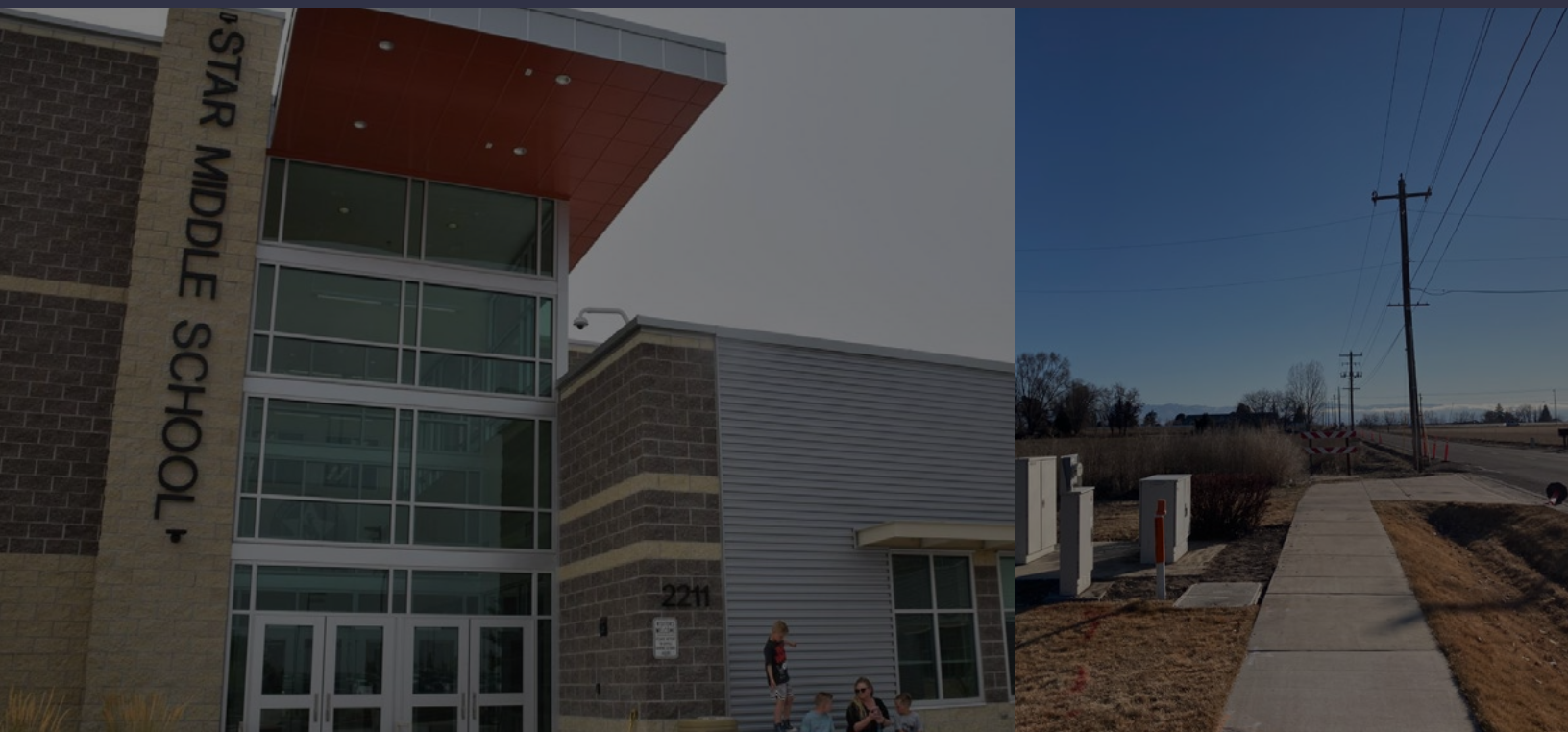


# Star Safe Route to School

*Pre-Concept Report*

September 2022



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**1**

# **Project Summary**



# Project Summary

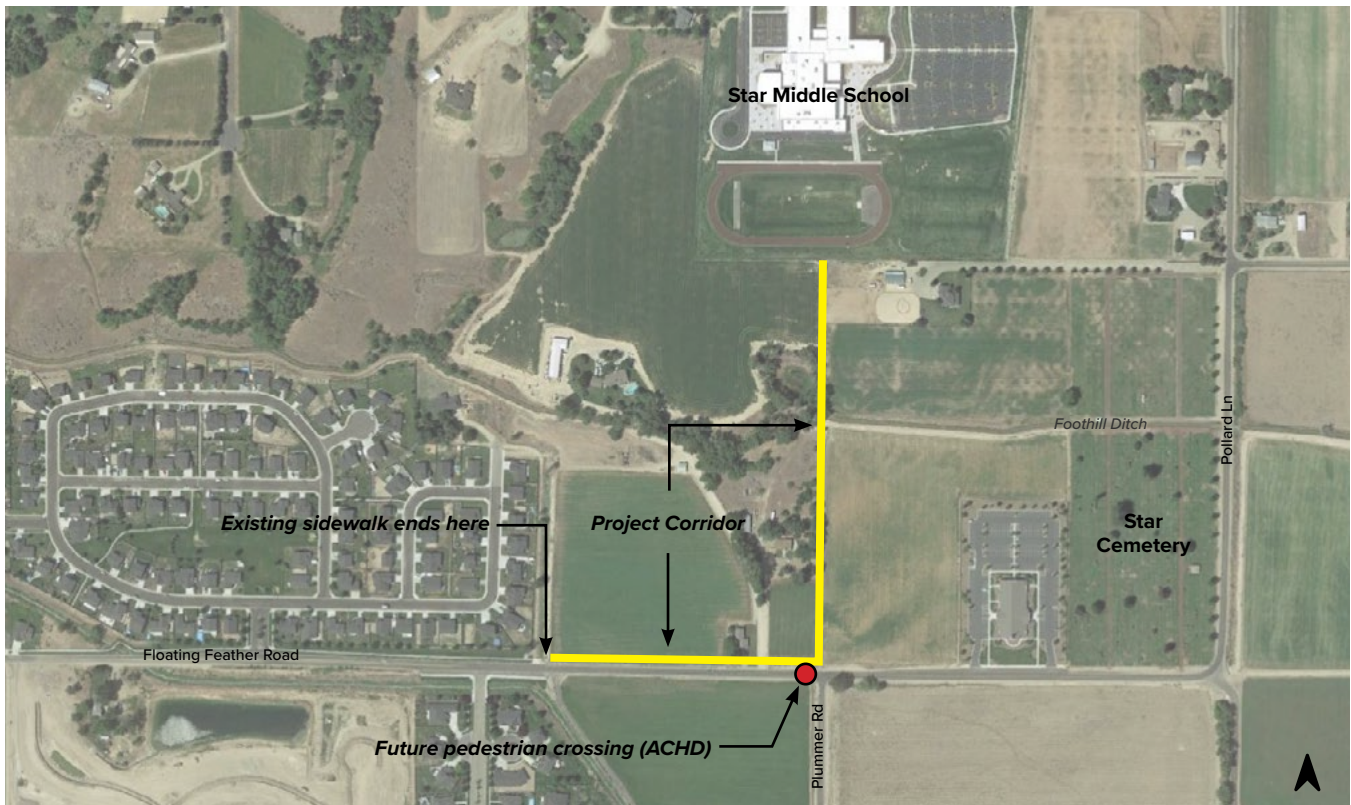
This project includes concept development for a future multi-use path connection to Star Middle School, extending from Floating Feather Road at Plummer Road to the south side of the middle school campus, including a new sidewalk connection on the north side of Floating Feather Road, between Plummer Road and the existing sidewalk to the west. This project fills a need in enabling students and staff in the surrounding neighborhoods to walk, bike, or use other personal mobility devices to access the school. Currently, safe and convenient bicycle and pedestrian infrastructure that connect to the school in this area does not exist; this presents a safety hazard for pedestrians and bicyclists and discourages active travel.

