Midpeninsula Regional
Open Space District

PROCUREMENT AGENDA ITEM

R-25-19
Meeting 25-04
February 12, 2025

AGENDA ITEM 3

AGENDA ITEM

Contract Amendment for Questa Engineering Corporation for Additional Services for a Vehicle Bridge Crossing and Slide Repair Project in La Honda Creek Open Space Preserve

GENERAL MANAGER'S RECOMMENDATIONS

1. Authorize the General Manager to execute a contract amendment with Questa Engineering Corporation for additional design and surveying to support the selection and delivery of a prefabricated steel bridge in the amount of $25,575, bringing the contract base amount to a not-to-exceed total of $175,575.

2. Authorize an additional contingency of $2,558 to be reserved for unanticipated issues, bringing the total contingency to $17,558 and the total not-to-exceed contract amount to $193,133.

DISCUSSION

The Midpeninsula Regional Open Space District (District) is completing engineering and design documents for the Paulin (Vehicle Bridge) Crossing and Slide Repair Project (Project) in La Honda Creek Open Space Preserve. The Paulin Crossing spans the upper reaches of La Honda Creek within the preserve. The proposed contract amendment would allow the District to procure the structural engineering and design plans for a prefabricated steel bridge and to provide additional surveying of the driveway to support delivery of the bridge to the project site. During the design process, Questa Engineering Corporation (Questa), the engineering firm hired for the project through a request for proposals process, performed an alternatives analysis to examine the types of structures for the La Honda Creek vehicle bridge. Questa and the District determined that a prefabricated steel bridge is most appropriate for the project site (See Attachment 3 for the alternatives analysis memo). The engineering and design for prefabricated bridges is normally completed by the bridge manufacturer and typically included in the procurement price of the bridge. To have the completed engineering and design available for permitting without having to purchase the bridge up front, Questa is hiring Excel Bridge as a subconsultant to provide the engineering and design now. These actions will allow the District to secure the necessary permits to be ready for construction once a separate construction contract is awarded. The District will include the purchase of the prefabricated bridge as part of the upcoming construction contract.

BUDGET / FISCAL IMPACT

The current fiscal year budget contains:

☐ sufficient funds.

☒ insufficient funds; the next quarterly budget update will include a reallocation of unspent funds from other project budgets to cover for this expenditure.

☐ insufficient funds; approval of this item requires a fiscal year budget augmentation.

☒ future fiscal year budgets will include additional funds to complete the contracted work.

Measure AA

☐ No, this contract is not part of a Measure AA project.

☒ Yes, this contract is part of a Measure AA project.

The following tables outline the Measure AA Portfolio # 05: La Honda Creek—Upper Area Recreation, Habitat Restoration and Conservation Grazing Projects allocation, costs-to-date, anticipated future project costs and the projected remaining balance.

MAA05 Portfolio Allocation:	**$11,733,000**
Grant Income (through FY28):	$1,000,000
Total Portfolio Allocation:	**$12,733,000**
Life-to-Date Spent (as of 12/31/2024):	(5,729,621)
FY25 Encumbrances:	(134,992)
Remaining FY25 Budget:	(207,978)
Future MAA05 Costs (FY26-FY28):	($5,759,585)
Total Portfolio Expenditures:	**(11,832,176)**
Portfolio Balance Remaining (Projected):	**$900,824**

MAA05 Portfolio Allocation:	**$11,733,000**
Grant Income (through FY28):	$1,000,000
Total Portfolio Allocation:	**$12,733,000**
Projected Project Expenditures (life of project):	
05-001 La Honda Creek Land Conservation Opportunities	($1,756,093)
05-002 Upper La Honda Creek Grazing Infrastructure	($297,432)
05-004 La Honda Creek Sears Ranch Interim Parking	$0
05-005 La Honda Creek Red Barn Parking Area and Easy Access Trail	($327,513)
05-006 La Honda Creek Sears Ranch Road Repair	$0
05-007 La Honda Creek Phase 2 Trail Connection	($1,471,703)
05-008 La Honda Creek White Barn Structural Rehabilitation	($705,117)
05-009 La Honda Creek Redwood Cabin Removal and Site Restoration	($488,846)

