October 2026

CUSTER AVENUE
IMPROVEMENTS STUDY



MONTANA
Department of Transportation

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1.0. INTRODUCTION

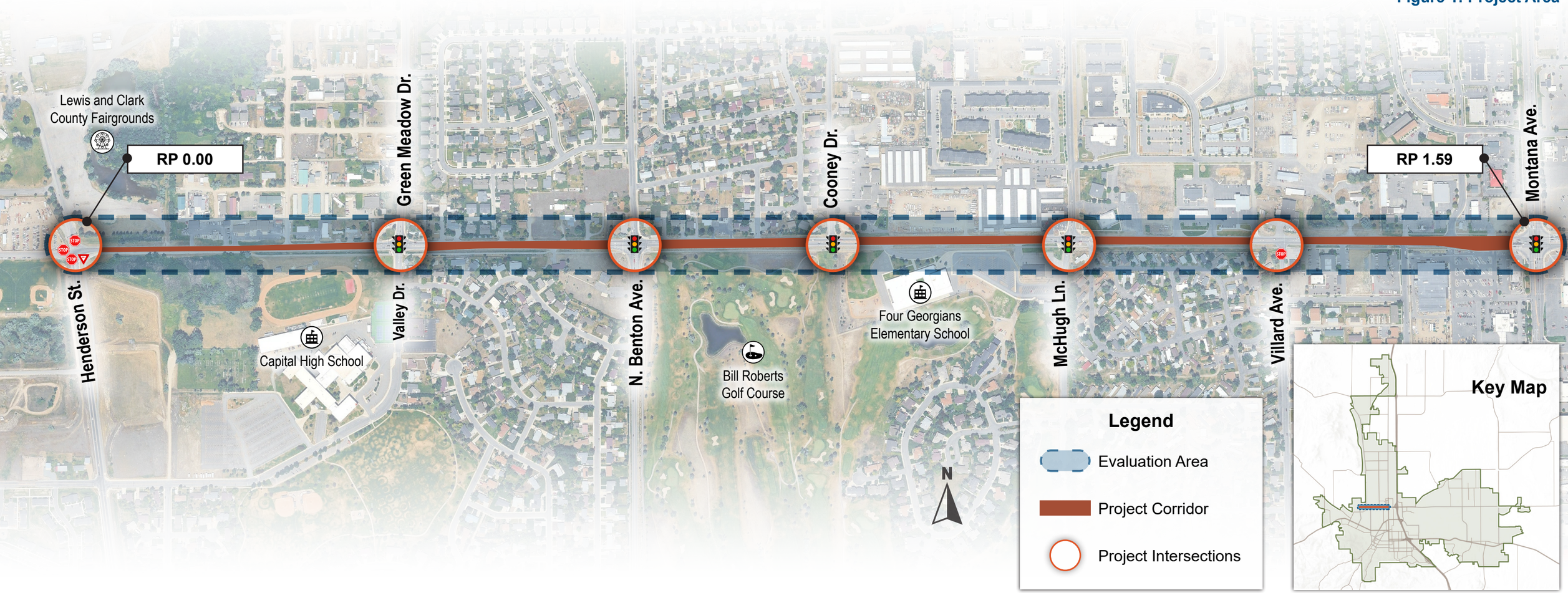
Custer Avenue is the only continuous east-west route across the north end of Helena, and the need for long-term improvements has been recognized for more than thirty years. Over that period the corridor has received a number of spot improvements, while several plans and studies have progressed towards identifying a full, long-term solution. Continued development in the area and the lack of alternate east-west routes have steadily increased demand on a roadway that was not built for its current role. As a result, the roadway experiences frequent congestion and lengthy vehicle delays, particularly during peak hours and special events.

This summary document consolidates the preliminary engineering work completed to date into a single reference. It summarizes the corridor's needs, the improvements that have been considered, the challenges faced, and the questions that remain. Its purpose is to give the public and local decision makers a clear understanding of where improvements to the corridor stand today. Decisions regarding final design, funding, and construction timing will be made in later phases of project development.

1.1. Project Area

The project area includes a 1.6-mile-long portion of Custer Avenue, extending from Montana Avenue on the east end to Henderson Street to the west. Within these limits, the corridor passes residential neighborhoods, commercial properties, and public facilities, including Capital High School, Four Georgians Elementary School, the Lewis and Clark County Fairgrounds, and Bill Roberts Golf Course. The corridor includes seven primary intersections: Henderson Street, Green Meadow Drive / Valley Drive, Benton Avenue, Cooney Drive, McHugh Lane, Villard Avenue, and Montana Avenue. A map of the project area is shown in **Figure 1**.

Figure 1: Project Area



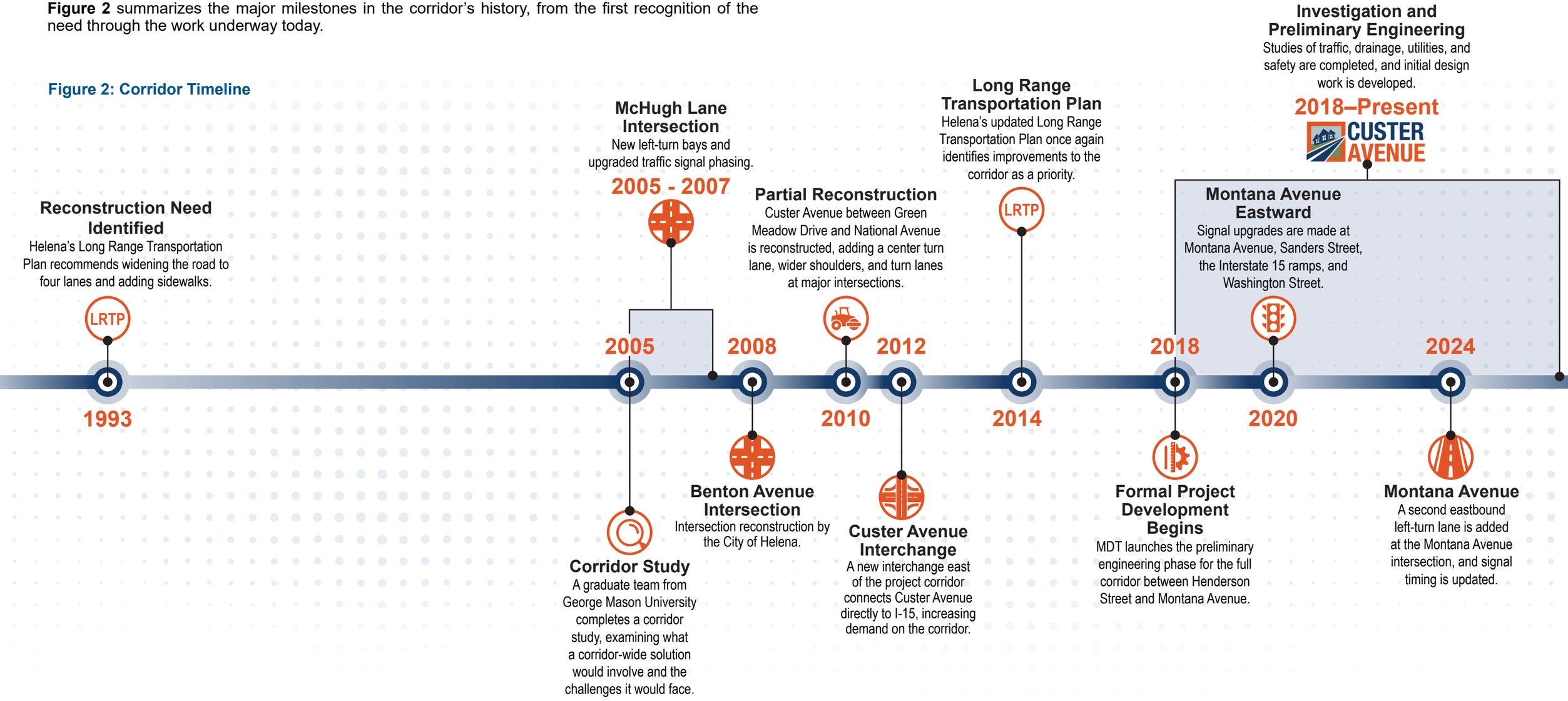
1.2. Corridor History

Improving Custer Avenue has been under discussion for more than thirty years. The corridor was first identified as needing improvement to address capacity concerns in the 1993 Long Range Transportation Plan and has been carried forward in regional planning ever since. In the following decades, it has been studied in detail, improved in places, and most recently advanced into preliminary design.

The first detailed look at the full corridor came in 2005, with a student-led study examining what a corridor-wide solution would involve. Individual intersections have also received targeted improvements in recent years. The corridor was partially reconstructed to include a center left-turn lane in 2010. In 2012, the Custer Avenue Interchange added a direct connection to Interstate 15, which increased demand on the route and modified travel patterns. Formal project development for a long-term solution began in 2018, when MDT initiated the preliminary engineering work that has continued through today. The project currently sits at the preliminary engineering stage, which is roughly 30 percent design.

Figure 2 summarizes the major milestones in the corridor's history, from the first recognition of the need through the work underway today.

Figure 2: Corridor Timeline



1.3. Agencies

Improving Custer Avenue involves several agencies, each with a different role in the corridor:

- **Montana Department of Transportation (MDT)** has led project development to date and oversees the corridor as a federal-aid route.
- **City of Helena** owns and maintains much of the surrounding street network and represents local interests in the corridor.
- **Lewis and Clark County** owns the Lewis and Clark County Fairgrounds at the west end of the corridor and has completed design for improvements at the intersection with Henderson Street.
- **Greater Helena Metropolitan Planning Organization (MPO)** coordinates regional transportation planning and helps prioritize projects for federal funding.

1.4. Public Involvement

As part of the preliminary engineering work in 2018, a focused round of public involvement was completed to understand how the community uses Custer Avenue and what residents, commuters, and businesses wanted to see from a corridor improvement. The outreach was led by a public involvement consultant and included a representative poll of Helena residents, a series of focus groups, and two public open houses.

The poll, conducted in August 2018, surveyed 400 residents. It found broad agreement that the corridor needs attention with 88 percent of respondents saying that the corridor is congested and could benefit from at least some improvement, including half who described it as very congested and in need of significant improvement. Focus groups were held in September 2018 to gather more detailed input from residents, commuters, and area businesses. Open houses followed, with the first held for landowners adjacent to the corridor on October 3, 2018, and the second for the general public on November 14, 2018. At the public open houses, attendees viewed video comparisons of current and projected future traffic conditions alongside displays of the corridor reconfigured with both traffic signals and roundabouts.

WHAT WE HEARD

The following themes emerged consistently across the poll, focus groups, and open house comments.

- The Villard Avenue intersection was raised repeatedly as a current and pressing safety and congestion concern.
- Signal timing was seen as both part of the current problem and part of the solution.
- There was interest in a mix of roundabouts and signals along the corridor, along with some caution about roundabouts.
- Safe, separated facilities for pedestrians and bicyclists were a high priority, particularly given the schools along the corridor.
- Neighborhood residents were concerned about traffic cutting through local streets, both today and during future construction.
- Many participants expressed frustration with how long the project has taken to advance, and a desire for closer coordination among the agencies involved.



2.0 CORRIDOR CONTEXT AND EXISTING CONDITIONS

Custer Avenue was originally constructed as a rural, two-lane roadway in 1955. In the decades since, it has been widened and updated in segments and at the intersection level. Today, it functions as the primary east-west route across the north end of Helena, carrying traffic volumes and demand that exceed what the roadway is currently built to accommodate.

The corridor is functionally classified as an urban minor arterial, meaning it is intended to balance traffic mobility with land access, connecting neighborhood streets to major highways. It is also designated as Urban Route U-5802, which recognizes it as a functionally important roadway for the Helena area and makes it eligible for federal funding dedicated to urban routes.

The following sections describe the existing corridor conditions, drawn from the multiple studies and preliminary design work completed to date. These conditions represent the baseline against which improvement alternatives were evaluated.



2.1. Land Use and Adjacent Properties

The Custer Avenue corridor passes through a mixture of land uses. On the west end, the roadway is anchored by public and recreational uses, including the Lewis and Clark County Fairgrounds and Ryan Fields, both of which have primary access from the Henderson Street / Custer Avenue intersection. Capital High School also fronts the roadway, with access provided from Valley Drive.

East of Green Meadow Drive, the roadway is designated by the Helena Land Use Plan as a commercial corridor. The roadway transitions to mixed urban use, with some residences and commercial parcels having driveway access onto Custer Avenue. Bill Roberts Golf Course abuts the south side between Benton Avenue and McHugh Lane, though without direct access onto Custer Avenue. Four Georgians Elementary School has a designated one-way drop-off and pick-up zone just east of Cooney Drive. East of McHugh Lane, the land use remains mixed, with both residential and commercial development, becoming predominantly commercial near Montana Avenue at the east end.