This project includes coordination with adjacent and underlying land owners to construct a safe, accessible, and direct route, separated from vehicle traffic, for people using active modes. This ensures that people have reliable choices in how they get to and from the school.

The total anticipated cost for this project is:

**\$611,000**

See Section 9: Cost Estimate for a breakdown of costs and cost estimating assumptions.



Context Map

The background image shows a field with a fence in the foreground and a building in the distance. The scene is dimly lit, suggesting dusk or dawn. The fence is made of chain-link and runs across the field. The building is a large, multi-story structure with a flat roof. There are some trees and bushes scattered throughout the field.

**2**

# **Project Description**

# Project Description

## Project Development Program

This project utilized the Community Planning Association of Southwest Idaho (COMPASS) Project Development Program (PDP) to prepare concept-level design and cost estimates for final design and construction. The information developed through PDP can then be used to coordinate with the Ada County Highway District (ACHD), underlying and adjacent land owners, and irrigation operators to identify likely funding requirements and coordinate project implementation.

## Consultant Scope

Alta Planning + Design was hired to provide a pre-concept report identifying a preliminary design with estimated construction costs to be used for future funding applications.

## Safety / Crash History

According to the data obtained from ITD's Safety Dashboard, between 1/1/2017 and 6/30/2022, there have not been any pedestrian- or bicyclist-involved crashes in the project area - Floating Feather Road and Plummer Road vicinity. Three crashes not involving pedestrians or bicyclists have occurred near the intersection of Floating Feather Road and Plummer Road, resulting in property damage only.

The nearest bicycle-related crashes occurred at the intersection of Floating Feather Road and Brandon Road.

## Regional Connections

The proposed improvements will enhance connectivity between surrounding communities and Star Middle School, and will tie in with the planned regional network of bicycle and pedestrian facilities. This project was already identified as a desired connection in the Ada County Highway District's (ACHD) 2018 Roadways to Bikeways Master Plan Update. A map illustrating these and other active transportation connections is included in Appendix A.

## Comprehensive Purpose & Need

The development of a bicycle and pedestrian route between Floating Feather Road and Star Middle School makes a critical connection that is consistent with ACHD's Roadways to Bikeways Master Plan, the City of Star's Bicycle & Pedestrian Plan, the City of Star's Pathways Master Plan, and COMPASS' Complete Network Policy. Additionally, there is a demonstrated need to provide bicycle and pedestrian connections to Star Middle School.

### Previous Plans

A multi-use path connection between Floating Feather Road and Star Middle School, as well as sidewalk connections along Floating Feather Road, has been planned since 2018, when it was included in both the ACHD Roadways to Bikeways Master Plan Update and the City of Star Bicycle & Pedestrian Plan. The Bicycle & Pedestrian Plan identified the project as a high priority, based on ACHD's community programs prioritization criteria. Results from the public input process showed that sidewalk connections along Floating Feather Road are the highest priority for the community. Star's 2022 Pathways Master Plan continues to identify the project as a critical connection for safe routes to school in the community.

Additionally, COMPASS' Complete Network Policy specifically states multi-modal connections to homes, schools, families, and friends, as well as safe and efficient movement of community members as primary objectives.

### Demonstrated Need

Star Middle School currently enrolls around 860 students and employs roughly 80 faculty and staff. In an interview with Principal Tyler Pence, the planning team learned that the school does not currently have any students or staff that walk or bike to school on a regular basis due to safety reasons and lack of connectivity to the school. Additionally, the school's no-bussing zone covers a one-mile buffer around the school, meaning that students within one mile of the school are not eligible to be bussed by the District's transportation system. This one-mile buffer covers a significant number of residential neighborhoods, including those south of Floating Feather Road. This results in a large number of students being dropped off and picked up by their parents via car, which puts a strain on the school's capacity to park and circulate the number of vehicles they experience during drop-off and pick-up times.

### Expected Benefits

Given the number of homes within one mile of the school and the ongoing development of more homes in the vicinity of the project area, it is expected that a multi-use path and sidewalk connection would see significant use and give students and staff more transportation choice.

**3**  
**—**

# **Project Constraints**





# Project Constraints

## Site Visit

A site visit was conducted on February 23, 2022 to identify any potential constraints that would affect the proposed concept alternatives. Attendees included representatives from the City of Star, including Mayor Trevor Chadwick, the canal operator for Foothill Ditch, the owners of the Star Cemetery, private developers of adjacent parcels, Ada County Highway District (ACHD), and the consultant team. The walkthrough primarily focused on the crossing of Foothill Ditch, where constraints and opportunities were discussed. Later, the consultant team walked the length of the project corridor multiple times to gather additional information and obtain field photos.

## Existing Conditions & Project Constraints

The initial proposed alignment extends from the existing sidewalk on the north side of Floating Feather in front of Colt Place Subdivision to approximately Plummer Road. This portion of Floating Feather is fronted by the future development of Langtree Bungalows, which presents opportunities to work with the developer to get the sidewalk built. Heading north from Plummer Road, the alignment follows the Star Cemetery property line to Foothill Ditch. The Cemetery is supportive of the project and willing to provide easements to accommodate the multi-use path. North of Foothill Ditch, Langtree Bungalows and Welton Estates developments have agreed to provide 5-foot easements (10 feet total) for the project.

The primary obstacle in making a pathway connection from Floating Feather Road to Star Middle School is the crossing of Foothill Ditch. The alignment identified in previous plans crosses Foothill Ditch at a location where a culvert crossing already exists; however, the site visit and discussions with the canal operator revealed concerns about safety at this location. The culvert opening on the east side of the proposed alignment is close and visibly accessible, creating the potential for trespassing and safety hazards. The topography of the site was another barrier identified at the crossing as a potential safety hazard. The ditch, and surrounding topography, drops significantly to the west side of the proposed alignment.

These constraints prompted the exploration of two alternatives: Alternative B and Alternative C alignments, as shown on the map in Figure 3.1. These alignments alleviate the challenge presented by the steep drop-off in Alternate A (initial proposed alignment), but require new crossings of Foothill Ditch and potential impacts / constraints related to the Welton Estates development on the north side of the ditch.

Additional constraints of lesser concern, beyond the crossing of Foothill Ditch, include the crossing and/or relocation of existing irrigation channels, potential relocation of utility poles, and topography constraints at the entrance to Star Middle School south of the football field and track.