05-010 Restoration Forestry Demonstration Project	($1,015,939)
05-011 Lone Madrone Ranch Fence Installation	($287,349)
05-012 Paulin Culvert/Bridge Improvements	($728,892)
05-013 La Honda Parking and Trailhead Access – Implementation	($3,612,356)
05-014 Lone Madrone Corrals	($114,578)
05-015 Upper La Honda Creek Land Conservation (Eberhard)	($1,026,358)
Total Portfolio Expenditures:	**($11,832,176)**
Portfolio Balance Remaining (Projected):	**$900,824**

PRIOR BOARD ACTION SUPPORTING THE PROJECT

- **October 25, 2023**: Award of Contract with Questa Engineering Corporation for Engineering and Design Services for the Paulin Crossing and Slide Repair Project in La Honda Creek Open Space Preserve. (R-23-124, Meeting Minutes)

- **August 22, 2012**: The Board certified the Mitigated Negative Declaration and approved the La Honda Creek Master Plan. (R-12-83, Meeting Minutes)

PUBLIC NOTICE

Public notice was provided as required by the Brown Act.

CEQA COMPLIANCE

An amendment to a contract is not a project subject to the California Environmental Quality Act (CEQA). Additionally, potential environmental impacts of the Project were analyzed in the Initial Study/Mitigated Negative Declaration for the La Honda Creek Master Plan, adopted by the Board in August 2012, and will be reviewed and confirmed prior to the award of contract for construction of the project.

