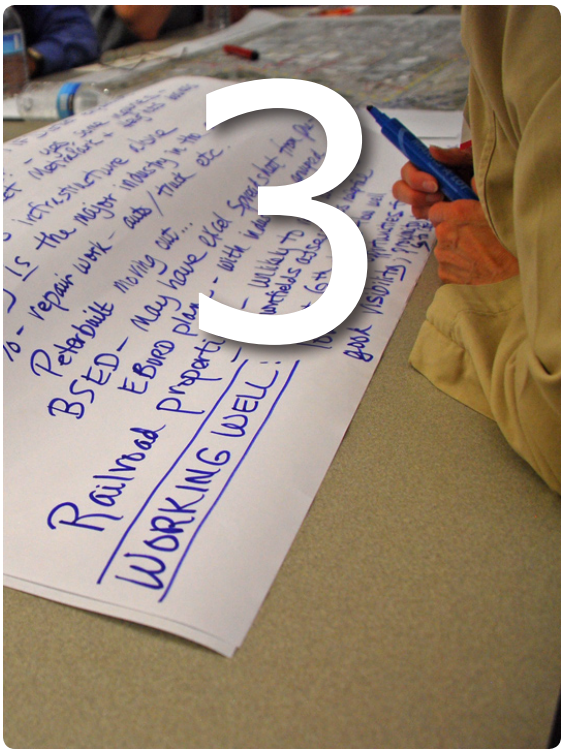


Figure 3.01 – This study provides outline information regarding partners and likely funding sources to help realize Hospitality Corridor goals. (Image source: Studio Cascade, Inc.)

Funding Sources

Critical to any plan is its implementation. As part of its work, the project team compiled a list of potential and likely funding sources for components of this plan, including them on the following page in Table 3.01.

There is no funding currently identified or allocated for improvements recommended in this study.

Table 3.01 - *Funding sources, eligible uses*

Agency	Source	Eligible Uses
City of Billings	Capital Improvement Fund	*Flexible source of funding, programmed every two years*
	General Bond	*Flexibility depends on allowable uses for bond funds*
	Special improvement district	*The City is currently researching the viability of a Special Improvement District within the Exposition Gateway Master Plan area, which could fund streetscape and stormwater infrastructure*
	Arterial fee	*Must be used for projects on arterial roadways*
Other local sources	Urban Transportation Districts	*An Urban Transportation District (UTD) is structured similar to a Special Improvement District, with bonds backed by local government and issued to cover the cost of a proposed transportation improvement. UTDs are a flexible fund source that can cover the cost of roadway capacity, streetscape, and transit improvements. Revenue to pay for the bonds is raised through assessments against property owners in the designated district. UTDs provide a mechanism for funding projects that span multiple jurisdictions. Montana Code provides counties with the authority to establish UTDs with approval of affected residents*
Federal	TIGER	*Highly-competitive Federal funds that can be used for a wide variety of corridor improvements*
	Transportation Alternatives Program (TAP)	*Funds projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways*
	Congestion Management/Air Quality (CMAQ)	*Operating assistance is limited to new transit, commuter and inter-city passenger rail services, inter-modal facilities, travel demand management strategies, including traffic operation centers, inspection and maintenance programs, and the incremental cost of expanding these services*
	Regional Transportation Planning (RTP)	*Flexible planning dollars that can be used for a variety of planning and design purposes*
	Highway Safety Improvement Program	*A highway safety improvement project is any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem. MAP-21 provides an example list of eligible activities, but HSIP projects are not limited to those on the list*
Other	Developer funds	*The City does not currently charge impact fees to fund new transportation system improvements. However, the City assesses an arterial construction fee, which levies a fee on all properties within the city limits and the resulting revenue (approximately $3 million annually) is used specifically for constructing or reconstructing arterial roads within Billings*
	Big Sky Economic Development Authority grants	*Projects must include an obvious link to economic development; in particular, the Exposition Gateway Plan*

Additional project support from:

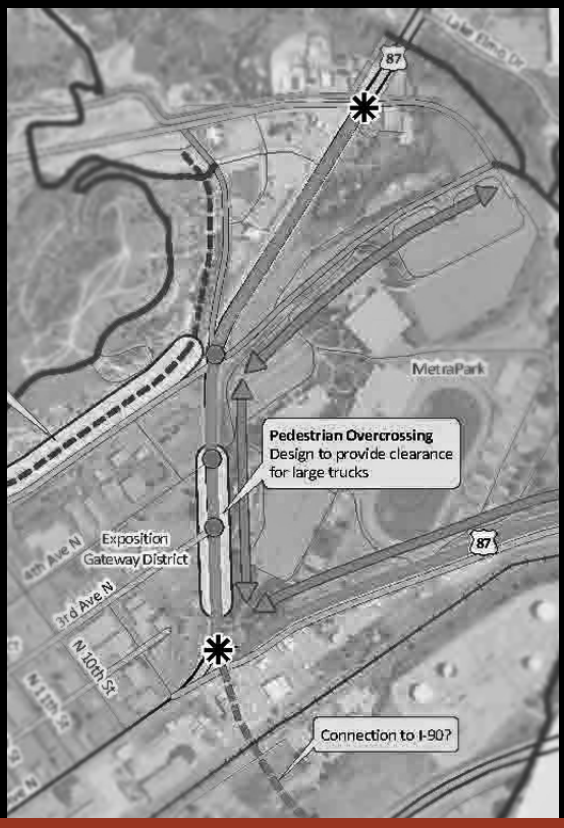
LMN Architecture Urban Design Interiors

HIGH PLAINS ARCHITECTS

Studio Cascade Community Planning & Design

SANDERSON STEWART

August 2013



City of
Billings

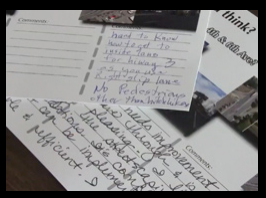
Hospitality Corridor Planning Study

Study Appendix









FEHR PEERS

Appendix

1. Expo Gateway Stakeholder Meeting Notes
   (December 2012)

2. Hospitality Corridor Context Report
   (March 2013)

3. Corridor Options Memo
   (April 2013)

4. MDT Contact Summary
   (July 2013)

FEHR PEERS

MEMORANDUM

Date: December 12, 2012

To: Lora Mattox, City of Billings and Mark Hinshaw, LMN Architects

From: Kendra Breiland, Fehr & Peers

Subject: 12/5 Exposition Gateway Stakeholder Meeting Recap - Transportation

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Fehr & Peers participated in the December 5, 2012 stakeholder meeting for the Exposition Gateway project. Our role was to introduce the upcoming Hospitality Corridor Planning Study effort and solicit feedback from Exposition Gateway plan stakeholders to ensure that the two projects complement one another to the highest degree possible. This memo summarizes the feedback received from participants and indicates the next steps in moving forward with each study.

Participant Feedback

Overall, the stakeholder meetings were both upbeat and productive. Because the participants were mainly property owners within the Exposition Gateway planning area or representatives of governing bodies (City of Billings staff, County Commissioners, Metra Park Staff), there was a high level of familiarity with the transportation challenges and opportunities within the Hospitality Corridor study area. Below, we provide a summary of the high-level issues raised during the stakeholder meeting, which are also illustrated in the accompanying figure.

- **Access into Exposition Gateway from Exposition Drive:** Stakeholders indicated openness to providing fewer access points than are shown on the Exposition Gateway concept diagrams, but stressed that any access provided should be highly visible and intuitive.

- **Bicycle and pedestrian circulation:** Participants agreed that the transportation system for biking and walking should be more complete. There was overall agreement that Exposition Drive may not be the best facility to accommodate these modes. Roadways within Exposition Gateway, a new trail system through Metra Park (including wider easements on the edges of Metra's property), and an overcrossing of Exposition Drive (somewhere between 4th Street and 2nd Street) were all discussed.
- **Treatments along Exposition Drive:** participants described a number of potential ideas for improving the current corridor. Among these ideas were streetscape concepts to improve aesthetic appeal, construction of a roundabout or other dramatic enhancement of the 1st Avenue/Exposition Drive intersection, grade separation at the 4th Avenue/Exposition Drive intersection, and capacity enhancements to the Exposition Drive/Airport Road intersection. There was general agreement that meeting with the Montana Department of Transportation would be the logical next step to better understand what is planned and what MDT will accept.

Next Steps

Below, we indicate specific next steps for each study.

Exposition Gateway

- Identify the critical access points along Exposition Drive and 1st Avenue that are necessary to make the district accessible and marketable to proposed development.
- If possible, eliminate the district access shown for 2nd Avenue and 9th Street, as these access points are considered to be too close to the 1st Avenue/Exposition Drive intersection. If elimination is not possible, consider designing these driveways to be right-in only, as this would minimize the impact on traffic operations.
- Show pedestrian link between Exposition Gateway and Metra Park as located somewhere between 4th and 2nd Avenues. The final location of this pedestrian overcrossing will be contingent on a variety of factors, including the placement of land uses on either side

of Exposition Drive and the potential construction of a fly-over at 4th Avenue.