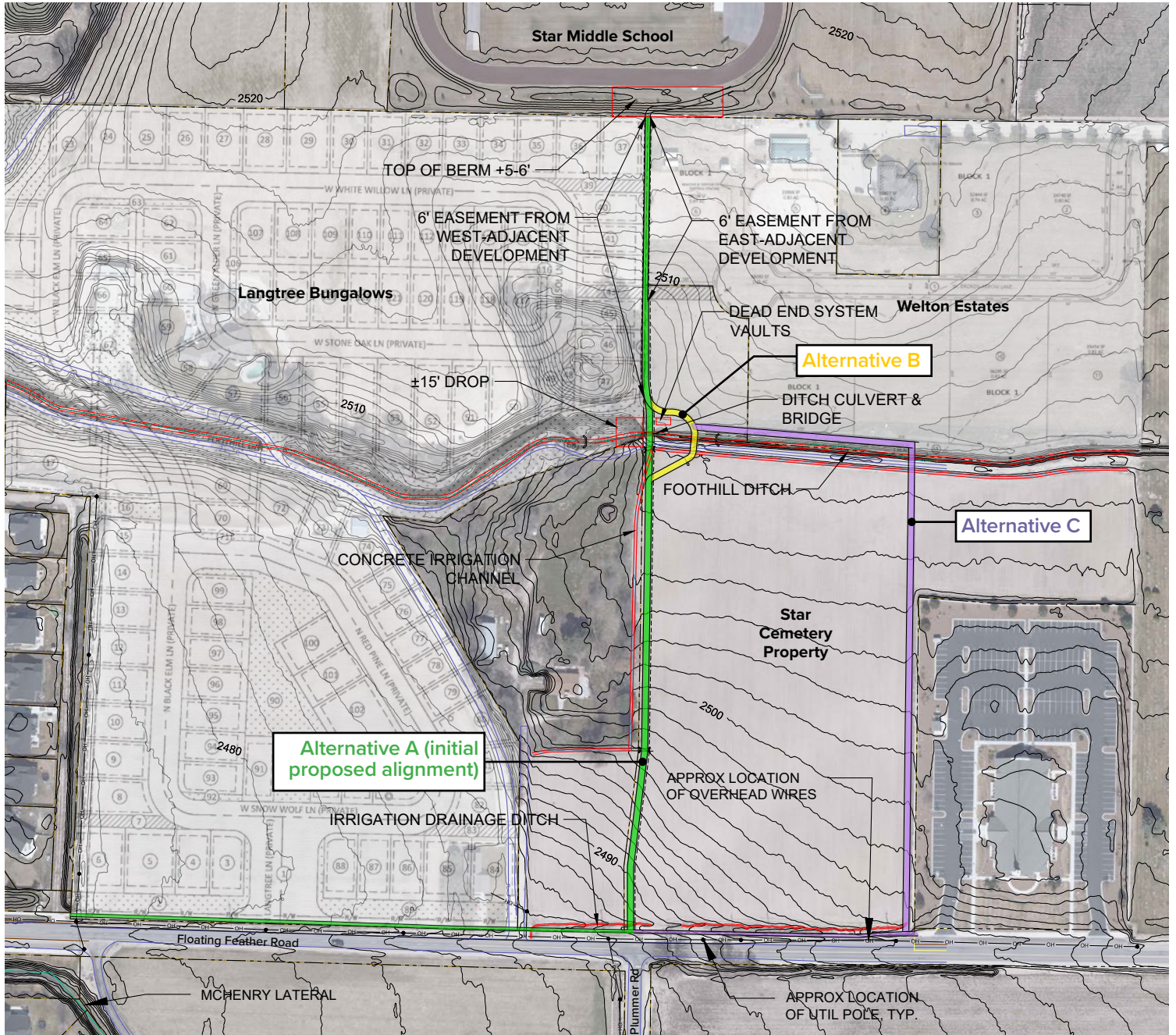
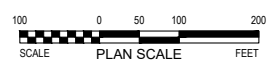


FIGURE 3.1 | PROJECT CONSTRAINTS



PLAN  
SCALE: 1" = 100'

- Alternative A
- Alternative B
- Alternative C
- Site constraint



**4**  
—

# Alternatives

# Alternatives

Figure 3.1 illustrates the location and alignment of the alternatives discussed in this section.

## Alternative A (preferred)

Alternative A is the initial alignment proposed in previous local plans. It provides the most direct route between Star Middle School and Floating Feather Road, tying into the intersection of Floating Feather Road and Plummer Road. To mitigate safety hazards, a new culvert would be constructed at Foothill Ditch, extending approximately 75 feet on both sides of the multi-use path. This prevents pathway users from accessing the culvert and allows for more gradual grading off the west bank of the pathway at Foothill Ditch. The typical cross section is a 10-foot pathway with 2-foot shoulders, or clear zones. The pathway would be narrowed to 8 feet between the Langtree Bungalows and Welton Estates development.

### Alternative A Advantages

- ▶ Most direct route
- ▶ Follows property lines and has the least amount of impact on adjacent properties
- ▶ Aligns well with Plummer Road, which is the likely location of a future crossing as new development continues to occur on the south side of Floating Feather Road.

### Alternative A Disadvantages

- ▶ Safety concerns related to canal culvert access and steep drop off, expensive to mitigate this with extended culvert
- ▶ Potential impacts on irrigation channels

## Alternative B

Alternative B follows the same alignment as Alternative A with the exception of the crossing of Foothill Ditch, where it jogs to the east to cross the ditch with greater clearance from the steep drop-off to the west, and returns to the Alternative A alignment north of the ditch. The purpose of Alternative B is to increase clearance from the drop-off while still maintaining a direct route. While Alternative B does decrease the amount of structural work and slope stabilization related to the steep drop-off, it does still require a modification and extension of the existing culvert to discourage trespassing. Additionally, the existing irrigation channel that feeds the Cemetery farming operations would need to be altered, and a greater easement would be required on the private property just north of Foothill Ditch.

### Alternative B Advantages

- ▶ Crosses ditch further away from steep drop-off, reducing structural work needed to make the crossing safe
- ▶ While less direct than Alternative A, the detour is minor and still provides a relatively direct route

### Alternative B Disadvantages

- ▶ Still requires existing culvert modification and extension to discourage trespassing near steep drop-off
- ▶ Bigger impacts on irrigation channels and Cemetery irrigation and farming operations
- ▶ Impacts on Walsh Group LLC parcel just north of ditch; requires bigger easement
- ▶ Relocate or work around existing structures (e.g., power transformer, irrigation vaults, etc.); protect structures with fencing

## Alternative C

Alternative C extends the sidewalk along the north side of Floating Feather Road further east to the west boundary of the Church of Jesus Christ of Latter-day Saints property, where a 10-foot pathway connection would be made to the north, across Foothill Ditch, and then back to Alternative B / A along the north side of the ditch. Alternative C is less direct and does not align with a future Plummer Road pedestrian crossing. In addition to crossing Foothill Ditch, the pathway would run along the ditch, requiring additional security/safety fencing along the ditch and imposing potential impacts on private properties in the Welton Estates development.

### Alternative C Advantages

- ▶ Lower complexity related to Foothill Ditch crossing - new culvert crossing, no modifications to existing culvert needed
- ▶ Furthers sidewalk connectivity along Floating Feather Road

### Alternative C Disadvantages

























- ▶ Indirect route; inconvenient detour, especially for people coming from the west
- ▶ Disruptive to Cemetery farming operations; bisects the field, creating concerns around access for farm equipment as well as trespassing
- ▶ More interaction with the ditch: crossing and running along
- ▶ Keep students on Floating Feather Road for longer
- ▶ Bigger impact on adjacent properties, need for more disruptive easements




# Alternatives Evaluation

The alternative alignments were evaluated relative to each other based on the criteria listed in the Table 1 below. Based on these criteria, Alternative A is the preferred alternative moving forward.