Figure 3: Existing Land Use

2.2. Roadway and Typical Sections

The typical section for Custer Avenue varies through the project area. At the west end, the roadway retains its original configuration with one travel lane in each direction, narrow or no shoulders, and open drainage ditches on both sides. Beginning at the intersection with Green Meadow Drive, the roadway transitions to include a center two-way left-turn lane (TWLTL), wider shoulders, and turn lanes at the primary intersections. East of National Avenue, the roadway is mostly built out as an urban facility, with curb and gutter and an additional eastbound lane.

The posted speed limit along the corridor is 40 mph, except for the school speed zone between Cooney Drive and McHugh Lane, where it is 25 mph during school hours and 35 mph at other times.

Non-motorized facilities are also inconsistent along the corridor. A continuous shared-use path parallels the south side of Custer Avenue from Henderson Street to National Avenue, serving both pedestrians and bicyclists. Sidewalks are less continuous on the north side. There are no sidewalks west of McHugh Lane, with only intermittent segments fronting individual businesses to the east. Full urban sidewalks are present on both sides between National and Montana Avenues. Crosswalks are generally provided at the primary intersections, but some locations lack curb ramps and other pedestrian facilities.

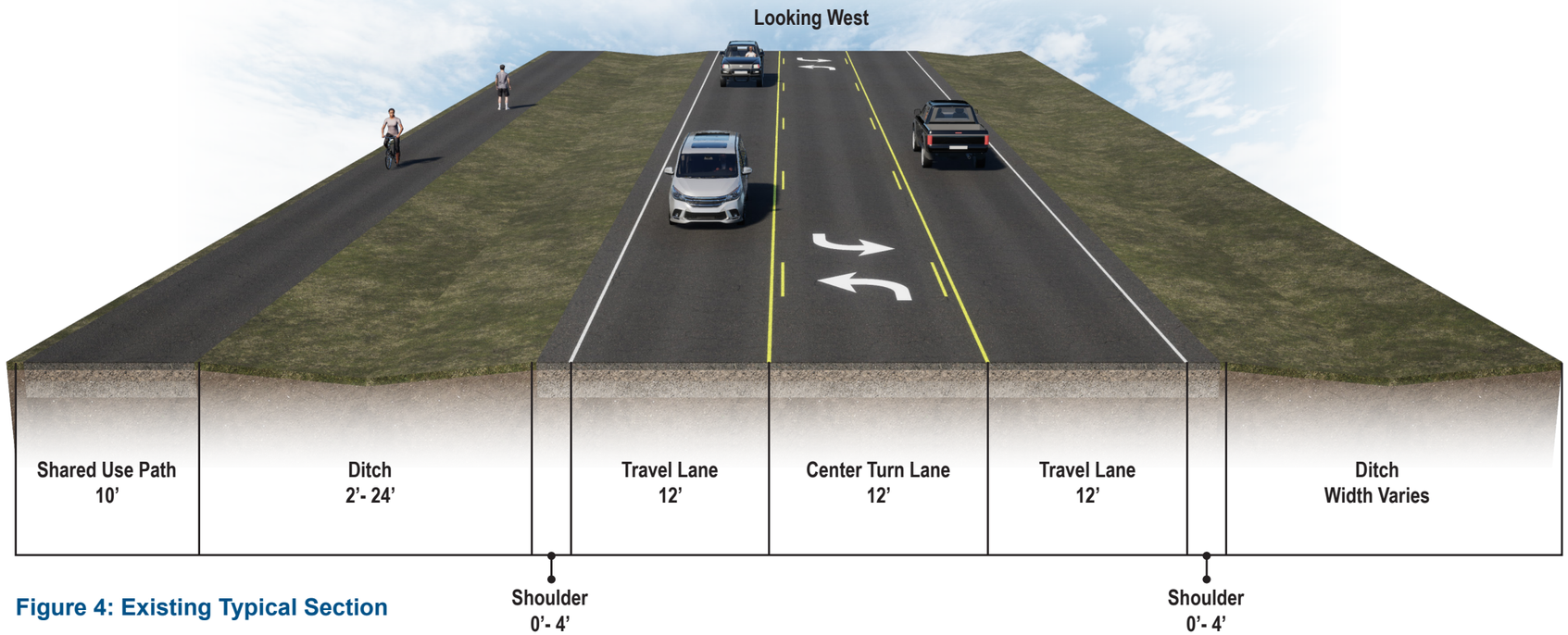


Figure 4: Existing Typical Section



2.3. Intersections

There are five signalized intersections along Custer Avenue within the project area: Green Meadow Drive / Valley Drive, Benton Avenue, Cooney Drive, McHugh Lane, and Montana Avenue. Two additional primary intersections are currently stop-controlled on the minor approach legs. The Henderson Street intersection, at the west end of the corridor, marks the corridor’s western terminus and provides the main access to the Fairgrounds and Ryan Fields. The intersection operates with the eastbound-to-southbound and southbound-to-eastbound movements as free-flow and the remaining movements stop-controlled. Villard Avenue is stop-controlled on the minor legs and has been noted for the difficulty of turning onto Custer Avenue during busy periods. Together, these primary intersections carry the majority of turning traffic along the corridor and are the focus of most of the operational and safety considerations discussed in **Section 3**.

Other minor intersections and approaches connect to Custer Avenue under minor-leg stop control, including those at National Avenue and Dredge Drive. These side streets and approaches provide local access to adjacent neighborhoods and businesses.

2.4. Right-of-Way, Utilities, and Drainage

Existing right-of-way along the corridor is generally 100 feet wide, measured 50 feet on either side of the centerline, though it is narrower in some locations. The corridor is largely developed along both sides. In several places, development, protected lands, and public facilities sit close to the existing right-of-way, leaving limited space for expansion along the corridor.

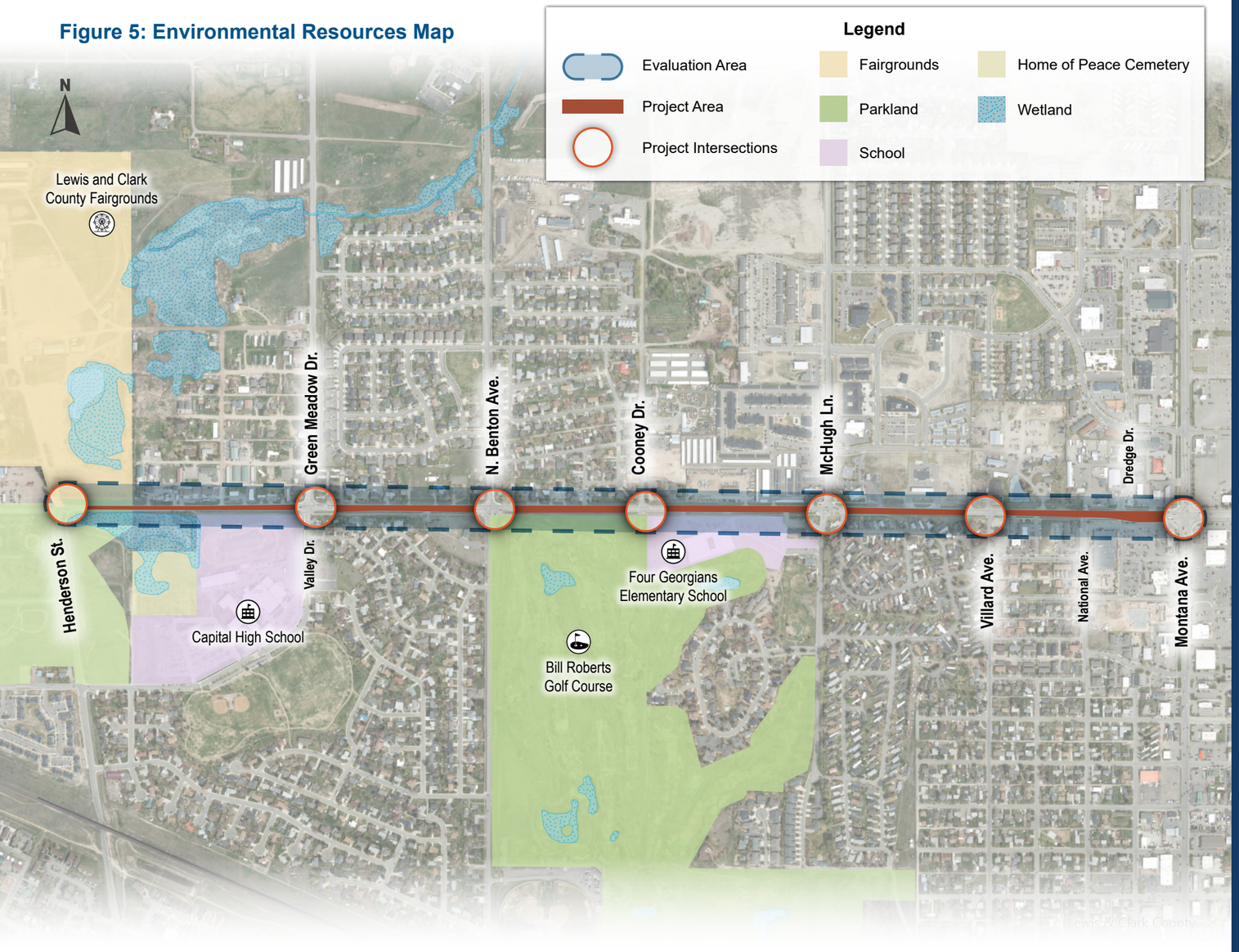
Custer Avenue is also a major utility corridor. A subsurface utility investigation was completed during the preliminary engineering phase to identify and locate these utilities. The investigation found a wide range of utilities running within and alongside the roadway. They are generally located near the right-of-way limits on both sides, with some areas where the alignments shift across the corridor or run beneath the pavement. Identified utilities include underground telephone, fiber optics, natural gas, city water and sewer, and overhead power transmission and distribution. In addition, the Yellowstone Pipeline, a high-pressure petroleum pipeline, runs parallel along the south side of Custer Avenue and is subject to special safety and monitoring requirements.

Drainage is another consideration along the corridor. Custer Avenue does not have a continuous, comprehensive storm drainage system. Runoff is currently handled by a mix of underground pipe and open roadside ditches. Surface water generally flows north toward Tenmile Creek, which has a documented history of flooding in the area. Helena is also a regulated municipal separate storm sewer system (MS4) community, meaning the City must meet federal stormwater requirements that include capturing or treating runoff from new and reconstructed roadways. These requirements are an important consideration for any work along the corridor. The drainage conditions are documented in detail in the project’s hydraulics reports.

2.5. Environmental Setting

The information in this section reflects a planning-level scan of environmental resources in the corridor, drawn from prior studies and publicly available information. It is intended to broadly identify the conditions and potential constraints that improvements to Custer Avenue may need to take into account. Any improvements will require environmental review and documentation under the National and Montana Environmental Policy Acts (NEPA/MEPA). This review will be completed during the project design phase.

Figure 5: Environmental Resources Map



Physical Environment

Custer Avenue was originally built across a marshy area, and wetlands remain on the south side of the corridor between Capital High School and Henderson Street, draining north toward the Fairgrounds. A formal wetland delineation will need to be completed during project development. A few sites in or near the corridor involve regulated or historic hazardous materials, including a former petroleum release at the Fairgrounds (resolved in 2010) and underground storage tanks near Montana Avenue. The Yellowstone Pipeline also runs along the corridor. No Superfund sites are present in the project area. The corridor likely meets federal air quality standards and is unlikely to require conformity analysis. Noise may be a consideration, as schools, parks, and residential areas along the corridor are sensitive to traffic and construction noise. The corridor also sits on deep valley sediments with a high potential for liquefaction in a major earthquake, within an area of moderate seismic risk.

Biological Environment

The corridor runs through a generally developed urban area with limited natural habitat outside of the wetland areas. Bald and golden eagles have been observed in the vicinity and are protected under federal law, with management guidelines intended to prevent disturbance of nesting eagles. The corridor lies outside mapped sage grouse habitat.

Social and Cultural Resources

Several publicly owned properties along the corridor carry federal protection. Under *Section 4(f) of the Department of Transportation Act*, publicly owned parks, recreation areas, and significant historic sites are protected from use by federally funded transportation projects unless there is no feasible alternative. Section 4(f) properties in the corridor include Bill Roberts Golf Course, Capital High School, Ryan Fields, the Lewis and Clark County Fairgrounds, and the Home of Peace Jewish Cemetery. Two of these, Bill Roberts Golf Course and the Fairgrounds, also fall under *Section 6(f) of the Land and Water Conservation Fund Act*, which protects lands developed with federal recreation funding and requires that any converted land be replaced with land of comparable value and use. In addition, several properties along the corridor are 50 years or older and may qualify as historic, although their significance has not yet been formally determined. *Section 106 of the National Historic Preservation Act* requires that federal projects consider their effects on historic properties. Visual quality near parks, schools, and residential areas may also warrant evaluation during project development.