- Identify how a pedestrian overcrossing might be funded. Examples of success from other cities, like Spokane, WA may be informative.

Hospitality Corridor

- Synthesize studies and plans for all modes of transportation within the study area. Develop a list of "potential ideas" for accommodating bicycle, pedestrian, and vehicular traffic within the study area (loosely defined by Airport Drive to the north, 10th Street to the west, 1st Avenue to the south, and the Yellowstone River to the east). Per the December 10, 2012 Yellowstone County Commissioner's Meeting, we understand this may also include incorporating developing plans for access to Metra Park.
- Meet with Brian Smith of the Washington State DOT's Strategic Planning Division to discuss context-sensitive solutions, such as roundabouts, for urban highways.
- Meet with Stefen Streeter at MDT to understand plans for key intersections (like 1st Avenue and 4th Avenue), as well as what the agency may or may not accept from a streetscape perspective. If appropriate, facilitate an idea-sharing session between Brian Smith and MDT staff.

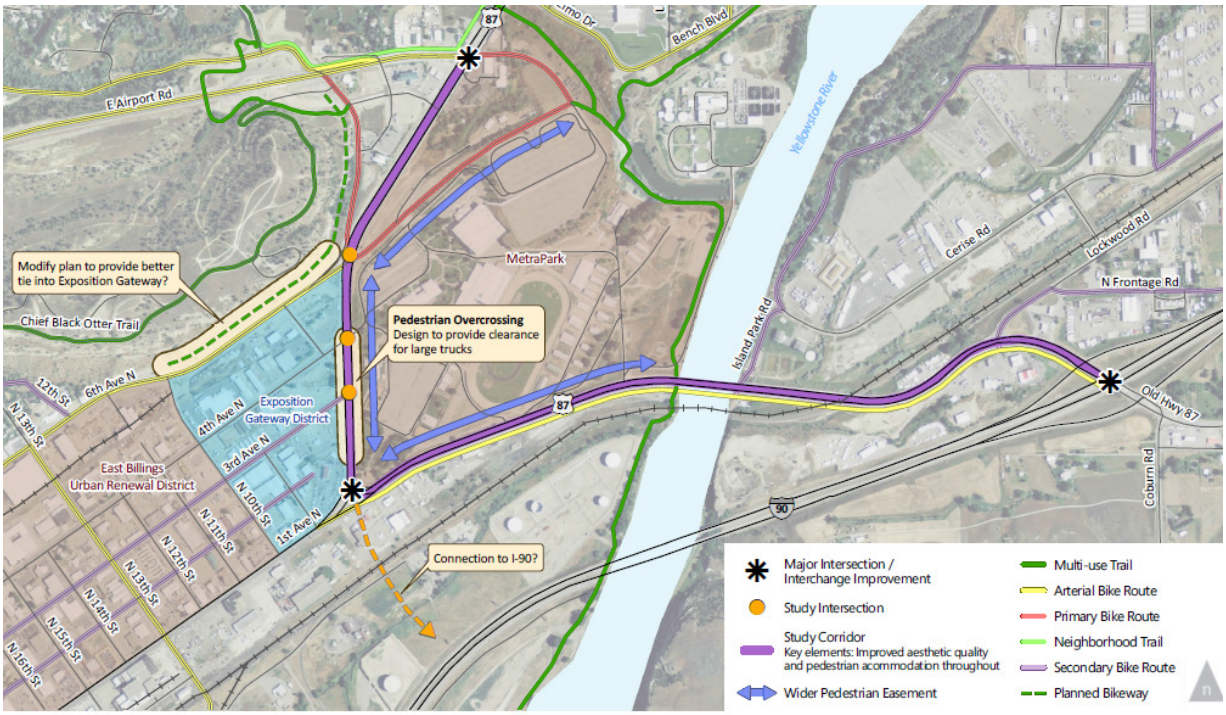
Once the above planning synthesis and coordinate tasks have been completed, our team will be in a position to begin development of the Hospitality Corridor Planning Study, including a streetscape plan, in earnest. These efforts will likely take place after the February 13, 2013 adoption of the Exposition Gateway plan.

Planning Context

This study provides the City of Billings, Yellowstone County, and the Montana Department of Transportation (MDT) with a unique opportunity to re-envision the US Highway 87 (Main Street) as a gateway into central Billings. The timing of this study is fortuitous, as it is following on the heels of the Exposition Gateway Master Plan, which is evaluating ways to revitalize the land uses surrounding the corridor, including creating better linkages between the East Billings Urban Renewal District (EBURD) and MetraPark.

This white paper provides the context for the Hospitality Corridor Planning Study, including our knowledge of existing conditions at each of the key intersections along the corridor, as well as what has been proposed in the near term and the long term. The document starts by summarizing our assessment of intersection operations from a vehicular perspective, followed by an assessment of non-motorized connectivity needs. The goal of the Hospitality Corridor Planning Study is to weave these disparate studies together to provide a cohesive vision for the corridor that provides safe and comfortable travel for a variety of modes and supports the City's overall vision of revitalizing the Exposition Gateway District and supporting the uses at MetraPark.

The below figure provides an overview of the corridor (which extends from Airport Road to the Lockwood Interchange), including the surrounding land use context, study intersections, and a few key mobility-related concepts identified by surrounding land owners.



Hospitality Corridor Planning Study – Transportation Concepts

Airport Road/Main Street

Aerial View (Google Images, 2013); on the ground view of the intersection.

This intersection has a large footprint, with a seven lane north-south cross-section and a sweeping southbound right-turn onto Airport Road. The Airport Road intersection has been analyzed in many related studies, most recently in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012). Although it wasn't one of the primary study intersections, it was included in all of the operations analyses completed for that project. For this study, we have taken a deeper look at near-term and long-term options to improve intersection operations.

- **Near Term Findings.** In the near term, the Main Street approaches will continue to operate at LOS D or better, while the eastbound and westbound minor approaches operate at LOS F during peak commute times.

- **Long Term Findings.** Over the next few decades, it is anticipated that traffic volumes would grow until the Billings Bypass is constructed. Associated with this growth, delays would increase at this intersection. If the Billings Bypass were not constructed by 2033 (the horizon year of the 6th Avenue North/Bench Boulevard Traffic Report), this intersection would eventually become over-capacity during the peak commute hours (LOS F). Construction of the Billings Bypass would divert sufficient volumes for this intersection to continue operating very similarly to the conditions seen today.

Potential Recommendation for Hospitality Corridor Study

Because the Billings Bypass is anticipated to move forward and the intersection is already "built-out" with multiple through lanes on all approaches, there is no reasonable short-term, low-cost solution for this intersection. We recommend that it be left as-is from a capacity standpoint and further evaluated after the Bypass is constructed. If Main Street volumes do continue to increase in the future, the most logical improvement at this intersection will involve grade separation.

However, grade separation would require future study to ensure another more substantial bottleneck is not created. To support the goal of a cohesive Hospitality Corridor, the project team will consider aesthetic improvements to enhance the visual appeal of this intersection and recognize its status as a gateway between Downtown Billings and the Heights.

6th Avenue/Bench /Main Street and 4th Avenue/Exposition Drive

Aerial View (Google Images, 2013); on the ground view of the 4th Avenue entrance to MetraPark.

4th and 6th Avenues create a one-way couplet through the Exposition Gateway District. Given the couplet configuration, these two intersections operate as a system (4th Avenue runs eastbound, 6th Avenue runs westbound). As arterials, both 4th and 6th Avenues feature full access, signalized intersections with Exposition Drive. These intersections were a focus in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012).

- **Near Term Findings.** Eastbound traffic on 4th Avenue carries experiences substantial queuing and delays (LOS F) in the evening peak period. Given the high volumes along Exposition Drive, particularly northbound during the evening commute, there are no simple fixes to provide additional green time to 4th Avenue without creating delays for Exposition Drive. The 6th Avenue/Bench Boulevard intersection operates more smoothly (LOS C or better) during the peak commute period, largely due to the uncontrolled, sweeping movement from southbound Exposition Drive/Main Street to westbound 6th

Avenue. By accommodating this movement separately, the signal is able to efficiently control other movements. Despite substantial delays on 4th Avenue, no feasible improvements have been identified in the near term.

- **Long Term Findings.** The 6th Avenue/Bench Boulevard traffic study included a long term recommendation to provide a flyover to connect 4th Avenue to northbound Exposition Drive without conflicting with traffic on Exposition Drive or 6th Avenue. While this improvement would remove the conflict between eastbound and northbound/southbound traffic, it is a very expensive fix and has identified challenges relating to noise, views, and consistency with the Exposition Gateway District Plan.