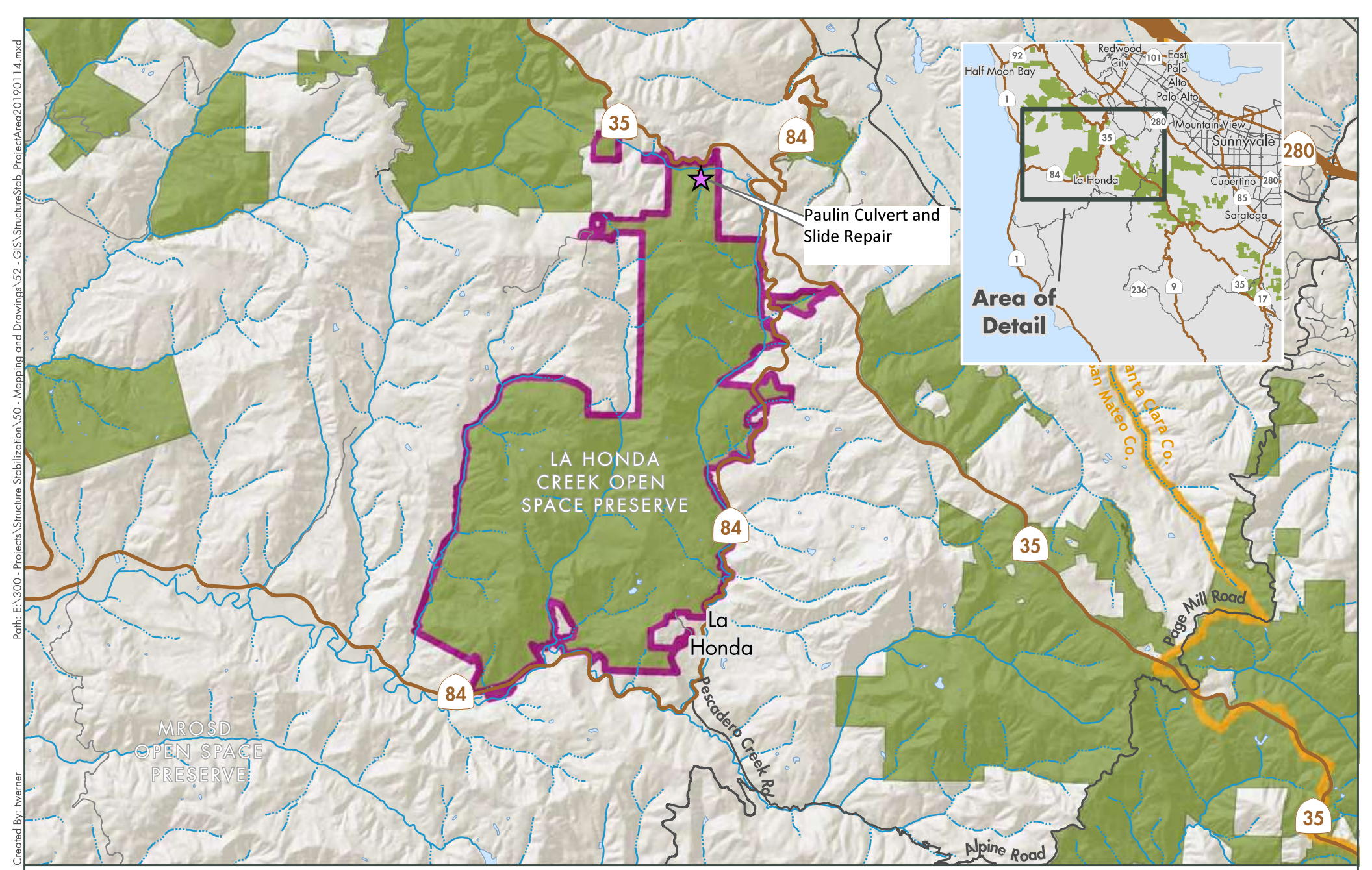
NEXT STEPS

Following Board approval, the General Manager would direct staff to amend the contract with Questa to include the additional approved amounts to complete the specified tasks.

Attachment(s)
1. Area Map
2. Site Map
3. Bridge Alternatives Analysis Memo.

Responsible Department Head:
Jason Lin, Engineering and Construction Department Manager

Prepared by/Contact person:
Leigh Guggemos, Capital Project Manager III, Engineering and Construction Department