3.0. TRAFFIC OPERATIONS AND SAFETY

The analysis of Custer Avenue's operations and safety draws on a combination of existing and updated work. A detailed traffic study completed in 2019 established baseline conditions and projected future volumes through field review and traffic microsimulation. To confirm current conditions, updated traffic counts were collected along the corridor in 2026 and compared against earlier data. The corridor's crash history was most recently reviewed in 2025. Together, these sources describe how the corridor performs today and how it is anticipated to perform in the future if no improvements are made.

3.1. Daily Traffic Volumes

MDT publishes Average Annual Daily Traffic (AADT) counts through its short-term traffic count program at four locations along the corridor. The count program provides estimates of traffic volumes intended to represent a standard day throughout the year. The data is collected over a short period, then adjusted for seasonal and daily variation to approximate a typical day. Because the short-term counts are collected over limited durations and many locations are not counted every year, reported volumes are understood as estimates of traffic conditions for a representative roadway segment and are not exact real-time or year-specific measurements at every point along the route.

For the Custer Avenue corridor, the counts show that traffic volumes increase from west to east, from roughly 9,000 vehicles per day (vpd) near Henderson Street to about 15,500 vpd between Cooney Drive and McHugh Lane, with the highest volumes toward the Montana Avenue end of the corridor. Over the past 20 years, the published counts appear relatively flat overall. This apparent trend is affected by one count location just west of Montana Avenue, where volumes show a marked decline in recent years that diverges from the rest of the corridor. The decline appears to be an anomaly related to when and how the count was collected rather than an actual reduction in traffic. Excluding that location, the remaining count sites show modest growth, averaging approximately 0.34 percent per year. **Figure 6** shows annual counts at the four locations from 2006 through 2025.

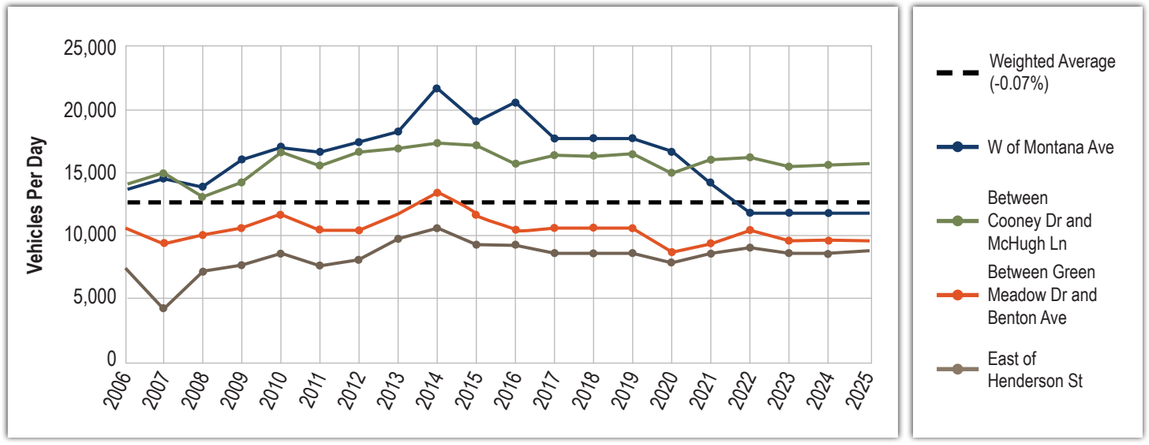


Figure 6: Corridor Average Annual Daily Traffic Volumes

To supplement MDT's published data, 24-hour intersection turning movement counts were collected at three intersections along the corridor in 2017 and again in 2026. The turning movement counts record each vehicle entering an intersection and the direction it travels and provide an accurate snapshot of traffic conditions at that time. When adjusted for seasonal and daily variation, the comparison shows total volumes at these intersections increasing over the nine-year period at an average of approximately 0.5 percent per year. Daily intersection volumes are shown in **Figure 7**, comparing 2017 and 2026 conditions.

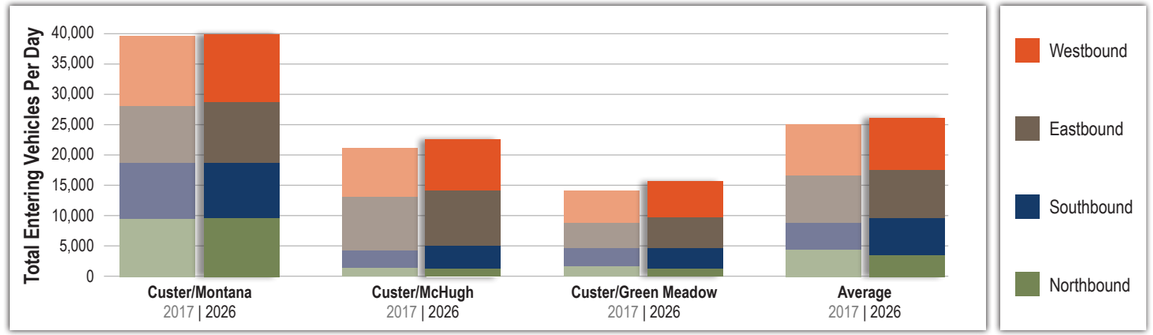


Figure 7: Intersection Average Annual Daily Traffic Volumes

A closer look at the intersection data shows how volumes vary throughout a weekday. **Figure 8** plots traffic entering the corridor's intersections in fifteen-minute increments from morning to evening. Volumes rise to three general peaks, representing the morning commute, school release and pickup, and the evening commute. Between these peaks, traffic does not fall off substantially. Volumes dip only briefly after the morning peak before climbing through midday, and at the busiest locations, particularly Montana Avenue, they remain high throughout the day. Sustained volumes of this kind, rather than short peaks with lighter traffic in between, are characteristic of a corridor at or near capacity.

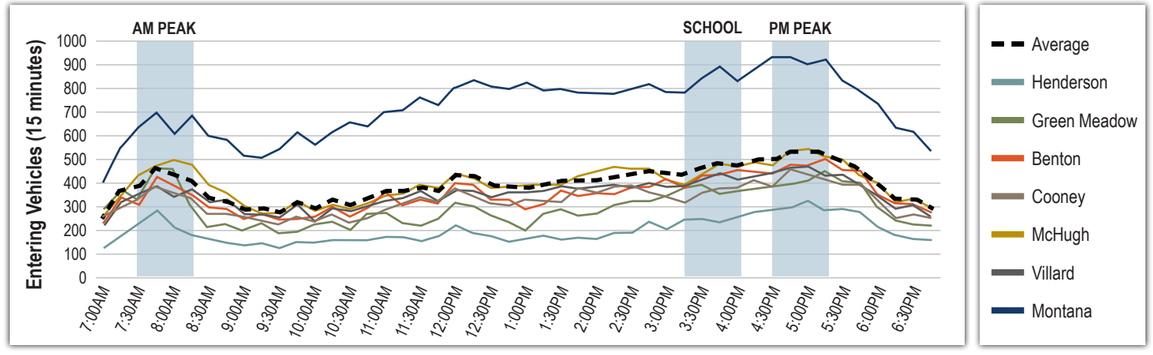


Figure 8: Intersection Traffic Volumes (2026)

Outside of normal workdays, the corridor is influenced by a variety of other activities. Special events at the Fairgrounds, sporting events at Ryan Fields, and school programs can all create periods of oversaturation and congestion. Weekend traffic can also create periods of congestion, particularly on the eastern end near the denser commercial development.

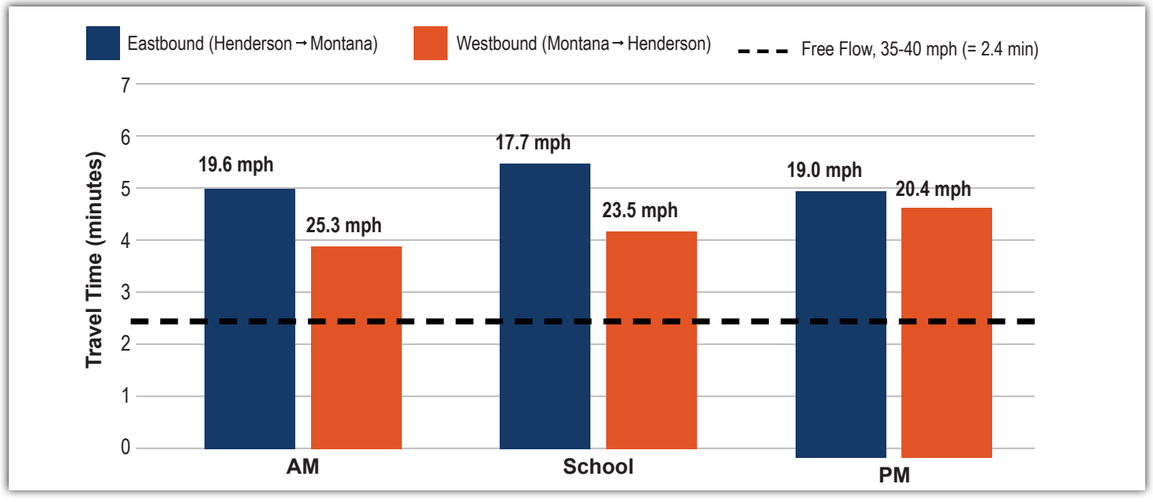
3.2. Operational Conditions

The operational conditions along Custer Avenue were established through the 2019 traffic study. That study evaluated the corridor through detailed field review and computer microsimulation modeling. The updated 2026 traffic counts verify that corridor volumes and associated congestion have persisted, confirming that the conditions documented in 2019 continue to generally reflect how the corridor functions today.

Along the corridor, users are typically impacted by delays related to congestion and stopping at intersections. These effects are most apparent on the eastern portion of the corridor, between McHugh Lane and Montana Avenue, where traffic volumes exceed the capacity of the corridor and major intersections.

Travel times measured over the 1.6-mile corridor between Henderson Street and Montana Avenue show that an eastbound trip typically takes around 5 minutes during the peak periods, slowest during the school peak. The same trip westbound averages around 4 to 5 minutes, slowest during the PM peak. These travel times are measured to and from the center of Montana Avenue. In the westbound direction, the time spent in the intersection queue east of Montana Avenue, between Sanders Street and Montana Avenue, is not included.

If the corridor were traveled without stops or delay, it would take approximately 2.4 minutes to travel from one end to the other, assuming the driver is traveling at the posted speed limit. The additional time reflects delay at intersections and congestion along the segments between them. **Figure 9** compares corridor travel times by direction and peak hour, along with the corresponding average speeds.



Travel Time Summary (2017 data)

Henderson to Montana Ave (eastbound)	Montana Ave to Henderson (westbound)
AM: 4.9 minutes (19.6 mph)	**AM:** 3.8 minutes (25.3 mph)
School: 5.4 minutes (17.7 mph)	**School:** 4.1 minutes (23.5 mph)
PM: 5.0 minutes (19.0 mph)	**PM:** 4.7 minutes (20.4 mph)

Figure 9: Corridor Travel Times (2017)

Congestion at the corridor's intersections is a key factor in overall delay and travel time. Intersection performance is commonly described using Level of Service (LOS), a rating from A to F. LOS A represents free-flowing conditions with little delay, and LOS F represents severe congestion with long delays and backups. LOS A through C are generally considered acceptable, LOS D indicates an intersection approaching capacity, LOS E indicates an intersection at capacity, and LOS F indicates an intersection operating over capacity. Several of the corridor's primary intersections operate at LOS E or F during one or more peak hours, including Henderson Street, Green Meadow Drive, McHugh Lane, Villard Avenue, and Montana Avenue. Villard Avenue, which is stop-controlled on the side-street approach, operates at LOS F in all three peak hours, reflecting the difficulty of turning onto Custer Avenue during busy periods. **Figure 10** summarizes baseline traffic conditions and intersection performance along the corridor.