Potential Recommendation for Hospitality Corridor Study

Because this system of intersections is already "built-out", there is no reasonable short-term, low-cost solution to address the traffic congestion issues. Our team will be meeting with MDT to discuss future improvements at this intersection, including grade separation.

It should be noted a study of MetraPark access is currently underway. This study is evaluating ways to make ingress/egress from events more efficient. In particular, the study has noted that 4th Avenue (which currently serves as Metra's front door) might also serve an exit after events, a change that would add a westbound movement to this intersection, which could increase delays and degrade LOS. Findings from this study should be incorporated into any plan addressing the 4th Avenue and 6th Avenue/Bench Boulevard intersections.

3rd Avenue /Exposition Drive

Aerial View (Google Images, 2013); On the ground view of 3rd Avenue intersection.

This is a T-intersection, whereby 3rd Avenue can only be accessed by southbound Exposition Drive due to the raised median. No crosswalk is provided, as pedestrians are expected to use the signalized crossing at 4th Avenue. Our team observed operations at this intersection in December 2012.

- **Near Term Findings.** Limited access and low volumes along 3rd Avenue maintain smooth operations at this intersection. Vehicle and pedestrian volumes are not expected to increase substantially until the Exposition Gateway District develops.

- **Long Term Findings.** The *Exposition Gateway Plan* (February 2013) designates 3rd Avenue as a signature street, with one-lane of traffic in each direction, bike lanes, and wide sidewalks. Despite these infrastructure enhancements along 3rd Avenue, the study recommended that the intersection remain right-in/right-out only with no at-grade pedestrian/bicycle crossing opportunities.

Potential Recommendation for Hospitality Corridor Study

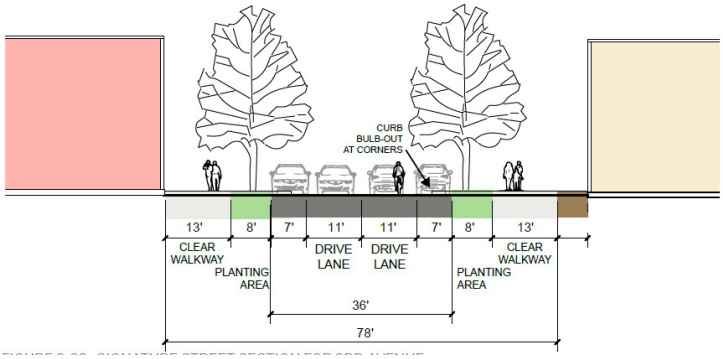
The images on the following page show the Exposition Gateway Plan's vision for 3rd Avenue. To be consistent with this enhanced vision for 3rd Avenue, this plan will explore treatments to the intersection to increase its aesthetic appeal and function for bicycles and pedestrians.

It is also important to note that the Exposition Gateway Plan identified 3rd Avenue as a potential location for a pedestrian overcrossing that would link the signature street and retail uses of the Exposition Gateway with MetraPark.

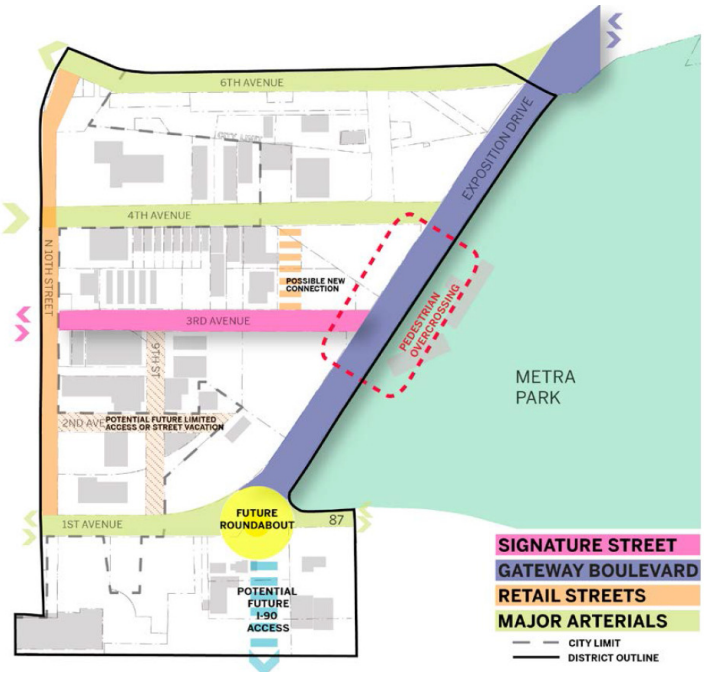
Excerpt from the Exposition Gateway Plan:

"Third Avenue should be completely re-purposed as a special kind of street that serves as the central spine for the Exposition Gateway Area. It would be narrowed to one lane each direction, with bicycle lanes and parallel parking on each side. As is currently the case today, the intersection with Exposition Drive should be right turn in / right turn out. The sidewalks should be expanded in width and fitted with trees and rain gardens. Walking surfaces should be treated with distinctive, textured paving.

FIGURE 2-21 SPECIAL STREETSCAPE AMENITIES



Additionally, special pedestrian-scale lighting should be installed. Third would serve as a quiet, landscaped promenade, linking the EBURD with MetraPark. Depending on the nature of redevelopment, the eastern end could have branches that connect between buildings and lead to other destinations to the north and south. Third might also incorporate unusual lighting such as catenary lighting overhead, to give it a "festival street" ambiance. (See photo images that depict this idea.)"



1st Avenue/Exposition Drive

Aerial View (Google Images, 2013); On the ground view of 1st Avenue intersection

This three-legged intersection serves as the confluence between 1st Avenue that connects with downtown, Exposition Drive that connects with MetraPark and the Heights, and US 87's east leg that connects to the I-90 Lockwood interchange. With large sweeping turns, this intersection has a large footprint to accommodate trucks and fast-moving vehicles. While sidewalks are provided, pedestrian crossings are not accommodated at the intersection. At present, the nearest pedestrian crossings are provided at 13th Street (to the west) and 4th Avenue (to the north). Both of these adjacent crossing locations are more than 2,000 feet away, which would add about 10 minutes of walking time to cross the street. This intersection has been analyzed in many related studies, most recently in the *6th Avenue North/Bench Boulevard Traffic Report* (December 2012). This intersection has also been a focus of the *Exposition Gateway Plan* (February 2013).

- **Near Term Findings.** The 6th/Bench study did not identify any near-term need to improve this intersection from an operations standpoint, since peak hour operations are LOS C or better. The study did identify the opportunity to provide a westbound-to-northbound right turn bypass lane, which would only improve vehicular operations. The Exposition Gateway project identifies this intersection as an opportunity site for a "grand roundabout" that would serve as a landmark for the corridor and help attract attention to the Exposition Gateway District and MetraPark.

- **Long Term Findings.** The 6th/Bench study identified a roundabout as a potential operational enhancement for this intersection in the future. The Exposition Gateway Plan also identified the potential for a future connection I-90 from this intersection, but the timeline for such a connection is likely 50 years or more.

Potential Recommendation for Hospitality Corridor Study

While this intersection would continue to operate acceptably for a number of years, installation of a roundabout provides a number of benefits, from simplifying intersection geometrics and minimizing vehicle idling to providing the corridor with a landmark feature. The roundabout also has long-term viability in terms of maintaining adequate intersection operations and accommodating truck movements. Given these multiple benefits, the project team recommends that installation of a roundabout at this location be considered as a near-term (5-10 year) improvement. The project team will explore this option with MDT.

I-90 Lockwood Interchange

Aerial View (Google Images, 2013); on the ground view of the interchange.

The I-90 Lockwood interchange has a diamond configuration. Both on-ramps have a single lane, as does the westbound off-ramp. The eastbound off-ramp includes two lanes. Existing and future year operations, including improvement concepts, were analyzed as part of the *Lockwood Transportation Study* (2007) and re-examined as a part of this study.

- **Near Term Findings.** Due to the queuing seen today, the Lockwood Transportation Study recommended a redesign of the eastbound off-ramp approach to US 87, including a dedicated left-turn lane, a shared through/left-turn lane, and a dedicated right-turn lane. With these proposed lane configurations in place, there would be significant reserve capacity in the near term. The project team's re-evaluation confirmed this finding.

- **Long Term Findings.** The Lockwood Transportation Study recommended a single point urban interchange (SPUI) as the ultimate configuration for this interchange. It should be noted, however, that the study's future forecasts did not account for the potential volume reductions along US 87 that would be associated with the planned Billings Bypass project. The project team updated this analysis to include consideration of the Billings Bypass. With the bypass assumed, volumes at the interchange could be accommodated with the eastbound off-ramp widening recommended in the near term.