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Created By: twerner

ATTACHMENT 1 - Area Map

MROSD Preserves

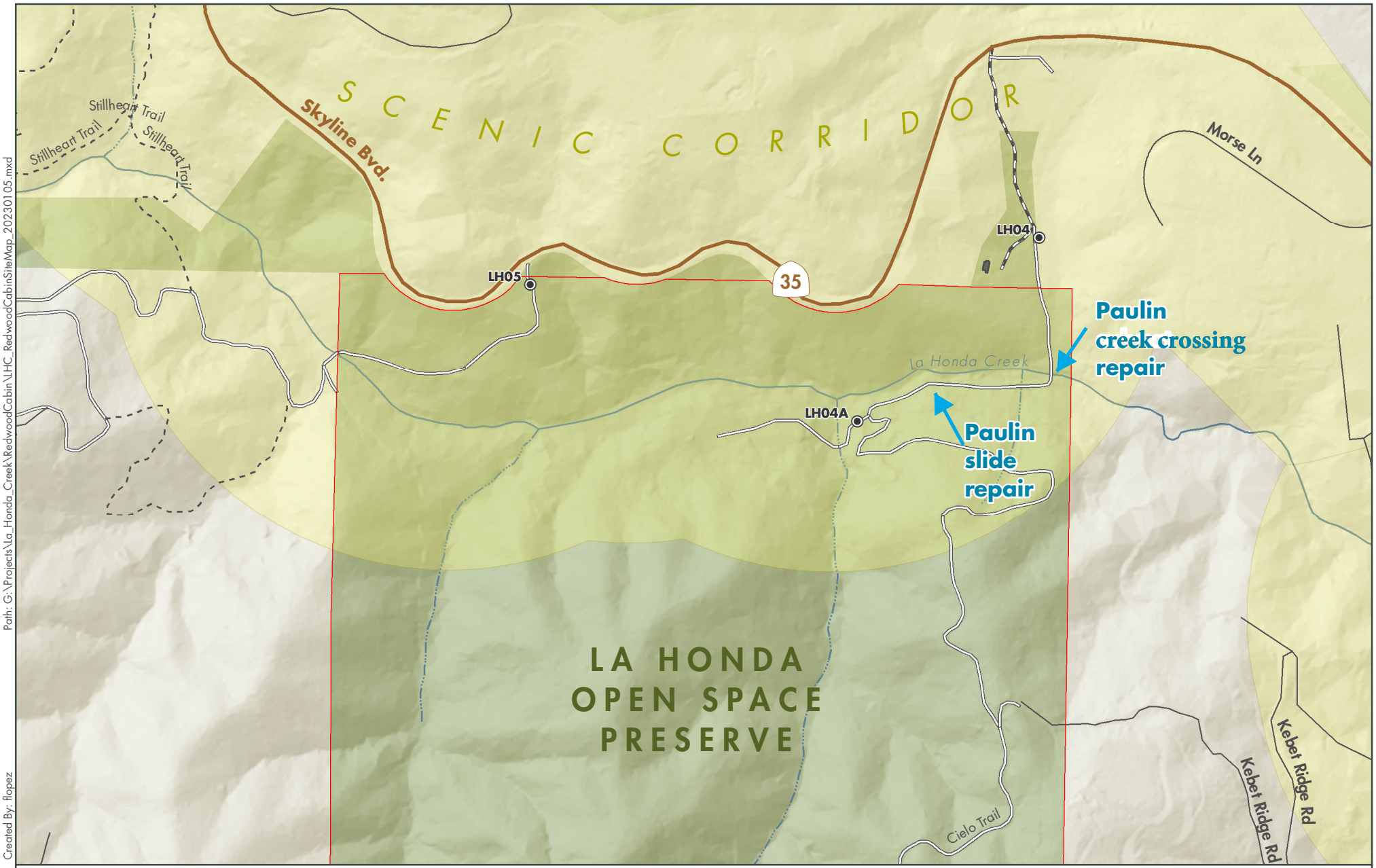
Paulin Crossing and Slide Repair

County Boundary

Midpeninsula Regional Open Space District *(MROSD)*
January 2019

Miles
0 1 2

While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.



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Created By: flopez

Attachment 2 - Site Map

- Midpen preserve
- Private property
- Building
- Gate
- Unpaved all-season road
- Unpaved seasonal road
- Parcel boundary
- Scenic corridor

Midpeninsula Regional
Open Space District
(Midpen)
10/13/2023

Feet
0 500 1,000

While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.

June 17, 2024

Leigh Guggemos, P.E.
Capital Project Manager III
Midpeninsula Regional Open Space District
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QUESTA ENGINEERING CORP.

Subject: Alternatives crossing types, Paulin crossing

This memorandum is intended to discuss the types of structures that were examined as possible alternatives for the Paulin crossing.

Three types of structures were examined:

Prefabricated truss bridge – This is premanufactured bridge that is typically made from weathered steel. There are several types of trusses, but the bridge is typically shipped to the site in pieces. The contractor then erects the pieces together then a cranes lifts and places the bridge on to the cast in place abutments.

Open bottom arch culvert – This typically comprises of prefabricated arch in aluminum, steel or concrete. Two linear foundations are constructed, the prefabricated arch is placed on the foundations and the structure is backfilled to establish the roadway. Steel or aluminum plates can be erected on site without a crane. Prefabricated concrete arch segments must be lifted into place by an excavator or small crane.

Cast- in-place stressed concrete bridge – This type of bridge is a common highway bridge where a series of falsework and forms are constructed within the area to be bridged. The form work and bridge are constructed in place. When the concrete cures the falsework and forms are removed, and a clear span bridge is left in place.