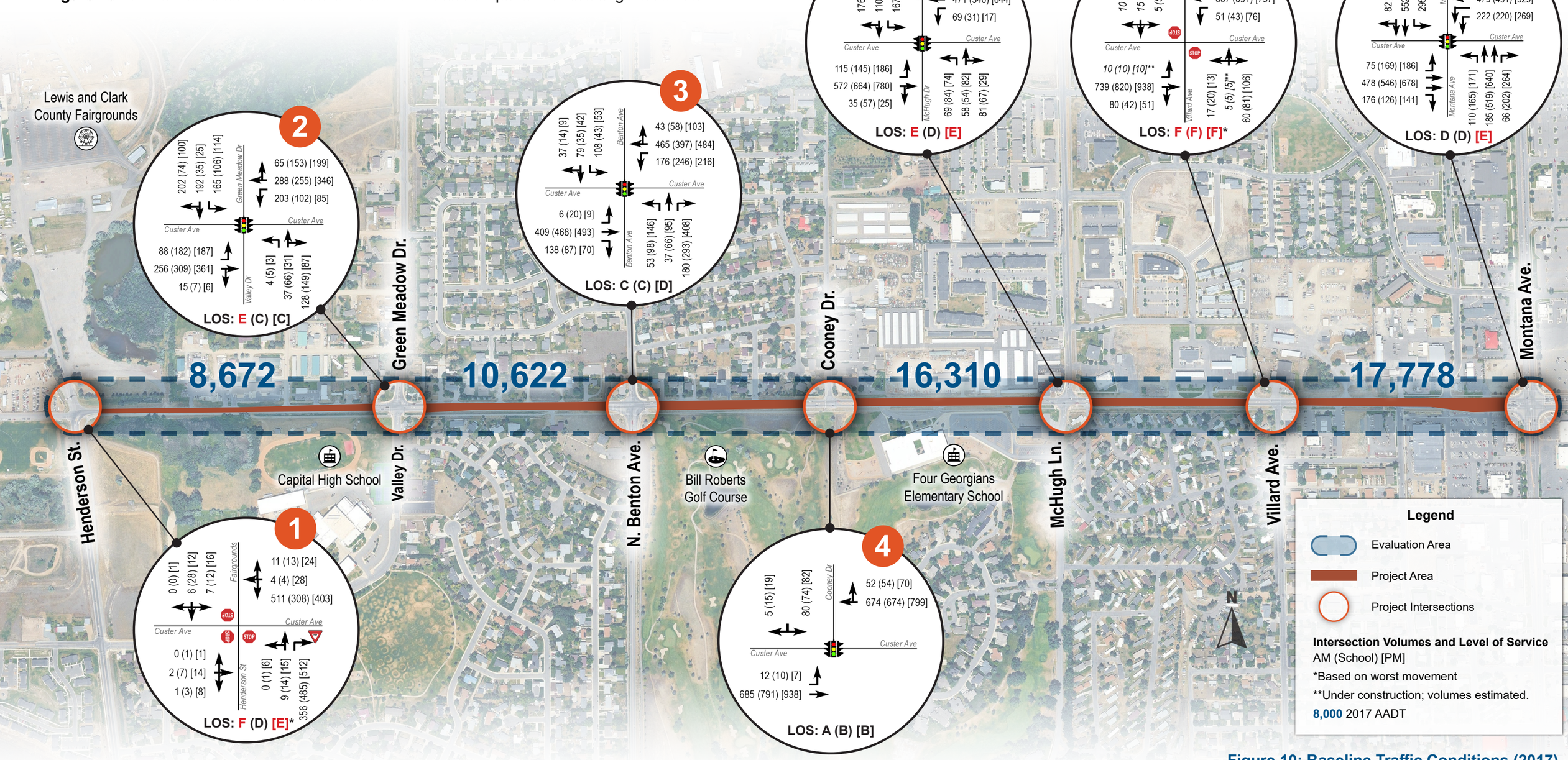


Figure 10: Baseline Traffic Conditions (2017)

3.3. Future Growth

As described in **Section 3.1**, measured traffic volumes along Custer Avenue have been generally steady in recent years. This is likely more a function of physical limits than a lack of demand. With the corridor currently operating at capacity, particularly during the peak periods, additional trips cannot be accommodated within the current configuration, and the reflected slow growth understates the true demand for travel along the corridor.

To estimate underlying demand on Custer Avenue, a regional travel demand model was used. The model, developed and maintained by MDT, represents travel across the Greater Helena area based on forecasted population, employment, and land use, and projects future traffic conditions. For the purposes of understanding true demand for the Custer Avenue corridor, the capacity of the corridor was increased in the model to represent future improvements, projecting the demand the corridor would need to serve rather than the volume the existing road can physically carry.

Using the regional travel demand model, the 2019 traffic study forecast volumes increasing by roughly 2.4 percent per year out to the planning year of 2042. This growth equated to more than 30,000 vehicles per day east of Cooney Drive and approximately 15,000 to 18,000 vehicles per day to the west in the year 2042.

Updated traffic modeling completed for the 2026 Greater Helena MPO Long Range Transportation Plan projects generally similar conditions. The updated model forecasts continued growth of about 2.0 percent per year through the planning year of 2046, with volumes exceeding 27,000 vehicles per day near McHugh Lane, around 17,000 vehicles per day to the west, and tapering toward Henderson Street at the west end of the corridor. These projections reflect travel demand rather than the volume the existing roadway can physically carry and represent demand the corridor would need to serve but cannot in its current form.

Under this projected growth, intersection operations would degrade further from the conditions described previously. The 2019 traffic study found that without improvements, most of the corridor's primary intersections would operate at LOS F during the peak hours by the planning year, with the delays and queuing worsening and extending over longer periods of the day.

3.4. Safety

The 2019 traffic study included a detailed review of crash history along the corridor, covering the ten-year period from 2007 through 2016. It identified 665 reported crashes, with the highest numbers concentrated at the busiest intersections, including Montana Avenue, Benton Avenue, and Green Meadow Drive. Rear-end crashes were the most common type, accounting for approximately 70 percent of all reported crashes. During the analysis period, one fatality occurred that involved a pedestrian, and three crashes resulted in serious injury.

An updated crash review was completed in 2025, examining the three-year period from 2022 through 2024. It found 74 reported crashes along the corridor, split roughly evenly between crashes at intersections and crashes between intersections. The dominant pattern was the same as the previous study where rear-end crashes accounted for the large majority. The next most common type involved turning movements, particularly vehicles turning to or from the side streets. Recent crashes were most concentrated near McHugh Lane and Benton Avenue and along the segments between Green Meadow Drive and McHugh Lane. The severity of recent crashes remained generally low. Most resulted in property damage only with one resulting in a suspected serious injury and no fatalities. Preliminary data for the first half of 2025 showed a continuation of the same rear-end pattern and low severity.

Across both reviews, the corridor's crash history points to the same underlying condition. The most common crashes are those associated with congestion and frequent stopping, and the locations with the most crashes are the busiest and most congested points along the corridor. The 2025 review concluded that most of the observed crash patterns would be expected to improve with the type of corridor improvements this project is considering.



4.0. CORRIDOR IMPROVEMENTS

Through prior planning and preliminary engineering efforts, two improvement alternatives were identified for the Custer Avenue corridor: a signalized alternative and a roundabout alternative. Both alternatives are intended to increase roadway capacity to address identified congestion, delay, and safety concerns while accommodating future travel demand. The alternatives differ in how the roadway is configured, particularly at the primary intersections, resulting in differences in cost, impacts, and implementation considerations.

4.1. Improvement Alternatives

The identified alternatives are aimed at improving the corridor between Montana Avenue and Henderson Street. At the east end, the alternatives tie into the Montana Avenue intersection, matching the built, urbanized cross-section already in place there. At the west end, they would tie into the planned roundabout at Henderson Street. Between these endpoints, both alternatives would upgrade Custer Avenue to an urban typical section, keeping the shared-use path along the south side and providing a continuous sidewalk along the north side.

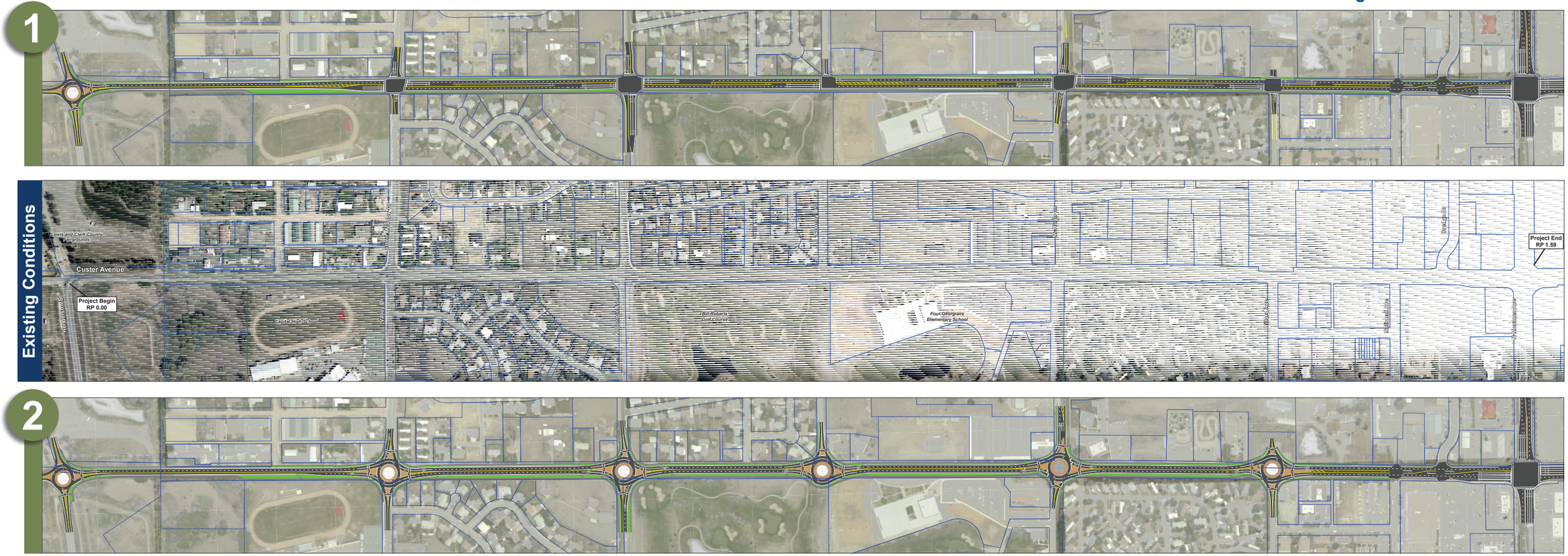
1 Signalized Alternative

The signalized alternative is a five-lane roadway consisting of two travel lanes in each direction and a center TWLTL. The center lane allows vehicles to turn left onto side streets and properties at any point along the corridor and provides a place to wait for a gap without blocking through traffic. The corridor's primary intersections would be controlled by traffic signals with appropriate dedicated turn bays and associated signal phasing. This configuration maintains direct left-turn access throughout the corridor and relies on more traditional traffic signals for primary intersection control.

2 Roundabout Alternative

The roundabout alternative is configured as a four-lane roadway with two travel lanes in each direction, separated by a raised center median. For intersection traffic control, multi-lane roundabouts would be installed at the corridor's primary intersections. Because the raised median replaces the TWLTL, left turns cannot be made directly across the corridor between intersections. To reach a property or street on the opposite side of the road, drivers would continue to a roundabout and complete a U-turn to reverse direction. Driveways and minor streets along the corridor would also be limited to right-in, right-out access.

Figure 11: Corridor Alternatives



4.2. Corridor Considerations

Several conditions along the corridor will need to be addressed as the project advances. These apply regardless of which configuration is ultimately selected, and each will be evaluated in greater detail during design.

Context Sensitivity

Schools, a golf course, and surrounding neighborhoods border the corridor, resulting in a consistent presence of pedestrians and cyclists, including students walking to school. Design of the corridor will need to remain sensitive to this context, with particular attention to the safety and security of these vulnerable users. This includes crossing treatments, lighting, and sightlines at intersections, as well as maintaining safe pedestrian and bicycle routes through work zones during construction. Appropriate non-motorized crossing treatments will be included under either alternative.

Right-of-Way and Access

The corridor is largely developed, with businesses and residences fronting the roadway. Widening the corridor will require acquiring additional right-of-way, and in the most constrained areas, may require the full acquisition of developed parcels. Beyond the right-of-way itself, maintaining and modifying access to adjacent properties will be an important consideration, particularly where driveways and approaches are close to intersections. The extent of these impacts will depend on the configuration selected. Right-of-way acquisition is expected to be among the most significant challenges to project delivery.

Protected Property

The most substantial protected-property constraint is the Bill Roberts Golf Course, which fronts the south side of the corridor between Cooney Drive and Benton Avenue where the right-of-way is especially narrow. Improvements in this area may require acquiring protected parkland. Because the golf course is protected under Section 6(f), any converted land must be replaced with land of comparable recreational value and use, subject to National Park Service approval. Resolving this will require early coordination.

Utilities

Custer Avenue is a major utility corridor with a range of underground utilities and overhead distribution and transmission lines. Reconstruction and widening will require relocating utilities in many locations, coordinated with the utility owners early in project development. One notable exception is the Yellowstone Pipeline, which is anticipated to remain in place due to the substantial cost and complexity of relocating it. Because the pipeline would remain in place, construction near it will need to follow the pipeline owner's requirements, including limits on certain construction methods, such as vibratory compaction.