Potential Recommendation for Hospitality Corridor Study

Widening the eastbound off-ramp to three lanes as described above and modifying signal timing and phasing accordingly should be sufficient to accommodate volumes in both the near and long term, assuming the Billings Bypass is constructed.

To be supportive of the goal to develop a cohesive Hospitality Corridor, the team will explore aesthetic treatments to enhance the visual appeal of this interchange and recognize its status as a gateway between central Billings and the Lockwood district.

Bicycle and Pedestrian Concepts

Existing sidewalks between 6th Avenue and 1st Avenue.

View of the Jim Dutcher Trail behind MetraPark; US-87 crossing the Yellowstone River

As an old highway corridor, there are relatively few bicycle and pedestrian accommodations today. Between Airport Road and 6th Avenue, Main Street has a steep grade and no separated bike facilities (a sidewalk is provided on both sides of the road). Between 6th and 1st Avenues (the section that cuts between MetraPark and Exposition Gateway District), sidewalks are present, but are directly adjacent to the seven-lane, high speed Exposition Drive – something that many pedestrians may find inhospitable. Between Exposition and the Lockwood interchange, bicycle and pedestrian facilities are substandard, with a narrow sidewalk on the north side of the road and shoulders on both sides.

Surrounding the corridor, there are a number of amenities for bicycles and pedestrians. The Heritage Trail system is a regional scenic amenity, a portion of which runs behind MetraPark, adjacent to the Yellowstone River. The recent Bench Boulevard improvements included upgraded sidewalks and trail connections that provide a nice connection with the Hospitality Corridor. Moreover, the City is planning a number of trails, bike lanes, and bike boulevards that crisscross the area, including through the Exposition Gateway district.

This study will identify how amenities like the Heritage Trail system and planned bike facilities can be tied into the corridor plan to provide overall mobility for all modes. Concepts that will be developed further include:

- Developing a multimodal trail around the perimeter of MetraPark to provide connections between the corridor, Exposition Gateway, and the Yellowstone River
- Identify an overcrossing location of Exposition Drive between 2nd Avenue and 4th Avenue, to facilitate interactions between Exposition Gateway and MetraPark
- Explore providing an improved bicycle/pedestrian facility between Exposition Drive and the Lockwood Interchange along US 87
- Identify a trail route connecting Airport Drive with 6th Avenue

Bringing It All Together: Streetscape

This study will recommend streetscapes that accomplish the following:

- Accommodate the travel modes that currently use the corridor
- Tie sensibly with area bicycle and pedestrian facilities
- Integrate with the near-term and long-term intersection concepts described above
- Provide aesthetic appeal
- Provide landmark/gateway features at key locations

This study will recommend streetscape concepts for the Hospitality Corridor in three main segments:

- **Airport Road to 6th Avenue/Bench –** This segment serves as a gateway between the Heights and Central Billings. It has a steep grade as it transitions from the Heights to the valley below with few uses directly accessing the corridor. Minor aesthetic treatments should be considered to provide drivers with visual cues that they are entering a more urban district.
- **6th Avenue/Bench to 1st Avenue –** This segment traverses the Exposition Gateway/MetraPark District, which expects to see a transition in uses from industrial to hospitality and retail in the coming decades. While the corridor will continue to carry regional traffic volumes between the Heights and Central Billings, this portion of the corridor also needs to accommodate increased cross-movement related to the Exposition Gateway/MetraPark development. It is also envisioned that this segment will incorporate streetscape elements (such as a roundabout, landmarks, or a gateway feature) that provide character for this more urban district.
- **1st Avenue to I-90 Lockwood Interchange –** This segment connects MetraPark with the I-90 Lockwood interchange. This segment traverses the Yellowstone River into the more rural Lockwood area. Streetscape elements in this segment are expected to be more modest, but the segment should be upgraded to provide adequate bicycle and pedestrian connectivity.

MDT Design Standards

Our team evaluated MDT's design standards for urban facilities. This section of Exposition Drive/US 87 is classified as a Principal Arterial. The relevant design details that will affect the design of our corridor are:

- 12 foot outside and 11 foot inside lanes
- 12 foot left turn lane (if identified)
- 4 foot minimum raised median width
- No clear zone requirement for curbed street
- Landscaping is to be considered in all designs reviewed by MDT

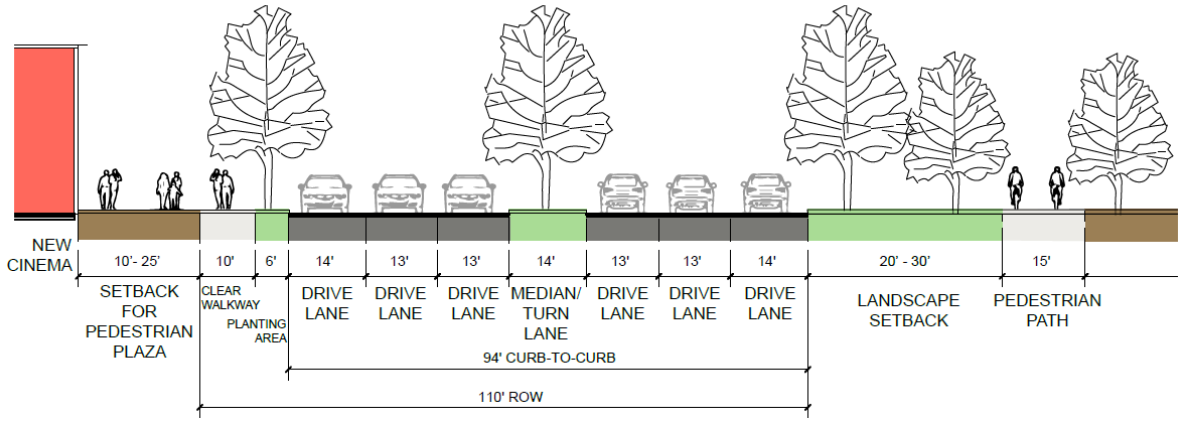
Example of an urban MDT facility in Helena

Based on these standards, the following concept for the corridor (between 6th Avenue and 1st Avenue) developed:

"The segment of Exposition Drive between 1st and 6th Avenues North has the potential of becoming a unique boulevard with qualities associated with a parkway. Already, the east side is heavily planted with mature trees and lawn area that lines the edge of MetraPark. Currently, this green corridor is cut off from public use because of a tall fence topped with barbed wire. We recommend that this fence be moved 20-30 feet to the east, which will still provide security and admissions control during ticketed events. The resulting wide corridor can then allow for a meandering, multi-purpose trail. The trail would allow people walking and using bicycles to connect from the Exposition Gateway Area to the Yellowstone River or the Rims with only one major street crossing.

Additionally, the median in the middle of Exposition Drive could be rebuilt to incorporate substantial planting so that a complete boulevard treatment can be created. Given the speeds involved in that corridor, there is sufficient room to install trees within the median, as well as understory.
The design of the boulevard could reflect a "Gateway" treatment, with special signage, artwork, and lighting as has been done in similar situations throughout the country.

As development occurs on the west side, the edge along Exposition Drive should include trees, planting and other features to extend and complement the boulevard. Since it is unlikely that the frontage along the State route will allow curb cuts, this edge can be relatively continuous planting. Site and building design guidelines should be adopted to ensure a consistent combination of elements."



FEHR PEERS

MEMORANDUM

Date: April 4, 2013

To: Lora Mattox, City of Billings

From: Kendra Breiland, Jeff Pierson, and Chris Breiland, Fehr & Peers

Subject: Hospitality Corridor Options

We are providing a status update on our current planning concepts for the Hospitality Corridor. This memo summarizes work performed in the past month. We believe it would be beneficial to have City staff review and provide feedback on the current direction and next steps.

EXPOSITION GATEWAY ACCESS EVALUATION

We have developed trip generation and distribution assumptions based on the Exposition Gateway Concept Plan. As shown in the table on the following page, the project would generate approximately 12,500 daily trips, including 1,100 trips during the evening peak hour.