- ▶ Directness of route: Alternative A has the most direct route between Floating Feather Road and Star Middle School
- ▶ Impacts on adjacent property: Because Alternative A follows property lines, it is the least disruptive to adjacent properties
- ▶ User safety: Alternatives B and C mitigate safety concerns related to the steep drop-off west of the project area
- ▶ Crossing Foothill Ditch: Alternative C has the lowest complexity level for crossing the ditch
- ▶ Utility impacts: Alternatives B and C impose impacts on recently constructed utilities related to the new Welton Estates development as well as utility poles along Floating Feather east of Plummer Road
- ▶ Constructability & cost: While Alternative A includes significant structural and earthwork costs, it is the most direct route and therefore requires less materials
- ▶ Overall user experience: Alternatives A and B provide the most convenient, direct route
- ▶ Environmental impacts: The environmental scan did not identify any cultural, social, or environmental concerns that would prevent any of the alternatives from moving forward

**Table 1.** Alternatives Comparative Evaluation

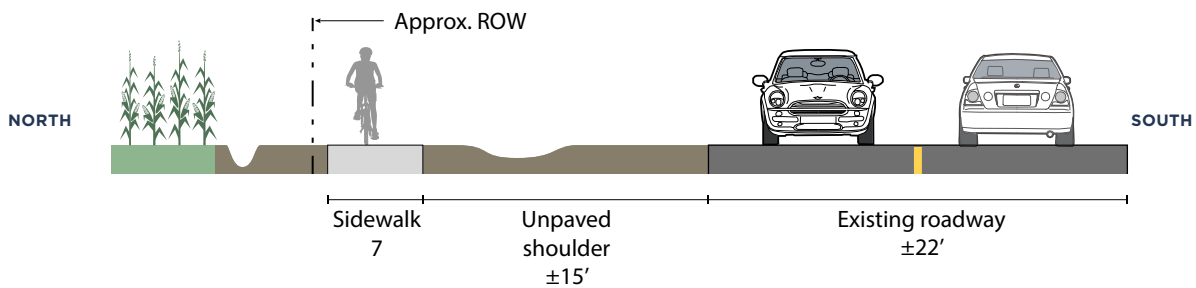
| EVALUATION CRITERIA          | ALT A   | ALT B   | ALT C   |  |
|------------------------------|---|---|---|--|
| Directness of route          |  |  |  |  |
| Impacts on adjacent property |  |  |  |  |
| User safety                  |  |  |  |  |
| Crossing Foothill Ditch      |  |  |  |  |
| Utility impacts              |  |  |  |  |
| Constructability & Cost      |  |  |  |  |
| Overall user experience      |  |  |  |  |
| Environmental impacts        |  |  |  |  |

 FAVORABLE  
  
 UNFAVORABLE

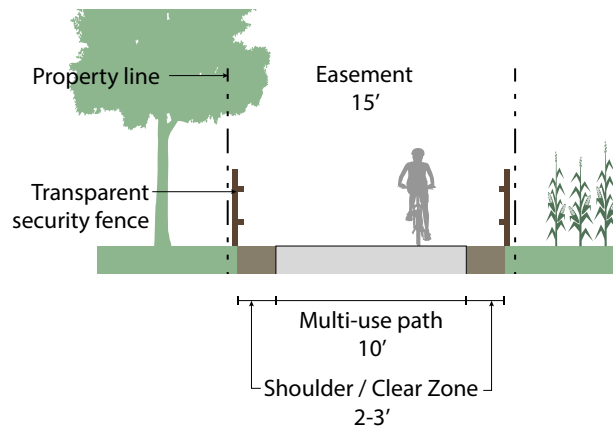
# Preferred Alternative

Alternative A was selected as the preferred alternative. For cost estimating purposes, the preferred concept includes a 7-foot sidewalk along the north side of Floating Feather, a 10-foot pathway on the west border of the Cemetery property (within a 15-foot easement), and a 8-foot pathway (within a 12-foot easement) between Welton Estates and Langtree Bungalows residential developments north of Foothill Ditch.

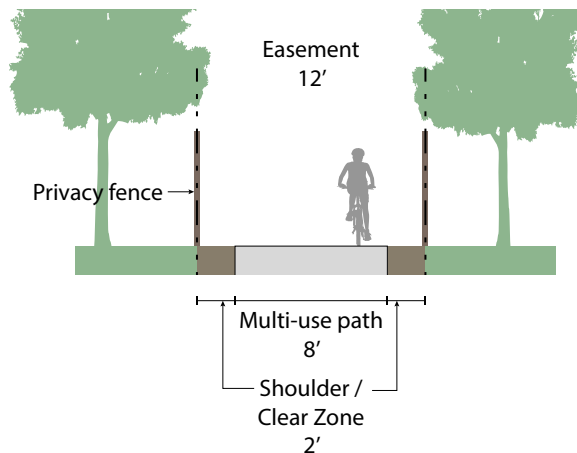
**Figure 1.** Floating Feather Road, looking east



**Figure 2.** Pathway typical cross section (unconstrained) along Cemetery property



**Figure 3.** Pathway typical cross section (constrained) between residential developments



**5**  
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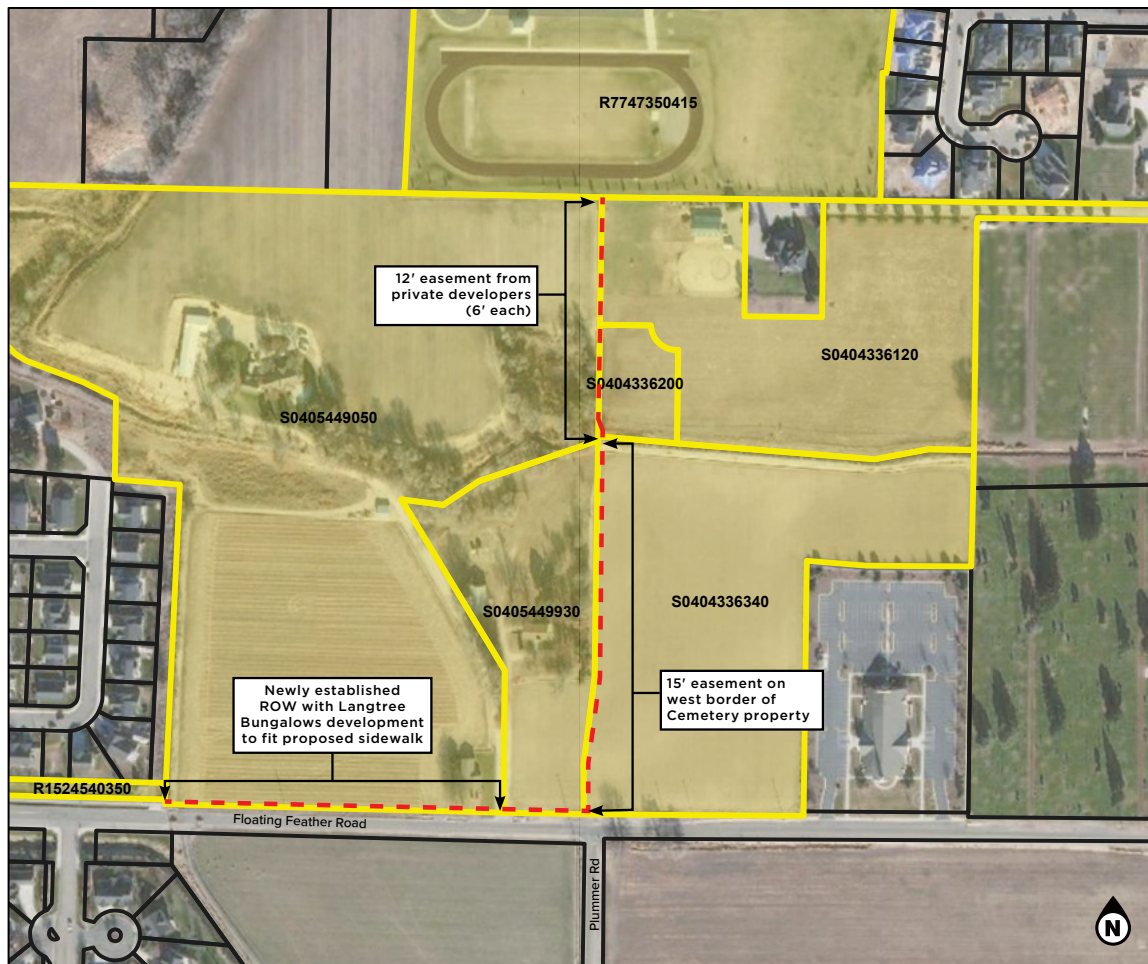
# **Right of Way / Easements**



