

**AGREEMENT FOR CONSULTING ENGINEERING SERVICES  
(Yamhill County and OBEC Consulting Engineers)**

THIS AGREEMENT ("Agreement") is made effective the last date set forth adjacent to the signatures of the parties below between **Yamhill County**, a political subdivision of the State of Oregon, acting through its county engineer and Board of Commissioners (referred to as County in this Agreement) and **OBEC Consulting Engineers, Inc.** (Contractor), an Oregon corporation, for the consulting engineering services for which proposals responsive to County's RFP were opened May 16, 2017 (referred to in this Agreement as the "Project").

**STATEMENT OF PURPOSE AND IDENTIFICATION OF CONTRACT DOCUMENTS**

A. County has budgeted funds to perform the Project. County conducted a competitive selection process to select the best qualified Respondent to complete the Project. Contractor was the deemed the best qualified Respondent. This Agreement is made to specify the mutual obligations of County and Contractor for completion of the Project.

B. This Agreement includes by reference the following Contract Documents that are part of the Project:

- (A) Request for Proposals
- (B) Addenda (if any)
- (C) Responsive Proposal
- (D) This Agreement
- (E) Agreement Amendments (if any)
- (F) Insurance Certificates
- (G) Notice to Proceed
- (H) Change Orders (if any)
- (I) Project Acceptance
- (J) Work Plan
- (K) Fee Schedule

**AGREEMENT:** In consideration of the mutual covenants contained below, County and Contractor hereby agree as follows:

1. **Scope of work.** The Contractor will commence and complete the Project in strict accordance with the Contract Documents identified above and with the Scope of Work and Fee Schedule attached hereto as Exhibit A, which is incorporated herein by this reference. The Contractor acknowledges receipt of all Contract Documents in existence at the date it executed this Agreement.

2. **Agreement performed at Contractor's expense as Independent Contractor.** The Contractor will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the Project as described in the Contract Documents. The Contractor is an Independent Contractor under this Agreement.

B.O. 17-309

3. **Commencement and completion date.** The Contractor will commence the work required by the Contract Documents within 7 calendar days after the County's approval of this Agreement and will complete the same no later than March 15, 2018 unless the Contract Period is extended or otherwise modified by written notice or executed Change Order.

4. **Termination.** County may terminate this Agreement if the Contractor fails to comply with a material term of this Agreement. If this Agreement is terminated, the County will pay for all work accepted by the Project Supervisor prior to termination.

5. **RESERVED**

6. **Compensation.** The Contractor agrees to perform all of the Work described in the Contract Documents and comply with the terms therein as set forth in Contractor's responsive proposal; provided, however, that the maximum amount due Contractor for completion of the scope of work is \$175,120 unless the Contract Price is modified by executed Change Order. Payment shall be made by County either in a single payment following final acceptance of the project by the Supervisor, or at Contractor's option, in monthly progress payments for work accepted by the Project Supervisor subject to a 5% retainage.

7. **Incorporation of statutory provisions required for public contracts.** The Contractor certifies it shall comply with all applicable Public Contract Laws to including, but not limited to, ORS 279B.200 through 279B.240 and ORS 279C.500 through 279C.530. ORS 279B.200 through 279B.240 and ORS 279C.500 through 279C.530 are incorporated into this Agreement by reference.

8. **Workers' compensation.** The Contractor, its subcontractors, if any, and all employers working under this Agreement or contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

9. **Certification of compliance with tax laws.** The Contractor certifies, under penalty of perjury, that the Contractor's Company is not in violation of any Oregon tax laws. In addition, Contractor agrees that it has complied with the tax laws of the state of Oregon or a political subdivision of the state of Oregon, including ORS 305.620 and ORS Chapters 316, 317 and 318.

10. **Certification of reading and understanding of documents.** The Contractor certifies it has read and fully understands all Contract Documents including Solicitation Documents and terms and conditions. The Contractor understands and acknowledges that in signing this Agreement the Contractor waives all rights to plead any misunderstandings regarding the same.