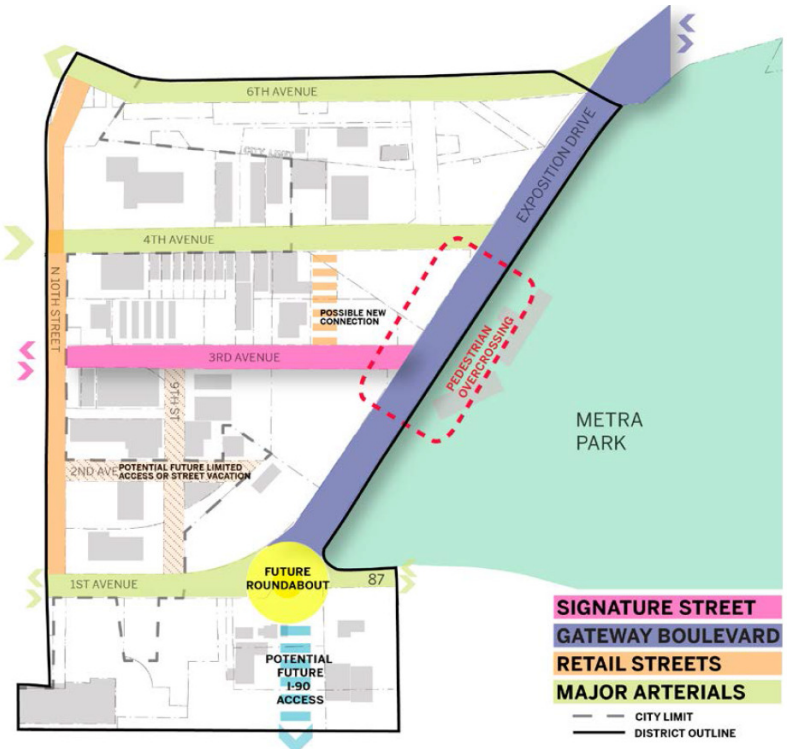
Given that this additional traffic should be accommodated by the Hospitality Corridor Plan, Fehr & Peers and Sanderson Stewart tested how Exposition Gateway traffic would influence operations along the Hospitality Corridor, as well as key access points to the Exposition Gateway district. Since the district would evolve over time, potentially adding uses to what is already there, we measured the effect of adding these new trips to existing and long-range forecast traffic volumes.

The map on the following page shows how access is envisioned within the Exposition Gateway Concept Plan. Specifically, 6th Avenue, 4th Avenue, and 10th Street would be primary access points. 3rd Avenue would provide limited right in/right out access. Additional access would be provided directly to the west – although this would be a more permeable edge, as there are a number of local streets that flow into the remainder of the East Billings Urban Renewal District.

TRIP GENERATION

Land Use	ITE Code	Amount	AM Peak Hour	PM Peak Hour	Daily
Adaptive Re-Use Retail	820	2 ksf	2	7	85
Adaptive Re-Use Restaurant	931	2 ksf	2	15	180
Hotel	310	180 rooms	101	108	1,606
Outlet Retail	820	200 ksf	200	742	8,540
Movie Theater	445	40 ksf	0	196	1,964
TOTAL TRIPS	**-**	**-**	**305**	**1,068**	**12,375**

Source: Fehr & Peers.



Access Concepts from Exposition Gateway Concept Plan (February 2013 Draft)

Our access evaluation yielded the following findings:

- Once trips are dispersed onto the network, trips associated with Exposition Gateway will not have a substantive influence on transportation infrastructure needs outside of the district. Roadway infrastructure improvements within the district (as shown the Concept Plan) and to the intersection of 1st Avenue and 10th Street (the southern entrance to the district) are the most pressing needs.
- An evaluation of the intersection of 10th Street/1st Avenue indicates that it would operate acceptably for a decade or more without a traffic signal. We would recommend the following access control at this intersection: left-in and right-in from 1st Avenue, but right-out only from 10th Street onto first. The 10th Street leg could be designed with a raised median to prohibit left egress movements.
- Anticipating a higher level of pedestrian activity, we found that controlled pedestrian movements should be provided at the following locations without substantially impacting vehicular operations:
    - 10th Street – provide a HAWK signal[1] for crossing 1st Avenue. The pedestrian crossing should be provided on the east side of the intersections to avoid conflicts with left-turning vehicles.
    - 3rd Avenue – in the short run, provide a HAWK signal for crossing Exposition Drive. This will facilitate pedestrian connections between Exposition Gateway and METRA. In the long-term, replace this at-grade crossing with a grade-separated pedestrian connection, such as an overcrossing that connects between two buildings on opposing sides of Exposition Drive.
    - Exposition Drive/1st Avenue – Consider adding marked crosswalks and actuated pedestrian crossing phases to the existing intersection.
    - US 87 midblock – depending on the selected treatment at Exposition Drive/1st Avenue, provide a HAWK signal for crossing US 87 south of METRA.

[1] A HAWK beacon (High-Intensity Activated crossWalK beacon) is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is officially known as a "pedestrian hybrid beacon". The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Research has shown motorists' compliance with the HAWK beacon at up to 97%, higher than with traditional un-signaled crossings.

HAWK At-Grade Pedestrian Crossing

Signal with Pedestrian Phase

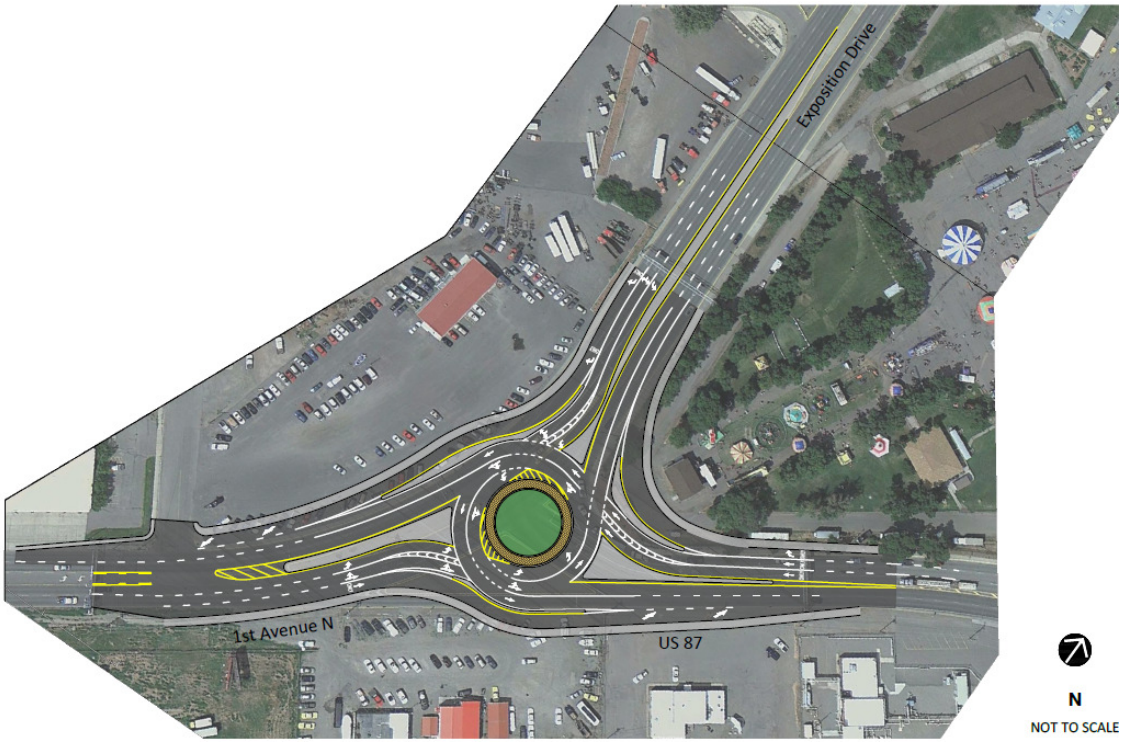
Pedestrian Overcrossing

1ST AVENUE/EXPOSITION DRIVE INTERSECTION

Given the importance of this intersection in setting the tone for the Hospitality Corridor, we took a hard look at operational needs at this intersection. Our evaluation yielded the following findings:

- Similar to the findings in Sanderson Stewart's 6th Avenue/Bench Boulevard study, the intersection could continue to operate acceptably (LOS D or better) for a long time into the future.
- A roundabout would provide an aesthetic benefit to the corridor, but would need to be a very large size (200 foot diameter with bypass lanes on all sides and multiple circulating lanes) to provide similar operations in the future. This size of roundabout would require substantial capital investment and additional right of way. Moreover, providing pedestrian accommodations at the roundabout would not be recommended given the amount and speed of circulating traffic.
- An alternative would be maintaining the current signalized intersection configuration, but adding pedestrian and aesthetic enhancements. These improvements could include adding street trees to buffer sidewalks, adding planting within the triangular median on the south side of the intersection, striping crosswalks, and adding pedestrian push-buttons and phases to the existing signal. We feel this option would achieve a variety objectives related to multimodal accommodation, vehicular operations, and aesthetic appeal, while fitting within financial constraints.

