# City of John Day – John Day River Improvements, Innovation Gateway Project

**Site Analysis and Preliminary Design**

*September 23, 2022*

# Scope of Work

**Background:** This scope covers site analysis and development of preliminary restoration designs for the John Day River as part of the John Day Innovation Gateway Plan. This scope covers analysis, preliminary design, and associated coordination and planning for approximately 1 mile of the John Day River (Bridge Street to Patterson Bridge Rd). The general design intent for the river is included in the City of John Day – Innovation Gateway Area Plan (COJD 2019).

**Task 1: Site Investigations and Analysis**

- Kick-off site tour with City, key stakeholders, and other consultant team members as appropriate
- Identification of river-specific project goals and objectives in coordination with City, other consultant team members, and key stakeholders.
- Existing information review
- Topographic and bathymetric survey to identify key site features, support the development of a hydraulic model, and to inform the grading plan. Existing survey control points will be tied into.
- Additional monitoring of groundwater and surface water levels and temperature. This includes the existing stations in the lower river and south side floodplain but will also include periodic monitoring of water levels using the available wells in the north floodplain.
- Fluvial geomorphic assessment to include a characterization of historical conditions and trends in river, floodplain, and habitat conditions to inform design. This will include collection of information on river conditions (bedload composition, instream habitat, riparian vegetation) as well as integration of existing available studies and historical information. The existing and on-going surface and groundwater data will be integrated into this analysis.

  *Assumptions*:
  - The City will coordinate landowner permissions for site access
  - The City will assist with existing and new groundwater and surface water monitoring (e.g. periodic data downloading).

  *Deliverables*:
  - Memo with project goals and objectives
  - Site topographic survey data, including documentation of new survey control established or existing survey control utilized
  - Site survey, site monitoring, and geomorphic analysis methods and results will be included in the design report in Task 4.

**Task 2: Hydrology and Hydraulic Modeling**

- Evaluate hydrologic conditions using existing long-term gage data as well as site hydrology data being acquired from existing on-site surface and groundwater monitoring stations. Flow data for

modeling will include flood flows (annual up to 100-yr flow) and other seasonal flows to understand impacts of project actions on fish and recreational uses.

- Create an existing conditions two-dimensional hydraulic model for the site extending from upstream of Bridge Creek Road to downstream of the irrigation diversion.
- Run hydraulic model iterations for potential proposed conditions to develop and analyze site alternatives and to inform preliminary designs. Assume no more than 6 model iterations to understand impacts of the various actions being considered.
- Review existing FEMA maps and county FIS study for comparison with existing conditions model.

*Assumptions*:

- Modeling to satisfy FEMA requirements will occur at a later stage of design.

*Deliverables:*

- Methods and results to be included in the design report.

**Task 3: Alternatives Analysis and Concept Designs**

- Develop potential river enhancement actions based on the project objectives and the site survey, analysis, and hydraulic modeling. We assume we will investigate up to 4 different actions/alternatives, which may or may not be mutually exclusive.
- Create planview sketches of potential restoration actions. A brief narrative of the potential actions will be provided, along with planning level construction cost estimates.
- Evaluate potential actions according to how well they accomplish the suite of previously-identified objectives. It is anticipated that potential actions will consider habitat enhancement benefits, water quality benefits, recreational river use, flooding/erosion risk, public safety, and other social and economic factors most of which are outlined in the Innovation Gateway Plan.
- Identify the suite of preferred actions to take forward to preliminary design in collaboration with the City and key stakeholders/partners.
- Develop an alternatives analysis memo/report including descriptions of alternative actions, planview sketches of alternative actions, and evaluation of actions.

*Assumptions*:

- Final preferred suite of restoration actions may still contain some options that require further analysis in the final design phase.

*Deliverables:*

- Alternatives analysis report including: 1) brief narrative description of restoration actions, 2) planview sketches of potential actions, 3) planning level construction cost estimates, and 4) results of restoration action evaluation.

**Task 4: Preliminary Design**

- The preferred suite of actions will be brought forward to the Preliminary Design stage (approximately 30% design)
- The design package will include drawings, preliminary construction cost estimate, and a basis of design report. Preliminary notes regarding environmental site controls (water management, fish management, erosion control) will be included within the drawing set based on preliminary coordination with permitting agencies.

*Deliverables:*

- Preliminary design package including drawings, Engineer's Opinion of Probable Construction Cost, and a basis of design report. Drawing set is assumed to comprise approximately 30 sheets.

**Task 5: Project Management and Coordination**

- This task includes management of the design team and coordination with the City, stakeholders, and partners.
- Regular on-going coordination and communication with the City and other key partners (avg of 3 hrs/mo for 18 mos)
- Coordination with permitting agency staff (avg of 2 hr/mo for 10 mos). Permitting agency staff to involve in early coordination are expected to include Oregon DSL, NOAA, FEMA, ODFW, Army Corps, and Oregon DEQ. Also recommend early coordination with Warm Springs Tribe, irrigators, and the public.
- Participation at meetings (assumed 6) including attendance and prep of materials to present (these are in addition to the on-going coordination in the bullets above).
    - 3 web-based meetings with the City, stakeholders, and/or permit agency staff (3 hr meeting plus 2 hr prep = 5 hr/mtg)
    - 3 in-person (John Day area) meetings and/or site visits with the City, stakeholders, and/or permit agency staff (4 hr meeting plus 2 hr prep plus 8 hr travel = 14 hr/mtg – assume 2 staff at 2 of the 3 meetings)

*Assumptions:*

- City will coordinate meeting attendance and venues

*Deliverables:*

- Regular communications and reporting
- Participation and presentation of information at three web-meeting and 3 in-person meetings/site visits. Assist with production of meeting agendas and minutes in collaboration with the City.

**Schedule**

To be discussed with City of John Day based on other actions occurring as part of the Innovation Gateway Project, but expected to take from 18-24 months from notice to proceed. Milestones to be established in coordination with City at project initiation.

**Cost Estimate**

Assuming a time and materials, not-to-exceed contract.

| Task | Labor | Expenses |
|---|---|---|
| **Task 1: Site Investigation and Analysis** | $53,830 | $4,592 |
| **Task 2: Hydrology & Hydraulic Modeling** | $35,474 | |
| **Task 3: Alternatives Analysis and Conceptual Design** | $44,026 | |
| **Task 4: Preliminary Design** | $63,546 | |
| **Task 5: Meetings & Project Coordination** | $38,378 | $2,054 |
| **Subtotals** | **$235,254** | **$6,646** |
| **Total Estimate** | **$241,900** | |