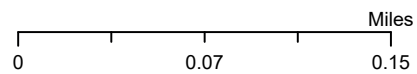


# Right of Way / Easements

In reviewing the ADA County Assessor parcel data, as well as plats for ongoing developments, seven properties are impacted by or adjacent to the proposed project. Easement agreements have already been reached with adjacent developments (S0405449050, S0404336200, S0404336120) and Star Cemetery (S0404336340) has been an involved stakeholder throughout the process and has verbally agreed to provide easements for the project.



**PROPERTY OWNERSHIP**  
Star Safe Route to School



| Parcel Number | Owner                           | Length (FT) |
|---------------|---------------------------------|-------------|
| R1524540350   | COLT PLACE SUB #1 HOA INC       | 1,994       |
| R7747350415   | WEST ADA SCHOOL DISTRICT        | 5,959       |
| S0404336120   | GREEN VILLAGE 2 DEVELOPMENT INC | 4,065       |
| S0404336200   | WALSH GROUP LLC                 | 798         |
| S0404336340   | STAR CEMETERY DISTRICT          | 3,214       |
| S0405449050   | LANGTREE BUNGALOWS LLC          | 5,362       |
| S0405449930   | FLOATING FEATHER T & ME LLC     | 2,144       |

**6**  
**—**

# **Environmental Scan**



# Environmental Scan Executive Summary

The following is an executive summary of the environmental scan conducted for the project area. A full report of the environmental scan process and findings can be found in Appendix C

## Executive Summary

Water, Civil, and Environmental Incorporated (WCE Inc.) on behalf of Alta Planning + Design Incorporated conducted an Environmental Scan for a proposed Safe Routes to School pathway along Floating Feather Road to Star Middle School. The scope of the environmental scan included evaluating cultural, biological, and social resources within the proposed project area to identify potential environmental issues that may require additional analysis or work as the project moves beyond the conceptual stage. The proposed pathway begins at the end of the existing sidewalk along Floating Feather Road at the southwest corner of Ada County parcel number S0405449050. It then extends east along Floating Feather Road for approximately 900 feet before heading north at the intersection of Floating Feather Road and North Plummer Road toward Star Middle School. The location of the proposed pathway is shown in Figure 1 in Appendix C.

The project area overlaps eight parcels of land as defined by the Ada County Assessor. WCE Inc.'s desktop review revealed no tribal, state, or federal ownership or interest in the project area. The location of the proposed project does not violate the Farmlands Protection Policy Act or Federal Aviation Administration requirements.

The National Register of Historic Places (NRHP) database was reviewed for Star, Idaho. Generally, structures may become eligible for listing in the NRHP when they are 50 years old. No current NRHP sites were listed within or adjacent to the project area. Only one structure was identified adjacent to the project area that may reach NRHP-eligible age before project operations are complete. However, while the structure may reach an NRHP-eligible age during project operations, it is not anticipated that this structure would be negatively affected by project operations. Section 4(f) considerations are unlikely to affect this project, and no 6(f) properties are within the project area, so project approval from the National Park Service is not necessary.

According to the U.S. Fish and Wildlife Service (USFWS) and Idaho State Fish and Game, one federally listed threatened species, one candidate species, and 24 state sensitive species or Species of Greatest Conservation Need may occur within the project area. Due to the small size of the project within an area that is or will soon be developed, the impact would likely be negligible. Nine migratory bird species may also occur in the project area. Per the USFWS migratory bird national standard, trimming or removal of vegetation and grading of vegetated areas should be scheduled outside the peak bird breeding season to the maximum extent practicable to protect potential migratory bird habitat.

All water bodies or surface water features within a mile of the project area were evaluated. Two natural streams are within one mile of the project area: the Big Gulch and Little Gulch Creeks, though their

distance from the project area precludes them from being affected by project operations. There are several manmade water bodies in the neighboring Legacy, Lake Point, and Lakes at Pristine Meadows subdivisions, but these features are all more than 800 feet from the proposed walking path. The Foothills Ditch, McHenry Lateral, Flake Lateral, and Middleton Canal are all irrigation features within a mile of the project area. Only the Foothills Ditch and associated irrigation drain directly intercept a portion of the proposed pathway. Coordination with Middleton Irrigation Association Incorporated/Middleton Mill Ditch Company will be necessary to develop a plan to resolve safety concerns and mitigate any potential effects on the irrigation feature. Coordination with the local floodplain administrator may also be necessary to ensure the project does not cause an increase in floodwaters. However, because project construction is not expected to substantially alter the floodplain topography, it is unlikely that any substantive actions will be necessary.

There are no air quality nonattainment areas in the State of Idaho. Northern Ada County has been designated as a maintenance area and an Area of Concern. Projects that occur in maintenance areas or Areas of Concern are typically subject to air quality conformity, but this project is exempt per Title 40 of the Code of Federal Regulations (CFR) Part 93.126 because the project involves bicycle and pedestrian facilities. There were no local air quality ordinances identified within the City of Star's municipal code that would require special construction provisions.

An environmental justice and neighborhood services review was completed to evaluate the likelihood of the project disproportionately impacting minority, low-income, or disadvantaged populations or impeding access to community or social services. Based on the data obtained from the U.S. Census Bureau included in Table 7, it is unlikely that this project will disproportionately affect minority or disadvantaged populations. Furthermore, because the objective of the project is to create accessible, safe walking/biking routes for community-wide use, the project outcome will only enhance the accessibility and cohesion of neighborhoods, businesses, and community services in Star.

No hazardous materials sites were located in the proposed project area. Three sites within a one-mile radius of the target property were listed on the regulatory databases searched by Environmental Record Search (ERS). Two of these sites are not considered to be environmental concerns to the project. The third site, a Nitrate Priority Area, is upgradient from the project area and may be an environmental concern. Eighteen additional sites were identified during searches of the Idaho Department of Environmental Quality's (IDEQ) Facility Mapper and the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) databases. The site in the IDEQ database, listed as "Carol Dixon Residence," contained elevated levels of toxaphene in the soil above the EPA Regional Screening Level. After 1,760 pounds of impacted soil were removed, IDEQ determined that no further action was needed at the site and marked the case as closed. This site does not pose an environmental concern to the target property. None of the 17 sites listed in the EPA ECHO database pose an environmental concern to the target property.