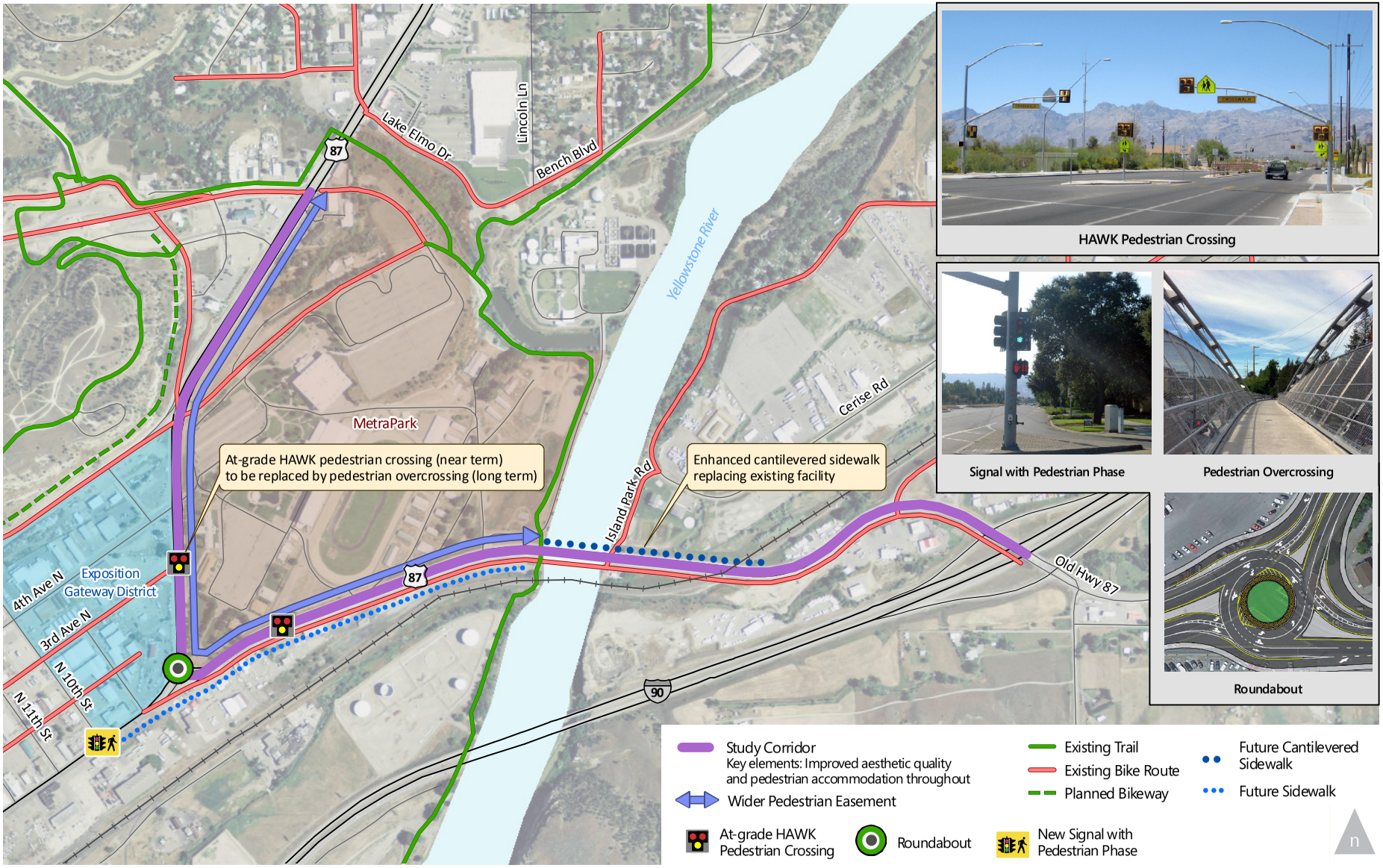
Below, we include an illustration of the necessary geometrics for a roundabout at 1st Avenue/Exposition Drive. If the City is interested in considering the more modest upgrades to this intersection, as described above, we can develop a concept.



Roundabout Concept at 1st Avenue/Exposition Drive

CORRIDOR CONCEPTS

On the following pages, we include two options for Hospitality Corridor concepts. Both concepts focus on enhancing the environment for multimodal travel. The concepts differ primarily in the treatment at 1st Street/Exposition Drive.



Hospitality Corridor Planning Study
Pedestrian/Bicycle Amenities - Option A

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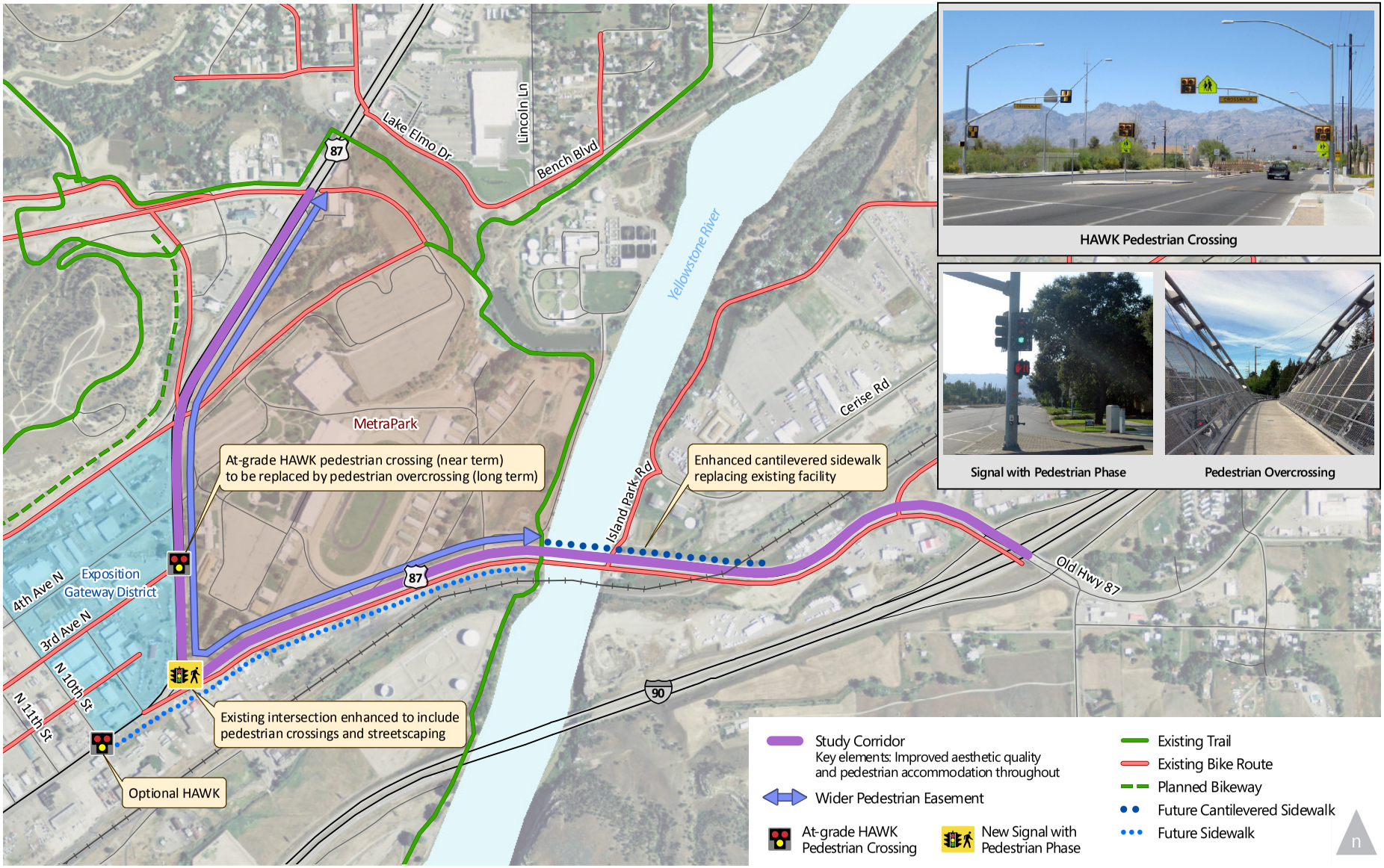
FEHR PEERS