Drainage

The corridor does not currently have a formal storm drainage system, so reconstruction to an urban roadway section would require constructing a new system of curb, gutter, inlets, and storm drain piping. The area is subject to municipal stormwater (MS4) permit requirements, so the project would also need to provide treatment of stormwater runoff, accounting for the corridor's contributing drainage areas and the documented flood concerns associated with Tenmile Creek.

Environmental

Environmental resources along the corridor, including wetlands and historic properties, will require a detailed environmental review as the project advances. This review will be completed once an alternative is selected, when impacts can be measured and any necessary mitigation determined.

4.3. Estimated Cost

Planning-level cost estimates were developed for both build alternatives, reflecting the full corridor improvement between Montana Avenue and Henderson Street. The estimates account for the major components of delivering a project of this scale, including construction, preliminary engineering, right-of-way acquisition, utility relocation, and construction engineering.

The estimated cost to complete the full corridor is approximately $31.1 million for the signalized alternative and $36.8 million for the roundabout alternative. The roundabout alternative carries the higher cost, roughly 18 percent more, driven largely by the additional right-of-way and property acquisition required for its larger intersection footprints. These estimates exclude the Henderson Street intersection. Design has been completed for that intersection through a separate, locally led process, and funding for its construction is also being pursued separately. A breakdown of estimated cost by activity is shown in **Table 1**.

To support future planning and phasing decisions, cost estimates were also developed for improving the corridor in segments, extending from Montana Avenue westward to interim points along the corridor. These segment-level estimates are discussed in **Section 6** and provided in the Appendix for use by decision makers in planning the timing and extent of future improvements.

	Signalized Alternative	Roundabout Alternative
Construction	$21,760,000	$22,630,000
Engineering	$2,910,000	$3,030,000
Right-of-Way	$4,360,000	$9,030,000
Utilities	$2,080,000	$2,130,000
Total	**$31,120,000**	**$36,810,000**

Table 1: Estimated Cost by Activity

5.0. EVALUATION OF ALTERNATIVES

During prior project development, MDT developed a scoring matrix to compare the two build alternatives against a no-build baseline. The matrix scored each alternative across a range of criteria, organized into two parts: a qualitative assessment of how each alternative performs against corridor priorities, and a cost and construction assessment considering the financial and implementation challenges. Each criterion was scored on a scale of 0 (worst performing) to 10 (highest). Scores were then weighted by relative importance, shown as a percentage for each criterion, and combined into an overall score for each alternative.

The scores presented in this section are drawn directly from that matrix and reflect the evaluation as developed during the preliminary engineering phase. This summary documents that evaluation and does not, on its own, identify a preferred configuration. The no-build baseline represents the corridor in its current configuration, with conditions expected to worsen over time if no improvements are made.

5.1. Qualitative Assessment

Public Support (15%)

Public involvement conducted during earlier project phases found broad recognition that the corridor is congested and in need of improvement. Through polling and public meeting attendance, there was strong support noted in favor of expanding the corridor over leaving it as is. On the choice of configuration, public feedback reflected somewhat more comfort with the signalized alternative and more caution toward the roundabout alternative. A number of participants expressed a preference for traditional signals and a desire to retain a center turn lane for corridor access. Several respondents raised concerns about the roundabout alternative, including winter maintenance, pedestrian crossings, and driver familiarity. Business and property owners in particular raised concerns about the access changes and right-of-way impacts associated with its larger footprint. Some participants did favor roundabouts for their traffic flow and safety benefits, and there was some interest in a mix of roundabouts and signals. There was strong and consistent support for the corridor's shared-use path and non-motorized facilities.

Score:

No-Build 0 | Signalized 9 | Roundabout 7

Capacity (25%)

Both build alternatives are shown to improve corridor operations over the no-build condition, and the 2019 traffic study found the two would generally perform comparably to one another. Using corridor-wide traffic simulation, the study estimated that under projected 2042 conditions, both alternatives would reduce average vehicle delay by roughly half and cut corridor travel times by more than 60 percent compared to the no-build condition. Both configurations add capacity by providing two through lanes in each direction, addressing the corridor's central constraint of a single through lane at most intersections today. The signalized alternative showed marginally lower vehicle delay in the peak hours, while the roundabout alternative showed more continuous flow with fewer stops, but at slower speeds. One consideration for the roundabout alternative is that adding the required pedestrian signals at the roundabout approaches may reduce its performance during periods of pedestrian activity, particularly at Cooney Drive and McHugh Lane, where school-related pedestrian activity is present.

Score:

No-Build 1 | Signalized 9 | Roundabout 8

Safety (15%)

Both build alternatives are anticipated to improve safety over existing conditions, while the no-build condition would perpetuate the corridor's current safety concerns related to congestion. The signalized alternative is anticipated to improve safety relative to today, but it retains more crossing and turning conflict points inherent to conventional intersections, which may result in higher-severity crash types. The roundabout alternative is anticipated to offer the greatest safety benefit. Roundabouts are widely recognized for improving intersection safety by lowering vehicle speeds and reducing the number of crossing conflict points. This has generally been shown to lower the frequency and severity of crashes, particularly through the reduction of right-angle and left-turn collisions. Some of these benefits may be less pronounced for multi-lane roundabouts than for single-lane roundabouts, as the additional lanes reintroduce some conflict points. Overall, the roundabout alternative is anticipated to have higher safety benefits than the signalized alternative.

Score:

No-Build 5 | Signalized 7 | Roundabout 10

Access (10%)

Under the signalized alternative, access along the corridor would remain largely as it is today. Direct left turns would be maintained through the center turn lane, though some approaches near signalized intersections may need to be relocated. The roundabout alternative would change how access functions along the corridor. Because the raised median restricts mid-corridor movements to right-in, right-out, reaching a destination on the opposite side of the corridor would require traveling to a roundabout to make a U-turn, adding some out-of-direction travel. Along a corridor with numerous business and residential approaches, this change to established access patterns is a notable drawback, and some approaches near the roundabouts may also need to be relocated or removed due to the footprint. Under the no-build condition, access would not change physically, though it would effectively degrade as growing congestion lengthens delays at existing approaches.

Score:

No-Build 5 | Signalized 8 | Roundabout 4

Bicycle and Pedestrian Accommodation (10%)

Both build alternatives include accommodations for people walking and biking. The existing shared-use path along the south side of the corridor would be perpetuated under both alternatives, remaining in its current alignment due to the presence of the Yellowstone Pipeline. Along the north side, both alternatives would provide a continuous sidewalk built to current accessibility standards, filling in the gaps that exist today. These improvements respond to the strong and consistent public support for enhanced non-motorized facilities expressed throughout the public involvement process. Between the two build alternatives, the signalized alternative offers a more familiar pedestrian environment, with dedicated crossing phases at signalized intersections. The roundabout alternative would provide compliant crossings as well, but pedestrian crossings at multi-lane roundabouts are less familiar and can feel less comfortable for some pedestrians.

Score:

No-Build 5 | Signalized 8 | Roundabout 7



Right-of-Way, Utility, and Environmental Impacts (25%)

The no-build condition would require no new right-of-way and would not result in physical impacts. However, forgoing improvements would allow the corridor's impacts to compound over time. As congestion worsens, vehicle delay and emissions are likely to increase and with traffic spilling onto nearby local streets, effects that may be progressively felt throughout the surrounding area. Both build alternatives would require utility relocation throughout the corridor, with the notable exception of the Yellowstone Pipeline which would remain in place. Both would also need to accommodate existing drainage patterns and stormwater management along the corridor. In addition, both would need to address environmentally sensitive areas, including wetlands and the Bill Roberts Golf Course, which is protected parkland subject to federal 4(f) and 6(f) requirements. The two build alternatives have similar impacts between intersections but differ in footprint at the intersections themselves. The signalized alternative has the smaller intersection footprint, with preliminary analysis indicating that a limited number of buildings could be affected, with the potential to utilize retaining walls to reduce those impacts. The roundabout alternative's larger intersection footprints would require considerably more right-of-way and would likely result in the greatest property impacts, potentially including impact to two homes, three business buildings, and a larger portion of the Bill Roberts Golf Course.

Score:

No-Build 3 | Signalized 7 | Roundabout 5

5.2. Cost and Construction Assessment

The following considerations address the two build alternatives. The no-build condition is not scored here, as construction cost and phasing do not apply to maintaining the existing corridor.

Cost (50%)

Both build alternatives represent a substantial investment in the corridor, with costs spanning construction, right-of-way acquisition, utility relocation, and engineering. The signalized alternative is the less expensive of the two. Its smaller intersection footprints require less right-of-way and less extensive construction, and it makes greater use of the existing roadway and infrastructure. The roundabout alternative is more expensive, estimated at roughly 15 percent more than the signalized alternative. This difference is driven largely by the greater right-of-way and property acquisition required by its larger intersection footprints, along with the more extensive construction involved.

Score:

Signalized 6 | Roundabout 4

Construction Phasing (50%)

Both build alternatives could be constructed in phases, but they differ in how the corridor would function during the interim. Under the signalized alternative, improvements would be made within each newly constructed segment. A capacity bottleneck would remain at the western end of the completed segment, but this effect would lessen the farther west the corridor is built. Under the roundabout alternative, phased construction over multiple years would be more problematic. During the interim, the sections between new and existing construction could operate similarly to or worse than existing conditions, as newly built roundabouts operating in close proximity to remaining signalized intersections can intermittently fail.

Score:

Signalized 8 | Roundabout 2

5.3. Scoring Summary

Both build alternatives are shown to address the corridor's core needs, improving capacity, operations, and safety over existing conditions. Both scored well above the no-build condition across nearly every consideration, reinforcing that improvements to the corridor are needed and that either configuration would represent a meaningful improvement over the corridor today. Combining both assessments, the evaluation produced a final score of 15.0 for the signalized alternative and 9.9 for the roundabout alternative, with the no-build baseline scored only in the qualitative assessment. The complete scoring is shown in **Table 2**.

The evaluation showed each build alternative to have distinct strengths, and both are projected to operate similarly in comparison under future traffic conditions. The roundabout alternative is anticipated to provide some additional safety benefit while providing smooth, continuous traffic flow. The signalized alternative maintains familiar corridor access and traffic control, carries a smaller footprint at the primary intersections, and has correspondingly lower right-of-way and property impacts. The signalized alternative is also less expensive and is better suited to phased construction. It received the higher overall score in both the qualitative and cost and construction assessments.

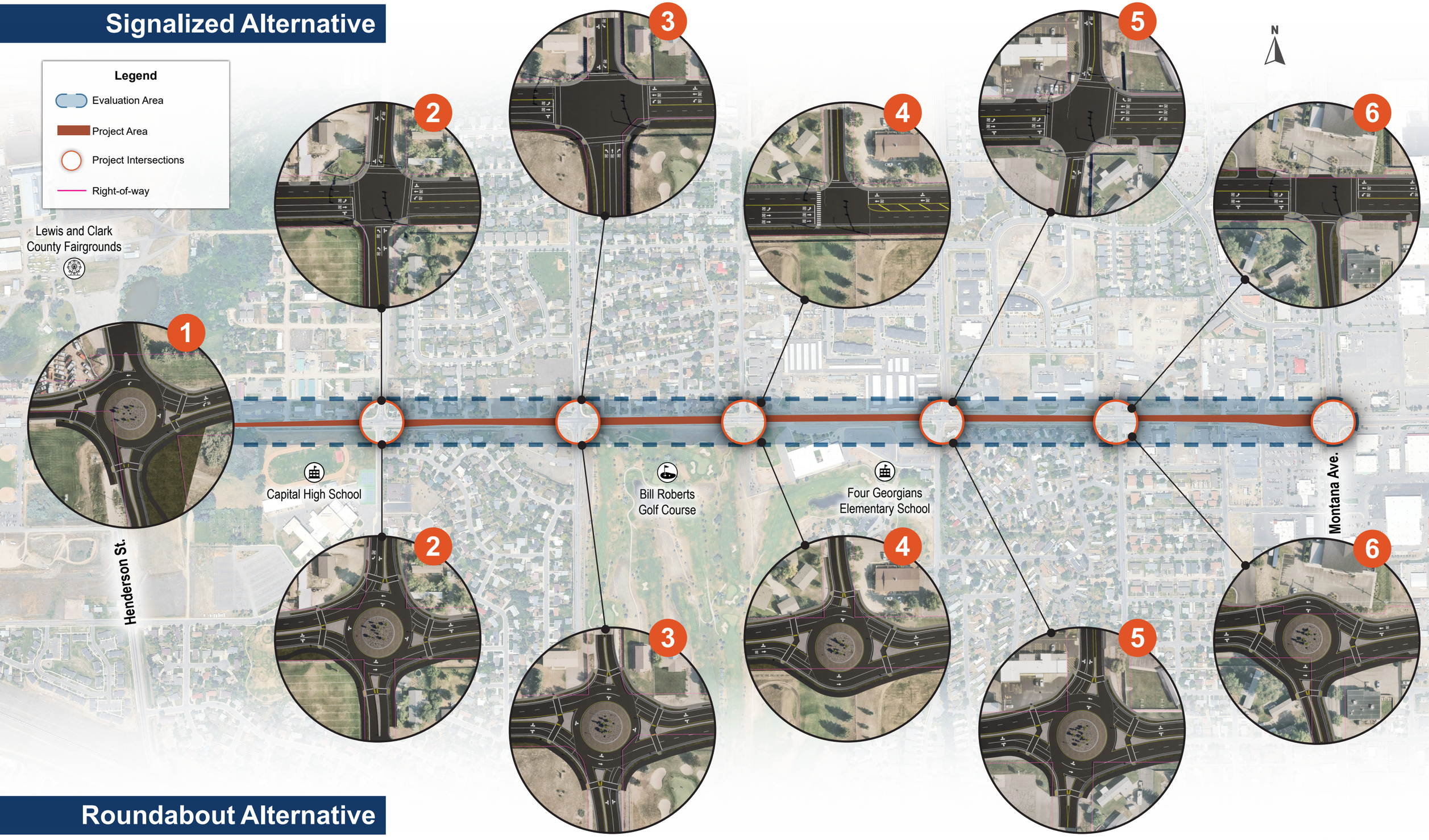
These results are presented as developed and are not intended to identify a preferred configuration by themselves. The ultimate corridor configuration, intersection treatments, and project limits will be determined as the project advances into full design.