Evaluation criteria

- Cost – Cost evaluation incorporates the total cost of project installation, not just the crossing structure. Project objective is to provide a fiscally responsible crossing.
- Impacts – The crossing types were evaluated as to how their overall impact to the riparian corridor. Impacts to surrounding area are assumed to be similar for all crossing options, so evaluation is focused on Riparian corridor. Project objective is to improve riparian corridor connectivity.
- Fire resistance - In any wildlands structure fire resistance is an import feature. Structures types were evaluated for their ability to survive wildfire events.
- Constructability – Ease of construction and access considerations were evaluated. The project site has difficult access (steep single lane unpaved driveway) and low overhead utilities. Ease of construction of each crossing type was considered as it pertains to cost, channel impacts, and schedule duration for a project. Project objective is to provide a crossing solution that can be deployed quickly with minimal in-channel work.

- Maintenance/Lifespan – Long term Maintenance and lifespan considerations were evaluated. Project objective is to provide a low-maintenance, long-term crossing solution.

Analysis and Discussion

The table 1 below provides a general matrix of each of the alternatives and how they compare under the above evaluation criteria.

A prefabricated bridge solution scores highest when compared to the other alternatives. A bridge solution minimizes impacts to the riparian corridor and a prefabricated bridge provides a similar cost solution to the arched culvert alternative. Constructability and Maintenance/Lifespan considerations were similar for all 3 alternatives. The prefabricated bridge alternative did score lowest under the fire resiliency criteria, however, higher scores under the other criteria may occur.

Regarding the prefabrication bridge alternative, Questa Engineering met with Eddie Gray of Bigge Crane and Rigging on the site to determine the feasibility of using a crane to set a prefabricated bridge. The existing power lines are a constraint however by placing the crane at the northeast section of the site the power lines can be avoided and a crane should be able to place a bridge at the site. Additionally, if the District elects the pre-engineered alternative, the project team will need to procure bridge drawings and calculations from the bridge fabricator. The cost of these drawings and calculations are typically included in the purchase price of the bridge and are included in the cost estimates provided in Table 1. These costs, however, are not included in the existing design contract between Questa Engineers and the District.

Attachment 1: Alternative Comparison

	Value vs. Cost	Impact to riparian corridor	Fire Resistance	Constructability	Maintenance/Lifespan
Option 1 – Open Bottom Arch Culvert					
	Culverts typically have cost savings over bridge crossings; however, it is likely that some type of mitigation would be required for this project due to increased with within the channel. Any cost savings for the crossing are anticipated to be offset by increased mitigation costs.	This alternative would result in slightly more length of stream channel that would be impacted. The existing culverts span 20 linear feet of channel, and a new structure would span 24 feet.	Because of the underground nature of the structure an arched culvert would be relatively fire-resistant	This type of crossing would reduce the amount of off haul from the site. A typical excavator can lift and place the precast arch units reducing the need for a crane. Rebuilding the bed and culvert bottom maybe a bit tricky as they excavate to find the underlying bedrock.	Moderate maintenance due to requirement to periodically clear the inlet from debris. Good lifespan
Option 2 – Cast In Place Bridge					
	Most expensive option at around $400,000	Greater temporary construction impacts but reduces long term impacts and represents a net removal of fill within the channel.	A Concrete bridge will be fire resistant	Construction relatively straight forward. Channel grading and construction may need to occur before false work is erected for the bridge deck.	Low maintenance on concrete structure. Good life span
Option 3 – Prefabricated Bridge					
	Cost effective. Bridge will cost $250,000.	Least amount of impacts for all of the alternatives. Bridge construction is offsite and the abutments are out of the channel.	Least fire resistant of the alternatives analyzed, however, still offers good fire resistance due to steel and concrete construction.	Relatively easier will require a crane and its position is tricky. Construction sequence will need to be thought through for smooth implementation	Low to moderate maintenance requirements. Moderate lifespan due to corrosion

 Strongest alignment with criteria

 Stronger alignment with criteria

 Medium alignment with criteria

 Weaker alignment with criteria

 Weakest alignment with criteria