Hospitality Corridor Planning Study
Pedestrian/Bicycle Amenities - Option B

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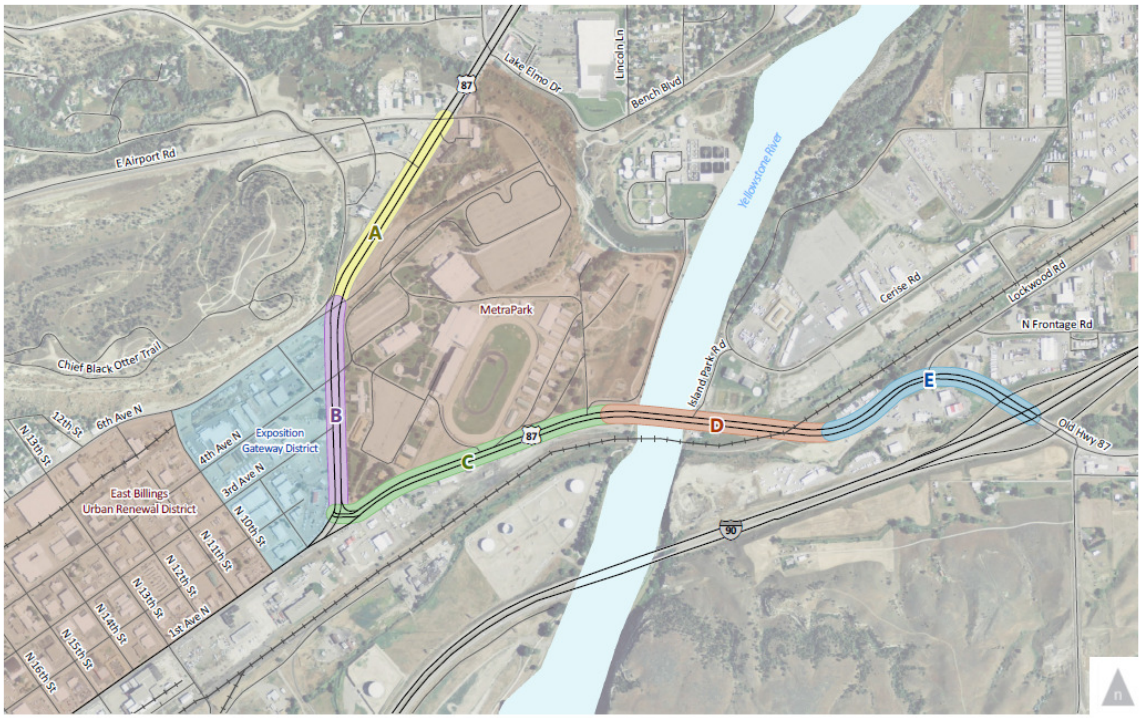
FEHR PEERS

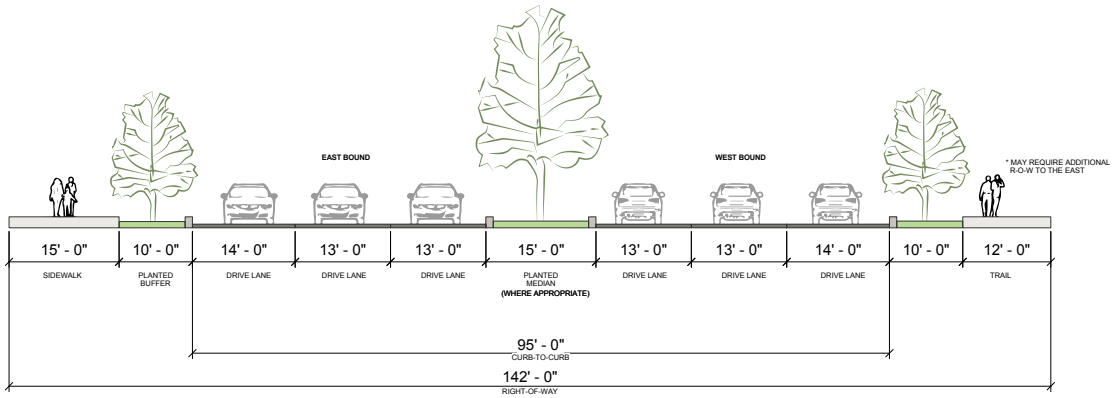
CROSS-SECTIONS

Tying together the corridor concepts above, Fehr & Peers and LMN staff developed cross-sections appropriate to discrete segments along the Hospitality Corridor. Segments within the corridor were identified based on characteristics such as surrounding land uses and physical constraints. Below, we provide a key to the segments, for which cross-sections are shown on the following page.

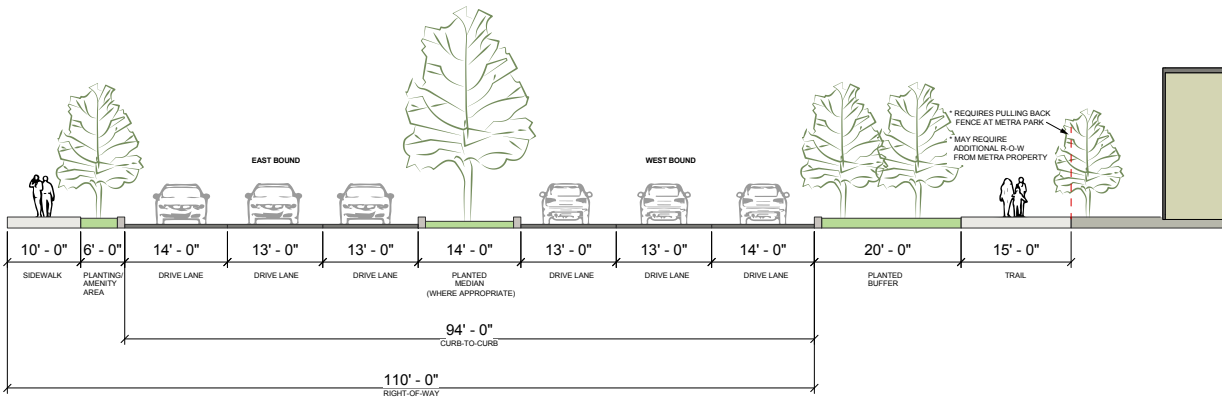


Hospitality Corridor Cross-Section Planning Segments

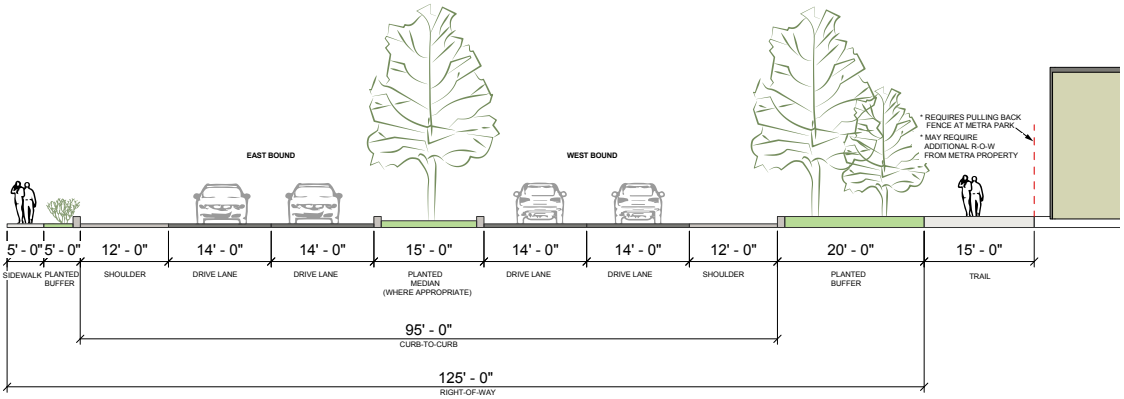
A


EAST BOUND
WEST BOUND
* MAY REQUIRE ADDITIONAL R-O-W TO THE EAST
15' - 0"
SIDEWALK
10' - 0"
PLANTED BUFFER
14' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
15' - 0"
PLANTED MEDIAN (WHERE APPROPRIATE)
13' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
10' - 0"
12' - 0"
TRAIL
95' - 0"
CURB-TO-CURB
142' - 0"
RIGHT-OF-WAY

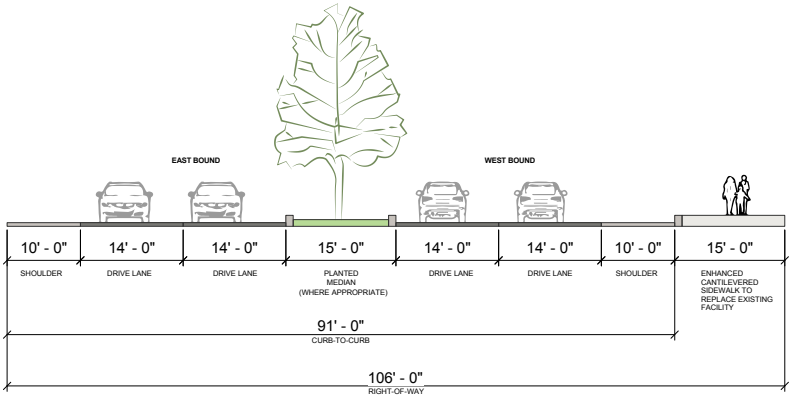
B


EAST BOUND
WEST BOUND
* REQUIRES PULLING BACK FENCE AT METRA PARK
* MAY REQUIRE ADDITIONAL R-O-W FROM METRA PROPERTY
10' - 0"
SIDEWALK
6' - 0"
PLANTING/ AMENITY AREA
14' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
14' - 0"
PLANTED MEDIAN (WHERE APPROPRIATE)
13' - 0"
DRIVE LANE
13' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
20' - 0"
PLANTED BUFFER
15' - 0"
TRAIL
94' - 0"
CURB-TO-CURB
110' - 0"
RIGHT-OF-WAY