Table 2: Alternatives Scoring Matrix

Criterion (Weight)	No-Build Alternative		Signalized Alternative		Roundabout Alternative	
	Pro	**Con**	**Pro**	**Con**	**Pro**	**Con**
			Qualitative Assessment			
Public Support (15.0%)	Only a small number of public meeting attendees expressed a desire for the no-build alternative.	Most public meeting attendees expressed support for the expansion of Custer.	The signalized alternative incurred the most public support. Some folks were surprised that roundabouts were being considered.	There was some reticence about how long the signalized corridor could handle the increased future vehicular traffic and that the expansion would ruin adjacent properties with the increased noise from more vehicles.	There was some public support that the roundabout alternative would better address congestion.	Adjacent business owners expressed concern about the right-in/ right-out access restriction and R/W acquisition with the roundabout alternative. Some individuals believe the corridor expansion will ruin adjacent properties with the increased noise from more vehicles. Some community members expressed caution regarding roundabouts and pedestrians.
	0		**9**		**7**	
Capacity (25.0%)	None	The Custer Avenue Traffic Study reported the average delay per vehicle, between Montana and Henderson, would be 32 minutes during the AM Peak, 36 minutes during the school peak, and 43 minutes during the PM peak in 2042. Conditions would deteriorate further.	The Custer Avenue Traffic Study reported the average delay per vehicle between Montana and Henderson would be 12 minutes during the AM Peak, 18 minutes during the school peak, and 25 minutes during the PM peak in 2042.	Traffic operations were found to perform similarly to roundabout alternatives. Neither alternative (roundabouts or signals) improves the capacity of the corridor so substantially it must be pursued.	The Custer Avenue Traffic Study reported the average delay per vehicle, between Montana and Henderson, would be 14 minutes during the AM Peak, 18 minutes during the school peak, and 27 minutes during the PM peak in 2042.	If pedestrian signals are provided at the Custer Avenue approach legs, additional delay and reduced performance would result when pedestrian activity occurs. Reduced performance would cause vehicular queuing which could stop traffic between Cooney and McHugh. This locational gridlock could ripple beyond these 2 intersections in the future.
	1		**9**		**8**	
Safety (15.0%)	None	Maintaining existing conditions would perpetuate existing safety conditions. Performance including crash rate, and severity rate, would likely remain similar to current conditions. Overall number of crashes would increase due to increased number of vehicles.	None	This design will increase the number of conflict points compared to the no build and roundabout alternatives.	Access will be restricted to right in/right out at mid-block approaches which mitigates right angle collisions (statistically more severe). Intersection conflict points will be reduced from 32 to 8 with right angle collisions specifically mitigated.	There were no identified safety concerns that would overwhelmingly support the roundabout alternative over the traffic signal alternative.
	5		**7**		**10**	
Access (10.0%)	Access would not change.	Access for the no build alternative would not physically change; however traffic conditions would deteriorate, due to longer durations of congestion, and force right in/right out conditions at approaches.	In general, access would not change.	Approaches in close proximity to signalized intersections may need to be relocated from their current locations. Evaluation for restricted access will occur.	None	Right-in/right-out access at all mid-block approaches. This would increase U-turn traffic at the roundabouts. Approaches in close proximity to roundabout intersections may need to be relocated or removed from their current locations. Evaluation for restricted access will occur.
	5		**8**		**4**	
Right-of-Way / Utility / Enviro Impacts (25.0%)	No R/W, Utility, or wetland impacts.	Air quality would worsen as more vehicles idle in place. Availability to access business would deteriorate. Locational quality on Custer would deteriorate. Congestion would force drivers to use alternate routes, which would congest nearby streets. Traffic impacts throughout Helena would be progressively felt over time.	R/W footprint at intersections would be less compared to roundabout alternative. The smaller intersection footprint would provide more flexibility to maintain existing access and internal circulation within business boundaries.	Full utility relocation except for Yellowstone pipeline. Footprint at signalized intersections is less than roundabout alternative; however there is the potential for changes to access/internal circulation that may render a business useless. Two storage buildings would need to be moved, however preliminary analysis suggests that using retaining walls would mitigate the impact to these buildings.	R/W impacts between intersections would be reduced compared to 5-Lane signalized intersections.	Full utility relocation except for Yellowstone pipeline. Footprint of intersections would be larger than 5-lane signalized alternative. Access changes/restrictions could render businesses unusable due to unworkable internal circulation. Two houses, 3 business buildings, and the 8th tee box at Bill Roberts would likely be demolished. Worst case R/W impacts at intersections.
	3		**7**		**5**	
Bikes / Peds (10.0%)	None	While Custer is not a deficient corridor in regard to bicycle and pedestrian facilities, not upgrading the corridor to current standards is a missed opportunity.	Fully compliant, multi-modal, PROWAG facility. Bike lane could be designed.	Longer crossing times than what currently exist.	Fully compliant, multimodal, PROWAG facility. Bike lane could be designed.	Modeling of the roundabout corridor did not include the effects of pedestrian crossings. Adding an exclusive bike lane would further widen footprint at intersections and would be a challenging design.
	5		**8**		**7**	
Combined Score	**2.75**		**8.0**		**6.9**	
			Cost/Construction Assessment			
Cost (50%)			Least expensive option	None	None	Most expensive alternative - approximately 10-15% more than signalized alternative
			6		**4**	
Construction Phasing (50%)			None	If construction is phased, conditions would improve within the new construction. However, a capacity bottleneck between new construction and the existing roadway (similar to conditions Montana and Custer currently experience) would occur at the end of the newly constructed roadway. The effect of these traffic conditions decreases the farther to the west Custer can be built.	None	If roundabouts are constructed in phases, traffic conditions (for multiple years) in between the new construction and the existing roadway would be similar to or potentially worse than existing conditions as roundabouts in close proximity to signals can intermittently fail.
			8		**2**	
Combined Score			**7.0**		**3.0**	
FINAL SCORE			**15.0**		**9.9**	

Signalized Alternative



Roundabout Alternative

Figure 12: Preliminary Design Configurations

6.0. IMPLEMENTATION

Improving the Custer Avenue corridor is a significant undertaking. While improvements are needed to address the corridor's congestion, safety, and capacity needs, delivering them involves real design challenges, from constrained right-of-way and protected property to extensive utilities and drainage needs. Addressing these challenges comes at a considerable cost. How and when the corridor is ultimately improved will depend on that cost and the funding available to support it, and the full corridor may need to be delivered in phases as funding allows.

6.1. Segmentation and Phasing

Completing the full corridor as a single project would represent a substantial cost, likely exceeding the funding available to the Helena area at any one time. If full funding cannot be secured at once, the corridor may need to be improved in segments as funding becomes available.

Because congestion and delay are most severe on the eastern portion of the corridor, near Montana Avenue, improvements would logically begin there and progress westward toward Henderson Street. This approach addresses the areas of greatest need first, and each segment would function as a complete, usable improvement on its own. Logical interim endpoints include McHugh Lane, Benton Avenue, and Green Meadow Drive.

The choice of interim endpoint affects how much benefit may be realized. The 2019 traffic study found that extending improvements only to McHugh Lane would provide limited relief, largely shifting congestion westward to the next constrained intersection rather than resolving it. Extending to Benton Avenue produced a much larger operational improvement, making it a more effective interim endpoint. Beyond Benton Avenue, each additional segment continues to improve corridor operations, but the added benefit of each becomes smaller.

A phased approach does carry tradeoffs. Until the full corridor is complete, a transition point would remain at the western end of each completed segment, where the improved roadway meets the existing corridor. Estimated costs for each segment and alternative are shown in **Table 3**, reflecting both the cost of each individual segment and the cumulative cost to build the corridor from Montana Avenue to the interim endpoint indicated.

Segment (from Montana Avenue)	Signalized Alternative		Roundabout Alternative	
	Segment	Cumulative	Segment	Cumulative
Montana Avenue to McHugh Lane	$12.5M	$12.5M	$13.4M	$13.4M
McHugh Lane to Benton Avenue	$8.9M	$21.3M	$11.4M	$24.7M
Benton Avenue to Green Meadow Drive	$5.1M	$26.4M	$6.6M	$31.4M
Green Meadow Drive to Henderson Street	$4.7M	$31.1M	$5.4M	$36.8M

Table 3: Estimated Cost by Segment

6.2. Funding

Improvements to Custer Avenue would likely be funded primarily through the Surface Transportation Program – Urban (STPU), which provides an annual allocation of federal funds for improvements to designated urban routes within the Helena urban area. Because this allocation is limited and shared among all of the area's designated routes, the Custer Avenue project would compete with other eligible projects for the same funding.

How these funds are spent is decided locally. The Transportation Policy Coordinating Committee (TPCC), the policy board of the MPO, sets priorities and allocates STPU funding through the region's transportation planning process. Whether and how the Custer Avenue project advances will depend on the TPCC's decisions about that funding.

Beginning in federal fiscal year 2027, the Helena urban area is projected to have an STPU account balance of approximately $15,022,300, with annual allocations of approximately $1,050,400. These figures reflect current federal funding authorization and are not guaranteed beyond it. The estimated cost to complete the full Custer Avenue corridor, roughly $31 to $37 million depending on the configuration, far exceeds these amounts, and that gap is likely to widen further as construction costs continue to outpace STPU allocation growth.

The scale of this difference has important implications. Advancing the full corridor as a single project would require a financial commitment well beyond the urban area's available balance and would draw down the annual allocation for many years to come. In practical terms, dedicating the urban area's funding to a full-build Custer Avenue project would leave little or no funding available for other transportation improvements across the urban area for an extended period.

If funding is not available for full corridor reconstruction, the project could be delivered in phases as funding becomes available, or advanced through supplemental funding sources such as grants, partnerships, or other collaboration among the involved agencies. The timing and extent of each phase would be determined through the TPCC's ongoing planning and programming process.



7.0 CONCLUSIONS AND NEXT STEPS

Custer Avenue is the only continuous east-west route across the north end of Helena and a primary route for the community. Existing traffic volumes regularly exceed what the corridor was built to handle, resulting in extended periods of congestion and delay, particularly on the eastern portion of the corridor. During the peak hours, a trip across the corridor can take roughly twice as long as it would under free-flow conditions. With no viable alternative route for east-west travel in the area, the corridor carries the bulk of this demand, and as the Helena area continues to grow, that demand is projected to increase. Without improvements, congestion, delay, and the associated safety concerns are expected to worsen over time.

To address existing and future needs, two corridor improvement alternatives were developed through prior planning and preliminary engineering. The signalized alternative widens the corridor to five lanes, two through lanes in each direction and a center left-turn lane, with traffic signals at the primary intersections. The roundabout alternative widens the corridor to four lanes divided by a raised median, with multi-lane roundabouts at the primary intersections.

Both alternatives are intended to add capacity, improve safety, and upgrade facilities for non-motorists. The existing shared-use path along the south side would be maintained, and the gaps in the sidewalk along the north side would be filled to provide a continuous walkway. Improved crossings and connections along the corridor would enhance accessibility and make walking and biking safer, particularly near the schools. Under future traffic conditions, both alternatives are projected to operate similarly, reducing delay by roughly half compared to the no-build condition.