**WCE Inc. did not identify any cultural, social, or environmental concerns that would impede future project operations.**

# 7

# Public Involvement Plan

# Public Involvement Plan

The proposed project received public support in the Star Bicycle and Pedestrian Plan conducted in 2018, but since then, no formal public input has been received regarding the project and community preferences. Mayor Trevor Chadwick has stated that numerous requests for the project and accounts of public support have been expressed in his conversations with Star Middle School parents and surrounding community members.

## Future Public & Stakeholder Engagement

During subsequent phases of design and implementation, the City should seek to get formal input from the general public and stakeholders. Community members that live in nearby neighborhoods and/or have students attending Star Middle School should be prioritized. In addition to general public outreach, the following stakeholders should be engaged throughout the entire process, including post construction evaluation and maintenance:

- ▶ Star Cemetery
- ▶ Middleton Mill Irrigation Company (Foothill Ditch)
- ▶ Star Middle School administration
- ▶ Ada County Highway District
- ▶ Adjacent home owners associations (HOAs)

Input from stakeholders and the general public regarding the final design of the facility should be solicited throughout the process.

# 8

# Cost Estimates & Funding Sources

# Cost Estimates

A cost estimate based on preliminary design was developed for the preferred alternative (Alternative A), reflecting estimated construction costs. Assumptions and calculations for cost estimates can be found in Appendix D. These cost estimates do not include costs associated with design and engineering (typically 8-10%) or environmental permitting, but may need to be factored depending on selected funding sources. See Figure 5 for a breakdown of costs associated with the sidewalk connection on Floating Feather only, which may be constructed as part of the Langtree Bungalows development or future ACHD improvements.

**Figure 4.** Cost estimate for overall project, including sidewalk and pathway

| Item Description  | Unit | Quantity | Unit Price (IDT) | Cost             |
|---|------|----------|------------------|------------------|
| Excavation (Sidewalk and Multiuse Pathway, including ramps) | CY   | 774      | \$35             | \$27,090         |
| Base for Sidewalk Areas (including ramps)                   | CY   | 51       | \$40             | \$2,040          |
| Base for Multiuse Pathway                                   | CY   | 141      | \$40             | \$5,640          |
| Install 7'-Concrete Sidewalk - W Floating Feather Rd        | SY   | 653      | \$86             | \$56,360         |
| Install 10'-Concrete Multiuse Pathway                       | SY   | 1,689    | \$77             | \$130,104        |
| Curb and Gutter Type 1                                      | LF   | 60       | \$40             | \$2,376          |
| 6'-Wrought Iron Fence                                       | LF   | 1,850    | \$46             | \$84,823         |
| 72" Pipe Culvert  | LF   | 150      | \$293            | \$43,950         |
| Concrete for Headwalls                                      | CY   | 8        | \$1,008          | \$8,269          |
| Steel for Headwalls   | LB   | 870      | \$11             | \$9,309          |
| Backfill  | CY   | 773      | \$35             | \$27,024         |
| Curb Ramps on W Floating Feather Rd                         | SY   | 47       | \$125            | \$5,875          |
| <b>SUB-TOTAL</b>  |      |          |                  | <b>\$402,860</b> |
| Basic Work Zone traffic Control (2%)                        | LS   | 1        |                  | \$8,057          |
| Mobilization (4%)   | LS   | 1        |                  | \$16,114         |
| Erosion and Sediment Control (0.5%)                         | LS   | 1        |                  | \$2,014          |
| Construction Contingency (30%)                              | LS   | 1        |                  | \$120,858        |
| Construction Inspection Contingency (15%)                   | LS   | 1        |                  | \$60,429         |
| <b>SUB-TOTAL</b>  |      |          |                  | <b>\$207,473</b> |
| <b>GRAND TOTAL COST</b>                                     |      |          |                  | <b>\$610,332</b> |
| <b>SAY</b>  |      |          |                  | <b>\$611,000</b> |

Assumptions:

Clearing & grubbing, harmonization, any incidental drainage improvement, as well as any work related to the irrigation channel relocation to be part of the 30% contingency



**Figure 5.** Cost estimate for Floating Feather sidewalk (only)

| Item Description                                     | Unit | Quantity | Unit Price (2022 \$) | Cost            |
|--|------|----------|----------------------|-----------------|
| Excavation (Sidewalk)                                | CY   | 102      | \$35                 | \$3,570         |
| Base for Sidewalk Areas                              | CY   | 39       | \$40                 | \$1,560         |
| Install 7'-Concrete Sidewalk - W Floating Feather Rd | SY   | 560      | \$86                 | \$48,334        |
| <b>SUB-TOTAL</b>                                     |      |          |                      | <b>\$53,464</b> |
| Basic Work Zone traffic Control (2%)                 | LS   | 1        |                      | \$1,069         |
| Mobilization (4%)                                    | LS   | 1        |                      | \$2,139         |
| Erosion and Sediment Control (0.5%)                  | LS   | 1        |                      | \$267           |
| Construction Contingency (30%)                       | LS   | 1        |                      | \$16,039        |
| Construction Inspection Contingency (15%)            | LS   | 1        |                      | \$8,020         |
| <b>SUB-TOTAL</b>                                     |      |          |                      | <b>\$27,534</b> |
| <b>GRAND TOTAL COST</b>                              |      |          |                      | <b>\$80,997</b> |
| <b>SAY</b>   |      |          |                      | <b>\$81,000</b> |

Assumptions:

Harmonization and any incidental drainage work to be part of the 30% contingency

# Potential Funding Sources

The following funding sources may be explored to fund the construction of this project:

## FEDERAL FUNDING

- ▶ Surface Transportation Block Grant
- ▶ Highway Safety Improvement Program
- ▶ Recreation Trails Program
- ▶ Community Development Block Grants
- ▶ Safe Streets for All (SS4A) Grant Program
- ▶ Carbon Reduction Program
- ▶ Local Highway Safety Improvement Program
- ▶ Transportation Alternatives Program