11. **Status of the Project Supervisor.** William A. Gille, Yamhill County Engineer, is the Project Supervisor (the "Supervisor"). The Supervisor or his designee shall perform technical inspections of work and shall have authority to stop the work whenever such stoppage shall be necessary to insure proper execution of the contract. The Supervisor or his designee may reject all work and materials that do not conform to the contract and shall decide questions that arise in

the execution of the work. The Supervisor has authority to reject or accept the work.

12. **Prohibition of Discrimination.** In hiring employees for performance of work under this contract, no contractor, subcontractor or any person acting on their behalf shall by reason of race, religion, age, color, creed, physical handicap, sex or sexual orientation discriminate against a person who is qualified and available to perform work to which employment relates.

13. **Risk of Loss.** The risk of loss or damage to the subject matter of this contract arising from any cause whatsoever, including acts of God, shall be upon the Contractor until such time as the County has accepted the work as provided in this Agreement.

14. **Indemnification.** The Contractor shall indemnify, defend, save and hold harmless County and State of Oregon, Oregon Transportation Commission and its members, Oregon Department of Transportation and its officers, employees and agents (collectively the "State") from and against any suits, actions, legal or administrative proceedings, demands, claims, liabilities, fines, penalties, losses, injuries, damages, expenses or costs, including interest and reasonable attorney fees, in any way connected with any injury to any person or damage to any property arising out of or related to the prosecution of work under this Agreement, but only to the extent caused, or alleged to be caused by any negligent or willful act or omission of Contractor or Contractor's subcontractors.

Neither Contractor nor its subcontractor nor any attorney engaged by Contractor or its subcontractor shall defend any claim in the name of the State of Oregon or any agency of the State of Oregon, nor purport to act as legal representative of the State of Oregon or any of its agencies, without the prior written consent of the Oregon Attorney General. The State of Oregon may, at any time at its election assume its own defense and settlement if it determines that Contractor is prohibited from defending the State of Oregon, or that Contractor is not adequately defending the State of Oregon's interests, or that an important governmental principle is at issue or that it is in the best interests of the State of Oregon to do so. The State of Oregon reserves all rights to pursue claims it may have against Contractor if the State of Oregon elects to assume its own defense.

15. **Insurance.** Contractor, at its expense, shall obtain the following insurance coverage and keep them in effect during the entire term of this Agreement:

1. Workers Compensation Insurance in compliance with statutory requirements;
2. Comprehensive General Liability Insurance (including contractual liability and completed operations coverage) on an occurrence basis, with not less than \$2,000,000 per occurrence for bodily injury and property damage liability, with an annual aggregate limit of \$3,000,000;
3. Professional Liability Insurance, including Errors and Omissions coverage, with a per occurrence and aggregate limit of not less than \$1,000,000, to protect against all loss suffered by Owner or third parties, including financial and consequential loss, caused by error, omission, or negligent acts related to the Project work or services provided under the Agreement.

4. Commercial Automobile Liability Insurance, with a combined single limit, or the equivalent of not less than \$1,000,000 per occurrence, for bodily injury and property damage with respect to Contractor's vehicles, whether owned, hired, or non-owned, assigned to, or used by Contractor in connection with the services provided under the Agreement;

The required insurance coverages shall be (i) with insurance companies admitted to do business in the state of Oregon and rated A or better by Best's Insurance Rating, and (ii) acceptable to Owner. Evidence of such insurance will be furnished to Owner before commencing Project work or services. The certificates of insurance shall indicate (a) the types of insurance coverage, (b) the identity of all persons or entities covered, (c) the amounts of insurance coverage, and (d) the period of insurance coverage. Any required insurance coverage shall provide that it may not be canceled except after at least 30 days written notice to Owner.