The two alternatives were evaluated across a range of considerations, including operations, safety, access, impacts, and cost. Both alternatives outscored the no-build condition by a wide margin, confirming that improvement to the corridor is needed regardless of which configuration is ultimately chosen. Between the two, each showed distinct strengths, with the roundabout alternative scoring highest for safety. The signalized alternative scored similarly or higher across the other considerations and received the higher combined score. Public input gathered through the project also leaned toward the signalized alternative, with support for retaining direct corridor access and some concern expressed about multi-lane roundabouts in general. The final corridor configuration, intersection treatments, and project limits will be determined as the project advances into full design.

A number of considerations will carry forward into the next phase of project development. Schools, a golf course, and surrounding neighborhoods along the corridor will require continued attention to non-motorist safety and comfort throughout design and construction. The corridor is already developed and physically constrained, and improvements will require additional right-of-way, with the potential to affect adjacent properties and access. It is also a major utility corridor, and reconstruction would require relocating utilities in many locations. Because Custer Avenue does not currently have a formal storm drainage system, a new system would need to be constructed to current stormwater standards. Environmental considerations include wetlands, historic properties, and the protected parkland at the Bill Roberts Golf Course, which is subject to federal protections. These impacts are generally greater under the roundabout alternative, which requires a larger footprint at the intersections. Each of these factors will be evaluated in greater detail as the design advances and a formal environmental review is completed.

Cost and funding will be central to how and when the corridor is improved. The full corridor improvement is anticipated to cost approximately $31 to $37 million depending on the configuration. This far exceeds the funding currently available to the Helena urban area, which has an urban funding balance of about $15 million and an annual allocation of roughly $1 million, figures that reflect current funding authorization and are likely to be outpaced by rising construction costs over time. Pursuing the full corridor as a single project would put the urban area in a financial hole, committing its urban funding for years to come and leaving little available for other transportation needs across the urban area. This reality may lead to the corridor being improved in segments over time, beginning at the eastern end where congestion is most severe and extending westward as funding allows, or advanced through supplemental funding sources such as grants and partnerships.

Advancing the project into the next phase will require several steps centered on funding and delivery. The first is a funding decision by the TPCC. The committee will determine whether to allocate the area's urban funds to the Custer Avenue project and, if so, in what form, including whether to pursue the full corridor or a phased approach. This decision establishes the funding framework the project needs to move forward. If funding is allocated, MDT and the City of Helena would then reach agreement on how the project will be administered and delivered. Once funding and administration is in place, the project can advance into full design and environmental compliance, carrying forward the considerations identified in this summary. Public involvement will continue to be an important part of the process, and future phases will provide additional opportunities for the community to participate.

Custer Avenue is a vital corridor for Helena, and the need for improvement is clear and will only grow as the area continues to develop. With the preliminary engineering complete, the decisions ahead on funding and delivery will determine when, and in what form, those improvements move forward.

Figure 13: Next Steps



8.0. REFERENCES

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COST ESTIMATES

CUSTER AVENUE IMPROVEMENTS STUDY

Unit Costs

Project:	CUSTER AVE. - HELENA STPU 5802 (21)
UPN Number:	9339000
Design Stage:	Alignment and Grade Review

ITEM	UNITS		UNIT PRICE	NOTES
Contingency			25%	Provided by MDT
Construction Engineering			12%	Estimated
Preliminary Engineering			15%	Estimated
Indirect Cost Rate				Provided by MDT
Construction IDC			10.52%	
Construction Engineering IDC			10.52%	
Preliminary Engineering IDC			10.52%	
Right-of-Way IDC			10.52%	
Utility IDC			10.52%	
Right-of-Way				Prices based on taxable land value averages by category
Residential	SQFT	$	9.80	
Commercial	SQFT	$	13.84	
Mixed	SQFT	$	6.99	
Government	SQFT	$	5.73	
Protected	SQFT	$	11.45	*2x government price (buy and replace)*
Full Parcel	LS		1.25	*full taxable value x1.25*
Utilities				Utility average unit costs provided by MDT
Power	LF	$	60.00	
Telephone	LF	$	10.00	
Fiber Optics	LF	$	20.00	
Gas	LF	$	57.00	
TV	LF	$	10.00	
Overhead Distribution	POLE	$	5,000.00	
Overhead Transmission	POLE	$	8,000.00	
Cost Share			-25%	*25% cost share with utility companies*
Henderson RBT Reduction	LS	$	(2,223,981.24)	Per Sanbell Opinion of Probable Cost 05/21/2026

Signalized Alternative - Cost Estimates

Project:	CUSTER AVE. - HELENA STPU 5802 (21)
UPN Number:	9339000
Design Stage:	Alignment and Grade Review

Notes:

Bid items subtotal provided by MDT
IDC applied to all phases and assumes MDT administration
R/W costs based on 2025 taxable value
Utility costs assume no impacts to the Yellowstone Pipeline

SIGNALIZED ALTERNATIVE			
Segment A: Montana to McHugh	**$**	**12,459,485**	**TOT**
Segment B: Montana to Benton	**$**	**21,347,595**	**TOT**
Segment C: Montana to Green Meadow	**$**	**26,426,525**	**TOT**
Segment D: Montana to Henderson	**$**	**31,116,439**	**TOT**

SEGMENT A: MONTANA TO MCHUGH	Length (mi)	0.5	$	12,459,485	TOT

Type	Units	Quantity		Unit Price		Cost	
CN - CONSTRUCTION					**$**	**9,136,000.82**	**TOT**
Bid Items Subtotal					$	5,904,555.62	
Contingency				25.0%	$	1,476,138.91	
Construction Subtotal					$	7,380,694.53	
Construction IDC				10.52%	$	776,449.06	
Construction Total w/ IDC					$	8,157,143.59	
Construction Engineering				12.0%	$	885,683.34	
Construction Engineering IDC				10.52%	$	93,173.89	
Construction Engineering w/ IDC					$	978,857.23	
Total w/ IDC					**$**	**9,136,000.82**	
PE - PRELIMINARY ENGINEERING					**$**	**1,223,571.54**	**TOT**
Preliminary Engineering				15.0%	$	1,107,104.18	
Preliminary Engineering IDC				10.52%	$	116,467.36	
Total w/ IDC					**$**	**1,223,571.54**	
RW - RIGHT-OF-WAY					**$**	**1,246,787.09**	**TOT**
Residential	SQFT	10366	$	9.80	$	101,564.32	
Commercial	SQFT	67354	$	13.84	$	932,490.08	
Mixed	SQFT	0	$	6.99	$	-	
Government	SQFT	16425	$	5.73	$	94,055.52	
Protected	SQFT	0	$	11.45	$	-	
Full Parcel	LS	1.25	$	-	$	-	
Right-of-Way Subtotal					$	1,128,109.92	
Right-of-Way IDC				10.52%	$	118,677.16	
Total w/ IDC					**$**	**1,246,787.09**	
UT - UTILITY RELOCATION					**$**	**853,125.09**	**TOT**
Power	LF	2361	$	60.00	$	141,631.82	
Telephone	LF	5136	$	10.00	$	51,360.27	
Fiber Optics	LF	6258	$	20.00	$	125,151.52	
Gas	LF	10932	$	57.00	$	623,105.85	
TV	LF	1298	$	10.00	$	12,976.14	
Overhead Distribution	POLE	7	$	5,000.00	$	35,000.00	
Overhead Transmission	POLE	5	$	8,000.00	$	40,000.00	
Cost Share				(25.0%)	$	(257,306.40)	
Utility Subtotal					$	771,919.19	
Utility IDC				10.52%	$	81,205.90	
Total w/ IDC					**$**	**853,125.09**	

SEGMENT B: MONTANA TO BENTON	Length (mi)	1.0	$	21,347,595	TOT

Type	Units	Quantity		Unit Price		Cost	
CN - CONSTRUCTION					**$**	**14,444,458.65**	**TOT**
Bid Items Subtotal					$	9,335,387.68	
Contingency				25.0%	$	2,333,846.92	
Construction Subtotal					$	11,669,234.60	
Construction IDC				10.52%	$	1,227,603.48	
Construction Total w/ IDC					$	12,896,838.08	
Construction Engineering				12.0%	$	1,400,308.15	
Construction Engineering IDC				10.52%	$	147,312.42	
Construction Engineering w/ IDC					$	1,547,620.57	
Total w/ IDC					**$**	**14,444,458.65**	
PE - PRELIMINARY ENGINEERING					**$**	**1,934,525.71**	**TOT**
Preliminary Engineering				15.0%	$	1,750,385.19	
Preliminary Engineering IDC				10.52%	$	184,140.52	
Total w/ IDC					**$**	**1,934,525.71**	
RW - RIGHT-OF-WAY					**$**	**3,370,770.62**	**TOT**
Residential	SQFT	44385	$	9.80	$	434,892.61	
Commercial	SQFT	130727	$	13.84	$	1,809,870.79	
Mixed	SQFT	0	$	6.99	$	-	
Government	SQFT	42788	$	5.73	$	245,022.42	
Protected	SQFT	48907	$	11.45	$	560,133.31	
Full Parcel	LS	1.25	$	-	$	-	
Right-of-Way Subtotal					$	3,049,919.13	
Right-of-Way IDC				10.52%	$	320,851.49	
Total w/ IDC					**$**	**3,370,770.62**	
UT - UTILITY RELOCATION					**$**	**1,597,840.12**	**TOT**
Power	LF	4008	$	60.00	$	240,493.25	
Telephone	LF	15303	$	10.00	$	153,032.01	
Fiber Optics	LF	13136	$	20.00	$	262,725.94	
Gas	LF	19639	$	57.00	$	1,119,397.60	
TV	LF	5201	$	10.00	$	52,014.52	
Overhead Distribution	POLE	12	$	5,000.00	$	60,000.00	
Overhead Transmission	POLE	5	$	8,000.00	$	40,000.00	
Cost Share				(25.0%)	$	(481,915.83)	
Utility Subtotal					$	1,445,747.49	
Utility IDC				10.52%	$	152,092.64	
Total w/ IDC					**$**	**1,597,840.12**	

SEGMENT C: MONTANA TO GREEN MEADOW	Length (mi)	1.23	$	26,426,525	TOT

Type	Units	Quantity	Unit Price		Cost	
CN - CONSTRUCTION				**$**	**18,011,501.86**	**TOT**
Bid Items Subtotal				$	11,640,751.42	
Contingency			25.0%	$	2,910,187.86	
Construction Subtotal				$	14,550,939.28	
Construction IDC			10.52%	$	1,530,758.81	
Construction Total w/ IDC				$	16,081,698.09	
Construction Engineering			12.0%	$	1,746,112.71	
Construction Engineering IDC			10.52%	$	183,691.06	
Construction Engineering w/ IDC				$	1,929,803.77	
Total w/ IDC				**$**	**18,011,501.86**	
PE - PRELIMINARY ENGINEERING				**$**	**2,412,254.71**	**TOT**
Preliminary Engineering			15.0%	$	2,182,640.89	
Preliminary Engineering IDC			10.52%	$	229,613.82	
Total w/ IDC				**$**	**2,412,254.71**	
RW - RIGHT-OF-WAY				**$**	**4,020,723.77**	**TOT**
Residential	SQFT	87306	$ 9.80	$	855,445.30	
Commercial	SQFT	133927	$ 13.84	$	1,854,178.13	
Mixed	SQFT	17635	$ 6.99	$	123,226.42	
Government	SQFT	42788	$ 5.73	$	245,022.42	
Protected	SQFT	48907	$ 11.45	$	560,133.31	
Full Parcel	LS	1.25	$ -	$	-	
Right-of-Way Subtotal				$	3,638,005.58	
Right-of-Way IDC			10.52%	$	382,718.19	
Total w/ IDC				**$**	**4,020,723.77**	
UT - UTILITY RELOCATION				**$**	**1,982,044.93**	**TOT**
Power	LF	5074	$ 60.00	$	304,424.53	
Telephone	LF	18742	$ 10.00	$	187,415.64	
Fiber Optics	LF	16099	$ 20.00	$	321,986.36	
Gas	LF	24407	$ 57.00	$	1,391,208.75	
TV	LF	7614	$ 10.00	$	76,139.69	
Overhead Distribution	POLE	14	$ 5,000.00	$	70,000.00	
Overhead Transmission	POLE	5	$ 8,000.00	$	40,000.00	
Cost Share			(25.0%)	$	(597,793.74)	
Utility Subtotal				$	1,793,381.22	
Utility IDC			10.52%	$	188,663.70	
Total w/ IDC				**$**	**1,982,044.93**	