## STATE FUNDING

- ▶ Children Pedestrian Safety Program

## LOCAL/OTHER FUNDING

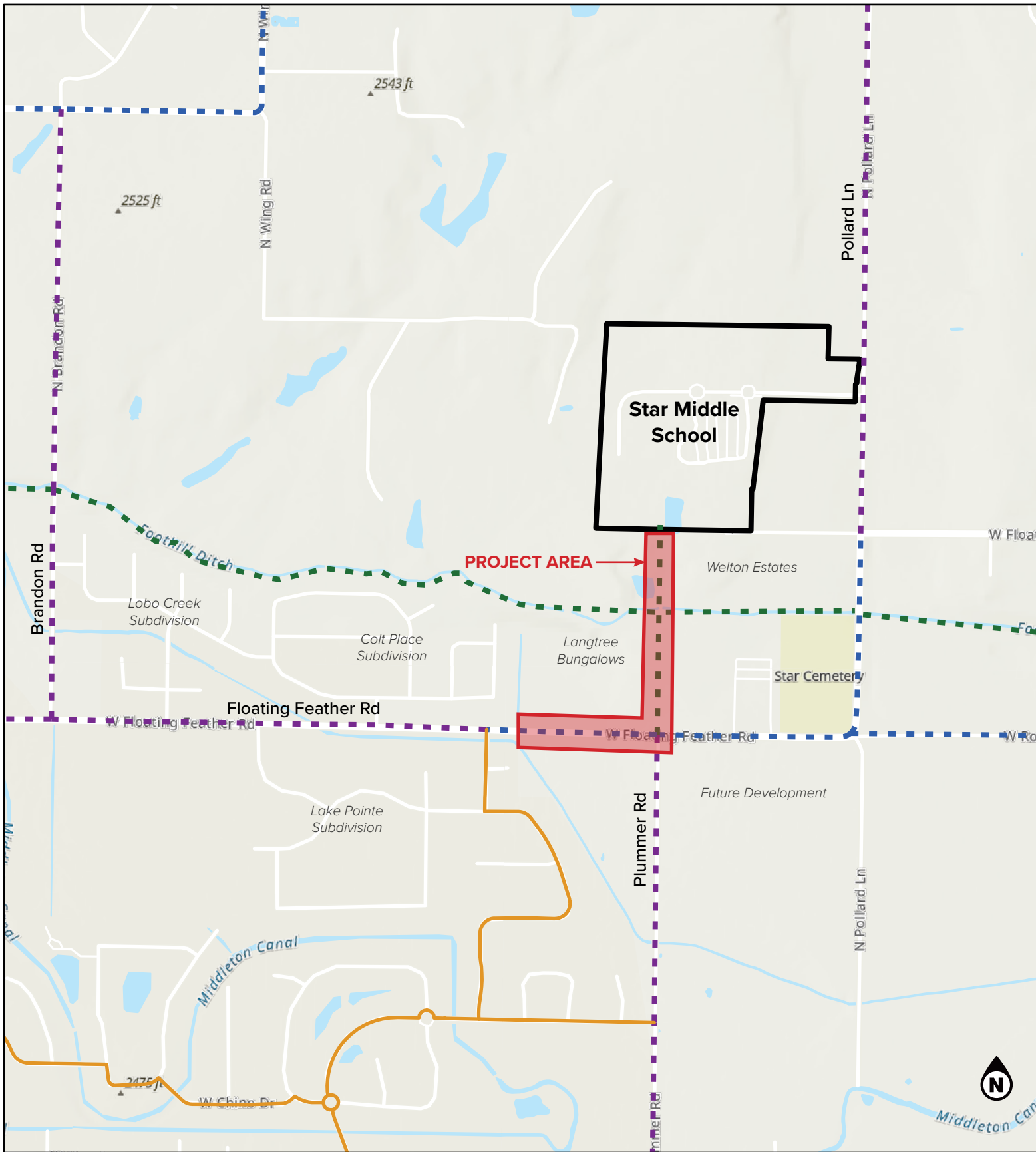
- ▶ City of Star
- ▶ Ada County Highway District
- ▶ Private development partnerships



# Appendices

**A**  
**—**

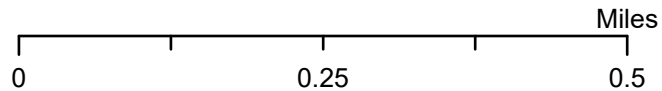
# **Regional Connections**



**REGIONAL CONNECTIONS**  
Star Safe Route to School

**Bicycle Facilities**

- | Existing | Planned |                                      |
|----------|---------|--------------------------------------|
|          |         | Bikeway / bike route                 |
|          |         | Bike lane, including buffered        |
|          |         | Enhanced bike lane or multi-use path |
|          |         | Pathways (non-ACHD)                  |



Data Source: 2018 ACHD Roadways to Bikeways

**B**  
**—**

# **Constraint Photos**

# Appendix B: Constraint Photos

*Floating Feather Rd, looking east: existing sidewalk ends*



*Floating Feather Rd, looking west: irrigation channel and utility poles; to continue existing sidewalk alignment, 4-6' of ROW acquisition likely*



*Floating Feather Rd, looking east: irrigation channel; private fence relocation; ROW acquisition*



*Looking south to Plummer Rd: need for pedestrian crossing at Plummer Rd and Floating Feather Rd*





*Alternative A, looking north from Plummer Rd: adjacent farming operations*



*Alternative A, looking north: adjacent irrigation channel*



*Alternative A, looking south: need to cross irrigation channel*



*Foothill Ditch, looking west toward Alternative A ditch crossing: culvert extension and security fencing needed*



*North of Foothill Ditch and east of Alternative A alignment: dead end system vaults, newly constructed for private development*



*Alternative A at Foothill Ditch, looking west: steep embankment and culvert outlet*



*Alternative A, looking north to Star Middle School: chain link fence and landscape berm*





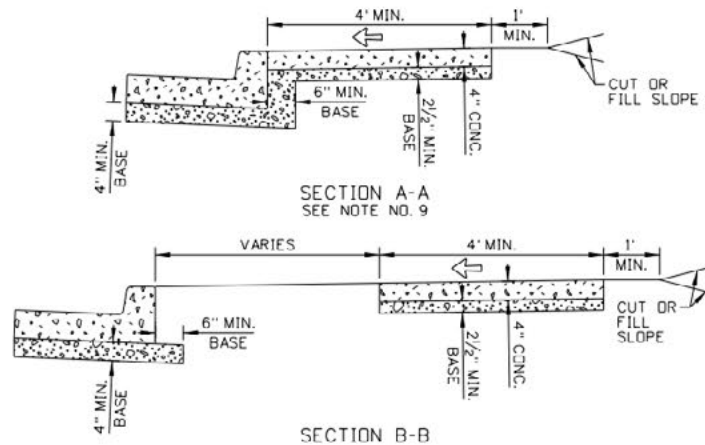
# Environmental Scan

**D**  
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# **Cost Estimate Assumptions**

## Star Pathway Concept Cost Estimate:

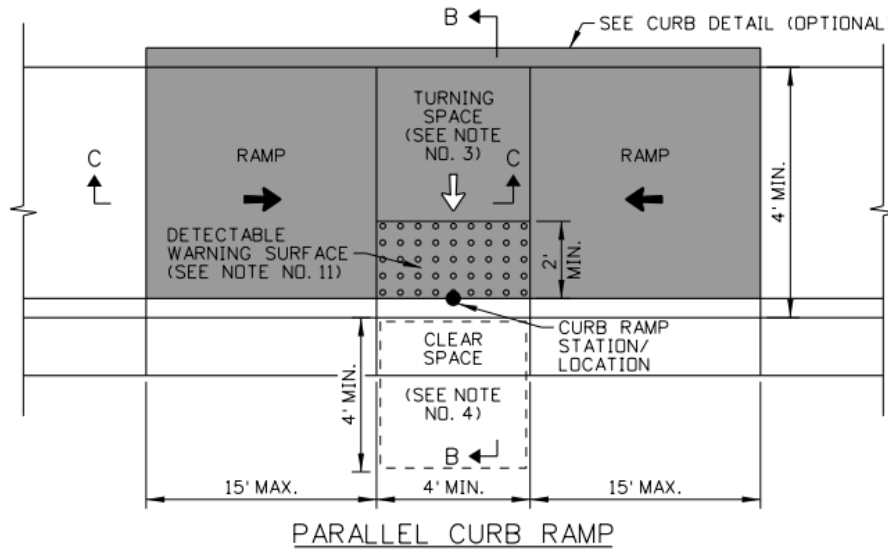
- The 7'-concrete sidewalk's area on W Floating Feather Road will be  $A = \frac{720 \times 7}{9} = 560 \text{ SY}$ , which will be constructed by a developer. The rest of the run,  $V = \frac{180 \times 7}{9} = 140 \text{ SY}$  will be part of the pathway construction—it includes ramp areas, which need to be deducted (refer to item j below). IDT's average unit price for pay item 614-015A was used (\$86.31/SY).
- The 10'-concrete pathway for the connection W Floating Feather Road and Star Middle School  $A = \frac{1,520 \times 10}{9} = 1,688.9 \text{ SY} \approx 1,689 \text{ SY}$ . IDT's average unit price for pay item S637-20A was used (\$77.03/SY). This includes 200' of pathways inside Star Middle School.
- Refer to Idaho Standard Specifications §614 – *SIDEWALKS, DRIVEWAYS, AND CURB RAMPS*, and Standard Details for any construction information