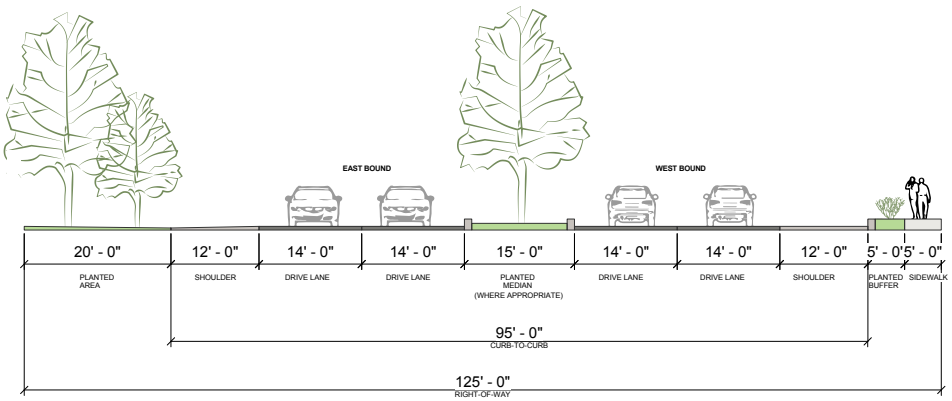
C


EAST BOUND
WEST BOUND
* REQUIRES PULLING BACK FENCE AT METRA PARK
* MAY REQUIRE ADDITIONAL R-O-W FROM METRA PROPERTY
5' - 0"
SIDEWALK
5' - 0"
PLANTED BUFFER
12' - 0"
SHOULDER
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
15' - 0"
PLANTED MEDIAN (WHERE APPROPRIATE)
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
12' - 0"
SHOULDER
20' - 0"
PLANTED BUFFER
15' - 0"
TRAIL
95' - 0"
CURB-TO-CURB
125' - 0"
RIGHT-OF-WAY

D


EAST BOUND
WEST BOUND
10' - 0"
SHOULDER
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
15' - 0"
PLANTED MEDIAN (WHERE APPROPRIATE)
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
10' - 0"
SHOULDER
15' - 0"
ENHANCED CANTILEVERED SIDEWALK TO REPLACE EXISTING FACILITY
91' - 0"
CURB-TO-CURB
106' - 0"
RIGHT-OF-WAY

E


EAST BOUND
WEST BOUND
20' - 0"
PLANTED AREA
12' - 0"
SHOULDER
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
15' - 0"
PLANTED MEDIAN (WHERE APPROPRIATE)
14' - 0"
DRIVE LANE
14' - 0"
DRIVE LANE
12' - 0"
SHOULDER
5' - 0"
PLANTED BUFFER
5' - 0"
SIDEWALK
95' - 0"
CURB-TO-CURB
125' - 0"
RIGHT-OF-WAY

FEHR PEERS

MEMORANDUM

Date: July 9, 2013

To: Lora Mattox and Scott Walker, City of Billings

From: Kendra Breiland, Fehr & Peers

Subject: Hospitality Corridor – Discussions with MDT

As part of the Hospitality Corridor Planning Study, our team has had several touch points with the Montana Department of Transportation (MDT). Below, we describe the contacts that we have had with MDT, as well as the findings from these meetings.

Contacts with MDT

Below is a summary of the contacts with MDT over the course of this project:

- **Advisory Committee Kick Off:** Stan Jonutis of MDT was included on the Hospitality Corridor Advisory Committee. The group's kick off meeting was held on November 20, 2012. During this meeting, participants were given the opportunity to comment on the proposed project scope and work plan.
- **Exposition Gateway Stakeholders Meeting:** Fehr & Peers presented at the December 5, 2012 stakeholders meeting and invited comments on the Hospitality Corridor Planning Study. Stan Jonutis from MDT attended the meeting.
- **Big Picture Concepts Call:** On March 4th, 2013, several MDT staff (Gary Neville, Stefan Streeter, Rodney Nelson, and Stan Jonutis) participated in a call with Fehr & Peers and City staff.
- **Advisory Committee Meeting 2:** Stan Jonutis, as a member of the Advisory Committee, was invited to the April 30, 2013 meeting to discuss initial concepts for the corridor. While Stan was not able to join, he did review and provide input on the concepts, which were provided after the meeting.

- **Refined Concepts Call:** On June 3rd, 2013, Stan Jonutis participated in a call with Fehr & Peers staff to discuss his comments on corridor concepts developed to date.
- **Plan Open House:** On June 26th, 2013, several representatives from MDT, including Carol Strizich and Katie Potts from MDT Planning and Stan Jonutis, participated in an open house that presented the findings of the study and corridor options. Staff were invited to provide feedback to the consultant team, as well as City staff in attendance.

Findings to Date

Through these conversations, we understand that MDT's primary concern is maintaining vehicular operations through the corridor, which includes both US 87 and Business 90. MDT has expressed openness to streetscape enhancements such as bike lanes, trails, breakaway trees, and low plantings so long as they do not pose safety risks to motorists. MDT is not supportive of signage or other fixed objects in medians.

Below, we list the resolutions to date on specific components of the corridor:

- **Airport Road/Main Street** –
  - **Initial Concept:** Minor aesthetic gateway treatments. MDT has expressed that they are very open to streetscape enhancements such as bike lanes, trails, breakaway trees, and low plantings.
  - **Long Term:** MDT does not currently have any plans, but periodically reviews signal timing options. Stan noted that they concur with our analysis that long term fixes for this intersection are limited, aside from major grade-separation efforts, which have upstream and downstream implications. In the long term, construction of the Billings Bypass would reduce volumes through this intersection.
- **4th and 6th/Exposition Drive**–
  - **Initial Concept:** Work with MetraPark to modify recommendations of recent access study (Marvin and Associates, spring 2013) including revisions to proposed

access at 4th Avenue. MDT seems to be fairly open to concepts proposed to date.

- **Long Term:** MDT has previously proposed a flyover at 4th Avenue to minimize conflicts at the intersection. This project could substantially improve vehicle operations, but is expensive and may not be fully compatible with the Exposition Gateway District Plan. Stan did not indicate that other solutions are currently being considered.

- **3rd Avenue/Exposition Drive** –
  - **Initial Concept:** No change.
  - **Long Term:** Provide a grade-separated pedestrian crossing, could be an under or overcrossing. MDT indicated that they preferred an undercrossing, as it doesn't conflict with over height vehicles, but that it would have to be carefully designed to avoid drainage issues.
- **1st Avenue/Exposition Drive** –
  - **Initial Concept:** We shared with MDT the initial concept of modifying the signal to include pedestrian phasing and marking pedestrian crossings at the intersection. The biggest concern was how these improvements would impact vehicular operations. We have provided MDT with the technical analysis showing that modifying the existing signal would have little impact on vehicular operations. Moreover, these minor impacts could be offset by providing a channelized right-turn lane serving the westbound-to-northbound movement.
  - **Long Term:** We shared the long-term vision of providing a large, truck accommodating, multi-lane roundabout at the intersection. MDT is not opposed to the concept, but would like to see an independent review of the roundabout if this design is to move forward. MDT staff also note that the necessary size of the roundabout makes it both costly and pedestrian hostile. Fehr & Peers staff share the same concerns, but recognize that pedestrian and bicycle movements can be accommodated on other facilities, such as a signal at 1st/10th and/or a grade-separated crossing at Expo Drive/3rd.
- **1st Avenue/10th Street** –
  - **Initial Concept:** No change.

- **Long Term:** We shared the long-term vision of potentially providing a signal in the future, which would be designed to prohibit left-out access from 10th Street, recognizing the operational needs of 1st Avenue. MDT staff indicated that they would not be very excited about a signal at this location, but would revisit the issue should it become necessary for accessing the Exposition Gateway District. Fehr & Peers' analysis suggested that any need for a signal is very long-term contingent on both implementation of the roundabout at 1st and Exposition, as well as substantial development of the Exposition Gateway.

- **Lockwood Interchange** –
  - **Initial Concept:** Minor aesthetic gateway treatments. MDT has expressed that they are very open to streetscape enhancements such as bike lanes, trails, breakaway trees, and low plantings.
  - **Long Term:** MDT has reviewed a number of options in past planning efforts. These include reconstructing the eastbound off-ramp to include three lanes and rebuilding the entire interchange as a single point urban interchange (SPUI). MDT notes that the bridge over the Yellowstone River is likely to be a bottleneck that could lessen the effectiveness of major interchange improvements. In the meantime, MDT continues to review signal timing modifications to improve the efficiency of the interchange. Construction of the Billings Bypass would reduce volumes along US 87 between the Lockwood interchange and Exposition Drive. FHWA approval is required for all modifications to existing interchanges.

Additional project support from:

LMN Architecture Urban Design Interiors

HIGH PLAINS ARCHITECTS

Studio Cascade Community Planning & Design

SANDERSON STEWART