SEGMENT D: MONTANA TO HENDERSON	Length (mi)	1.63	$	31,116,439	TOT

Type	Units	Quantity		Unit Price		Cost	
CN - CONSTRUCTION					**$**	**21,761,515.94**	**TOT**
Bid Items Subtotal					$	14,064,368.40	
Contingency				25.0%	$	3,516,092.10	
Construction Subtotal					$	17,580,460.50	
Construction IDC				10.52%	$	1,849,464.44	
Construction Total w/ IDC					$	19,429,924.94	
Construction Engineering				12.0%	$	2,109,655.26	
Construction Engineering IDC				10.52%	$	221,935.73	
Construction Engineering w/ IDC					$	2,331,590.99	
Total w/ IDC					**$**	**21,761,515.94**	
PE - PRELIMINARY ENGINEERING					**$**	**2,914,488.74**	**TOT**
Preliminary Engineering				15.0%	$	2,637,069.08	
Preliminary Engineering IDC				10.52%	$	277,419.67	
Total w/ IDC					**$**	**2,914,488.74**	
RW - RIGHT-OF-WAY					**$**	**4,355,834.13**	**TOT**
Residential	SQFT	87306	$	9.80	$	855,445.30	
Commercial	SQFT	136334	$	13.84	$	1,887,500.54	
Mixed	SQFT	17635	$	6.99	$	123,226.42	
Government	SQFT	89918	$	5.73	$	514,912.43	
Protected	SQFT	48907	$	11.45	$	560,133.31	
Full Parcel	LS	1.25	$	-	$	-	
Right-of-Way Subtotal					$	3,941,217.99	
Right-of-Way IDC				10.52%	$	414,616.13	
Total w/ IDC					**$**	**4,355,834.13**	
UT - UTILITY RELOCATION					**$**	**2,084,600.08**	**TOT**
Power	LF	5104	$	60.00	$	306,235.86	
Telephone	LF	19419	$	10.00	$	194,185.25	
Fiber Optics	LF	16718	$	20.00	$	334,358.81	
Gas	LF	26210	$	57.00	$	1,493,979.75	
TV	LF	7614	$	10.00	$	76,139.69	
Overhead Distribution	POLE	14	$	5,000.00	$	70,000.00	
Overhead Transmission	POLE	5	$	8,000.00	$	40,000.00	
Cost Share				(25.0%)	$	(628,724.84)	
Utility Subtotal					$	1,886,174.52	
Utility IDC				10.52%	$	198,425.56	
Total w/ IDC					**$**	**2,084,600.08**	

Roundabout Alternative - Cost Estimates

Project:	CUSTER AVE. - HELENA STPU 5802 (21)
UPN Number:	9339000
Design Stage:	Alignment and Grade Review

Notes:

Bid items subtotal provided by MDT
IDC applied to all phases and assumes MDT administration
R/W costs based on 2025 taxable value
Utility costs assume no impacts to the Yellowstone Pipeline

ROUNDABOUT ALTERNATIVE			
Segment A: Montana to McHugh	**$**	**13,392,483**	**TOT**
Segment B: Montana to Benton	**$**	**24,744,457**	**TOT**
Segment C: Montana to Green Meadow	**$**	**31,381,480**	**TOT**
Segment D: Montana to Henderson	**$**	**36,813,852**	**TOT**

SEGMENT A: MONTANA TO MCHUGH	Length (mi)	0.5	$	13,392,483	TOT

Type	Units	Quantity	Unit Price		Cost	
CN - CONSTRUCTION				**$**	**9,980,326.14**	**TOT**
Bid Items Subtotal				$	6,450,239.22	
Contingency			25.0%	$	1,612,559.81	
Construction Subtotal				$	8,062,799.03	
Construction IDC			10.52%	$	848,206.46	
Construction Total w/ IDC				$	8,911,005.48	
Construction Engineering			12.0%	$	967,535.88	
Construction Engineering IDC			10.52%	$	101,784.77	
Construction Engineering w/ IDC				$	1,069,320.66	
Total w/ IDC				**$**	**9,980,326.14**	
PE - PRELIMINARY ENGINEERING				**$**	**1,336,650.82**	**TOT**
Preliminary Engineering			15.0%	$	1,209,419.85	
Preliminary Engineering IDC			10.52%	$	127,230.97	
Total w/ IDC				**$**	**1,336,650.82**	
RW - RIGHT-OF-WAY				**$**	**1,188,087.18**	**TOT**
Residential	SQFT	44699	$ 9.80	$	437,975.03	
Commercial	SQFT	39420	$ 13.84	$	545,762.84	
Mixed	SQFT	0	$ 6.99	$	-	
Government	SQFT	15936	$ 5.73	$	91,259.58	
Protected	SQFT	0	$ 11.45	$	-	
Full Parcel	LS	1.25	$ -	$	-	
Right-of-Way Subtotal				$	1,074,997.45	
Right-of-Way IDC			10.52%	$	113,089.73	
Total w/ IDC				**$**	**1,188,087.18**	
UT - UTILITY RELOCATION				**$**	**887,418.61**	**TOT**
Power	LF	2325	$ 60.00	$	139,525.03	
Telephone	LF	4854	$ 10.00	$	48,535.73	
Fiber Optics	LF	6288	$ 20.00	$	125,763.77	
Gas	LF	10893	$ 57.00	$	620,897.76	
TV	LF	1288	$ 10.00	$	12,875.63	
Overhead Distribution	POLE	15	$ 5,000.00	$	75,000.00	
Overhead Transmission	POLE	6	$ 8,000.00	$	48,000.00	
Cost Share			(25.0%)	$	(267,649.48)	
Utility Subtotal				$	802,948.43	
Utility IDC			10.52%	$	84,470.18	
Total w/ IDC				**$**	**887,418.61**	

SEGMENT B: MONTANA TO BENTON	Length (mi)	1.0	$	24,744,457	TOT

Type	Units	Quantity	Unit Price		Cost	
CN - CONSTRUCTION				**$**	**16,037,475.40**	**TOT**
Bid Items Subtotal				$	10,364,947.13	
Contingency			25.0%	$	2,591,236.78	
Construction Subtotal				$	12,956,183.91	
Construction IDC			10.52%	$	1,362,990.55	
Construction Total w/ IDC				$	14,319,174.46	
Construction Engineering			12.0%	$	1,554,742.07	
Construction Engineering IDC			10.52%	$	163,558.87	
Construction Engineering w/ IDC				$	1,718,300.94	
Total w/ IDC				**$**	**16,037,475.40**	
PE - PRELIMINARY ENGINEERING				**$**	**2,147,876.17**	**TOT**
Preliminary Engineering			15.0%	$	1,943,427.59	
Preliminary Engineering IDC			10.52%	$	204,448.58	
Total w/ IDC				**$**	**2,147,876.17**	
RW - RIGHT-OF-WAY				**$**	**4,913,325.23**	**TOT**
Residential	SQFT	78965	$ 9.80	$	773,724.37	
Commercial	SQFT	82877	$ 13.84	$	1,147,411.61	
Mixed	SQFT	0	$ 6.99	$	-	
Government	SQFT	57928	$ 5.73	$	331,722.38	
Protected	SQFT	64779	$ 11.45	$	741,910.17	
Full Parcel	LS	1.25	$ 1,160,700	$	1,450,875.00	
Right-of-Way Subtotal				$	4,445,643.53	
Right-of-Way IDC			10.52%	$	467,681.70	
Total w/ IDC				**$**	**4,913,325.23**	
UT - UTILITY RELOCATION				**$**	**1,645,780.32**	**TOT**
Power	LF	3995	$ 60.00	$	239,675.22	
Telephone	LF	15338	$ 10.00	$	153,378.77	
Fiber Optics	LF	13101	$ 20.00	$	262,015.23	
Gas	LF	19756	$ 57.00	$	1,126,064.28	
TV	LF	5137	$ 10.00	$	51,365.75	
Overhead Distribution	POLE	21	$ 5,000.00	$	105,000.00	
Overhead Transmission	POLE	6	$ 8,000.00	$	48,000.00	
Cost Share			(25.0%)	$	(496,374.81)	
Utility Subtotal				$	1,489,124.43	
Utility IDC			10.52%	$	156,655.89	
Total w/ IDC				**$**	**1,645,780.32**	

SEGMENT C: MONTANA TO GREEN MEADOW	Length (mi)	1.23	$	31,381,480	TOT

Type	Units	Quantity	Unit Price		Cost	
CN - CONSTRUCTION				**$**	**20,488,225.46**	**TOT**
Bid Items Subtotal				$	13,241,446.58	
Contingency			25.0%	$	3,310,361.65	
Construction Subtotal				$	16,551,808.23	
Construction IDC			10.52%	$	1,741,250.23	
Construction Total w/ IDC				$	18,293,058.45	
Construction Engineering			12.0%	$	1,986,216.99	
Construction Engineering IDC			10.52%	$	208,950.03	
Construction Engineering w/ IDC				$	2,195,167.01	
Total w/ IDC				**$**	**20,488,225.46**	
PE - PRELIMINARY ENGINEERING				**$**	**2,743,958.77**	**TOT**
Preliminary Engineering			15.0%	$	2,482,771.23	
Preliminary Engineering IDC			10.52%	$	261,187.53	
Total w/ IDC				**$**	**2,743,958.77**	
RW - RIGHT-OF-WAY				**$**	**6,114,348.36**	**TOT**
Residential	SQFT	124521	$ 9.80	$	1,220,094.45	
Commercial	SQFT	85248	$ 13.84	$	1,180,227.28	
Mixed	SQFT	25744	$ 6.99	$	179,891.32	
Government	SQFT	57928	$ 5.73	$	331,722.38	
Protected	SQFT	64779	$ 11.45	$	741,910.17	
Full Parcel	LS	1.25	$ 1,502,800	$	1,878,500.00	
Right-of-Way Subtotal				$	5,532,345.60	
Right-of-Way IDC			10.52%	$	582,002.76	
Total w/ IDC				**$**	**6,114,348.36**	
UT - UTILITY RELOCATION				**$**	**2,034,947.17**	**TOT**
Power	LF	5075	$ 60.00	$	304,509.41	
Telephone	LF	18677	$ 10.00	$	186,768.32	
Fiber Optics	LF	16151	$ 20.00	$	323,010.83	
Gas	LF	24500	$ 57.00	$	1,396,485.25	
TV	LF	7622	$ 10.00	$	76,223.37	
Overhead Distribution	POLE	24	$ 5,000.00	$	120,000.00	
Overhead Transmission	POLE	6	$ 8,000.00	$	48,000.00	
Cost Share			(25.0%)	$	(613,749.30)	
Utility Subtotal				$	1,841,247.89	
Utility IDC			10.52%	$	193,699.28	
Total w/ IDC				**$**	**2,034,947.17**	

SEGMENT D: MONTANA TO HENDERSON	Length (mi)	1.63	$	36,813,852	TOT

Type	Units	Quantity	Unit Price		Cost	
CN - CONSTRUCTION				**$**	**22,630,379.43**	**TOT**
Bid Items Subtotal				$	16,849,892.15	
Henderson RBT Reduction	LS	1	$ (2,223,981)	$	(2,223,981.24)	
Contingency			25.0%	$	3,656,477.73	
Construction Subtotal				$	18,282,388.64	
Construction IDC			10.52%	$	1,923,307.28	
Construction Total w/ IDC				$	20,205,695.92	
Construction Engineering			12.0%	$	2,193,886.64	
Construction Engineering IDC			10.52%	$	230,796.87	
Construction Engineering w/ IDC				$	2,424,683.51	
Total w/ IDC				**$**	**22,630,379.43**	
PE - PRELIMINARY ENGINEERING				**$**	**3,030,854.39**	**TOT**
Preliminary Engineering			15.0%	$	2,742,358.30	
Preliminary Engineering IDC			10.52%	$	288,496.09	
Total w/ IDC				**$**	**3,030,854.39**	
RW - RIGHT-OF-WAY				**$**	**9,027,449.31**	**TOT**
Residential	SQFT	124521	$ 9.80	$	1,220,094.45	
Commercial	SQFT	120045	$ 13.84	$	1,661,979.81	
Mixed	SQFT	25744	$ 6.99	$	179,891.32	
Government	SQFT	104063	$ 5.73	$	595,913.24	
Protected	SQFT	64779	$ 11.45	$	741,910.17	
Full Parcel	LS	1.25	$ 3,014,696	$	3,768,370.00	
Right-of-Way Subtotal				$	8,168,158.99	
Right-of-Way IDC			10.52%	$	859,290.33	
Total w/ IDC				**$**	**9,027,449.31**	
UT - UTILITY RELOCATION				**$**	**2,125,169.31**	**TOT**
Power	LF	5105	$ 60.00	$	306,320.74	
Telephone	LF	20355	$ 10.00	$	203,548.27	
Fiber Optics	LF	16872	$ 20.00	$	337,447.18	
Gas	LF	25617	$ 57.00	$	1,460,190.46	
TV	LF	8834	$ 10.00	$	88,336.16	
Overhead Distribution	POLE	24	$ 5,000.00	$	120,000.00	
Overhead Transmission	POLE	6	$ 8,000.00	$	48,000.00	
Cost Share			(25.0%)	$	(640,960.70)	
Utility Subtotal				$	1,922,882.11	
Utility IDC			10.52%	$	202,287.20	
Total w/ IDC				**$**	**2,125,169.31**	