- Based on item c, a min of 6" need to be excavated for sidewalk/pathway construction. Standard detail requires a flat area of at least 1" beyond sidewalk/pathway area. Typically, for pathways, the base is extended at least 6" beyond the pathway footprint. Hence, the volume of material to be excavated by a developer will be  $V = \frac{720 \times 7 \times \frac{6.5}{12}}{27} = 101.1 \text{ CY} \approx 102 \text{ CY}$ ; and  $V = \frac{((180 \times 7) + (1,520 \times (10 + 2))) \times \frac{6.5}{12}}{27} = 391.2 \text{ CY} \approx 392 \text{ CY}$  as part of the pathway project, which includes 200' of pathways inside Star Middle School. IDT's unit price for pay tem 205-005A for project "Latah County Paving, Latah County" (#8218; let on 05/23/2017) was used (\$35/SY)
- For the base required at sidewalk areas, the volume required to be placed by a developer will be  $V = \frac{720 \times 7 \times \frac{2.5}{12}}{27} = 38.9 \text{ CY} \approx 39 \text{ CY}$ ; and  $V = \frac{180 \times 7 \times \frac{2.5}{12}}{27} = 9.7 \text{ CY} \approx 10 \text{ CY}$ . IDT's unit price for pay tem 301-010A for project

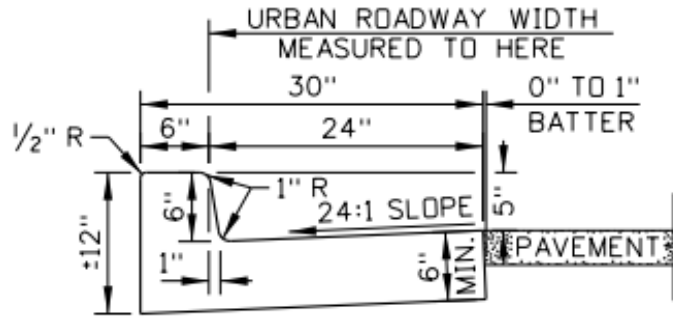
“SH-55, PAYETTE RV BR, HORSESHOE BEND” (#8523; let on 06/25/2019) was used (\$40/CY)

6. For the base required at the multiuse pathway, the volume required will be  $V = \frac{1,520 \times (10+2) \times \frac{2.5}{12}}{27} = 140.7 \text{ CY} \approx 141 \text{ CY}$ . This includes a connection inside Star Middle School’s property (200’). IDT’s does not have an average unit price for pay tem S637-11A; then for estimating purposes, IDT’s unit price for pay tem 301-010A for project “SH-55, PAYETTE RV BR, HORSESHOE BEND” (#8523; let on 06/25/2019) was used (\$40/CY) instead
7. Based on conversation with the City of Star, MOT is to be kept at 2% of the total cost.
8. Based on conversation with the City of Star, no design or survey cost should be included in the estimate
9. Regarding the two curb ramps, refer to the standard details below



10. Based on item g, curb ramp areas will be  $A = 2 \times \frac{7 \times 30}{9} = 46.7 \text{ CY} \approx 47 \text{ CY}$ . IDT’s average unit price for pay tem 614.025A was used (\$125/CY). Per Idaho Standard Specifications §614 – SIDEWALKS, DRIVEWAYS, AND CURB RAMPS, detectable warning surfaces are incidental and the cost included in the contract unit price
11. For curb and gutter details, refer to the drawing below





### CURB AND GUTTER TYPE 1

12. Based on items c and j, a min of 10" need to be excavated for curb and gutter type 1 construction. Hence, the volume will be  $V = 2 \times \frac{30 \times \frac{10}{12} \times \frac{30}{12}}{27} = 4.6 \text{ CY} \approx 5 \text{ CY}$ . IDT's unit price for pay tem 205-005A for project "Latah County Paving, Latah County" (#8218; let on 05/23/2017) was used (\$35/SY)
13. Based on item g and j, the length of curb and gutter will be  $L = 2 \times 30 = 60 \text{ LF}$ . IDT's average unit price for pay tem 615-491A was used (\$39.60/CY).
14. Based on items c and j, the volume of base material needed is  $V = \frac{\frac{30}{12} \times \frac{4}{12} \times 60}{27} = 1.85 \text{ CY} \approx 2 \text{ CY}$ . IDT's unit price for pay tem 301-010A for project "SH-55, PAYETTE RV BR, HORSESHOE BEND" (#8523; let on 06/25/2019) was used (\$40/CY)
15. Approximately 1,850' of a 6'-tall wrought iron fence need to be installed along the certain sections of the pathway. IDT doesn't have an unit price for this item; hence, for estimating purposes, ID's unit price for pay item 610-035A was used as a reference.
16. 150' of 72" pipe culvert will be installed. IDT's average unit price for pay item 602-125A was used (\$293/LF).
17. For backfill calculations by culvert areas, and based on conversations with the city of Star:
- a. For 50' along the west pathway, a slope of 1:4 is required for about 25' perpendicular to the pathway. After those 25', approximately another 25' are needed at a 1:3 slope to eliminate the height difference between the future pathway elevation and the bottom of the canal/creek. So, to calculate roughly what might be needed, we anticipate a volume of  $V = \frac{(\frac{15+8.75}{2} \times 25 \times 50) + (\frac{8.75 \times 25}{2} \times 50)}{27} = 752.3 \text{ CY} \approx 753 \text{ CY}$ . To this quantity, the pipe volume,  $V = \frac{\pi \times 3^2 \times 50}{27} = 52.4 \text{ CY} \approx 53 \text{ CY}$ , needs to be deducted.
  - b. For 8' along the east side pathway, the area is flat; and there is a height difference of about 6'. Hence, the volume needed to fill this section will be

$$V = \frac{100 \times 8 \times 6}{27} = 177.8 \text{ CY} \approx 178 \text{ CY. To this quantity, the pipe volume,}$$
$$V = \frac{\pi \times 3^2 \times 100}{27} = 104.7 \approx 105 \text{ CY}, \text{ needs to be deducted.}$$

- c. IDT's average unit price for pay item 210-015A was used (\$34.96/CY).
18. Headwalls are meant to be installed at the end of the pipe runs on both sides of the pathway. Per standar details, for a 72" culvert, 8.2 CY of concrete and 870 lbs of reinforcement steel will be needed for 2 headwalls. IDT's average unit prices for pay item 502-310A and 514-315A were used (\$1,008.4/CY and \$10.7/LB).
19. Roughly 275 CY of material was assumed to be excavated at the pathway connection by Star Middle School to get rid of berm currently existing where the proposed pathway meets the school property. IDT's unit price for pay tem 205-005A for project "Latah County Paving, Latah County" (#8218; let on 05/23/2017) was used (\$35/SY)