The Commercial General Liability and Commercial Automobile Liability shall (i) name Owner, its directors, officers, and employees as additional insured, (ii) name the State and its directors, officers and employees as additional insureds, (iii) provide that it is primary insurance with respect to the interests of Owner and that any insurance maintained by Owner is excess and not contributory, and (iv) include a cross-liability and severability of interest clause and a waiver of subrogation clause.

16. **Nonwaiver.** No waiver of any breach of this contract shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this contract shall be taken and construed as cumulative, that is, in addition to every other remedy provided therein or by law. The failure of County to enforce at any time any of the terms of this contract, or to exercise any option which is provided, or to require at any time performance by Contractor of any of the provisions, shall in no way be construed to be a waiver of such provisions, nor in any way to affect the validity of any part of this contract, or the right of County to thereafter enforce each and every provision.

17. **Contractor's Representation.** Contractor, by entering into this Agreement, represents that its bid for this project is made without connection with any person, firm or corporation making or refraining from making a bid for the same or similar project and was in all respects fair and without collusion or fraud.

18. **Severability.** Should any clause or section of this Contract be declared by court to be void or voidable, the remainder of this Contract shall remain in full force and effect.

19. **Dispute resolution through mediation and arbitration.** Any dispute between the parties to this Agreement shall be resolved according to the following process:

(a) The parties first shall submit to mediation of the dispute to be conducted by a mutually acceptable mediator. If the parties cannot agree on a mediator, they shall request a mediator to be appointed by the U.S. Mediation and Arbitration service in Portland, Oregon. The mediator's charges and expenses shall be borne equally by the parties. All other expenses, including attorney fees and costs, shall be borne exclusively by the party requiring the service or for which

payment is to be made.

(b) If the dispute is not resolved in mediation, the parties shall then submit the dispute to binding arbitration. Arbitration shall be conducted in accordance with the rules set forth in the Oregon International Commercial Arbitration and Conciliation Act, ORS 36.450 to 36.558, 2007 replacement part. The decision of the arbitrator shall be final and binding on the parties. The party that does not prevail, as determined by the arbitrator, shall pay the arbitrator's fees and expenses in arbitration. All other expenses, including attorney fees and costs, shall be borne exclusively by the party requiring the service or for which payment is to be made.

20. **Attorney fees and costs.** In the event that either party to this Agreement shall take any action, judicial or otherwise, to enforce or interpret any of the terms of this contract, each party shall be wholly responsible for its own expenses which it may incur in taking such action, including costs and attorney fees, whether incurred in a suit or action or appeal from a judgment or decree therein or in connection with any nonjudicial action.

21. **Applicable laws.** This Agreement is executed in the State of Oregon and is subject to Oregon law and jurisdiction in Yamhill County.

22. **Subcontractors.** The Contractor may not engage any subcontractor(s) to perform work under this Agreement without the express written consent of the County. If the County does grant consent, the Contractor covenants and agrees to bind any and all Subcontractor(s) for performance of work under this Agreement. Any reference to Contractor shall include any and all Subcontractor(s) ad infinitum.

23. **Written changes required.** The rights and duties under this Contract shall not be modified, delegated, transferred, or assigned, except upon written signed consent of both parties.

24. **Successors bound.** This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

THIS AGREEMENT AND THE CONTRACT DOCUMENTS CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE IN TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY FOR THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS OR REPRESENTATIONS, ORAL OR WRITTEN NOTICE SPECIFIED HEREIN REGARDING THIS CONTRACT. THE CONTRACTOR, BY SIGNATURE OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT HE/SHE HAS READ THIS CONTRACT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed on the date indicated by their duly authorized officials, this Agreement in duplicate, each of which shall be deemed an original on the date executed by all parties.

OBEC Consulting Engineers

YAMHILL COUNTY, OREGON

By: Guy Hakanson  
(signature)  
Date: 7-28-17

Stan Primozych  
STAN PRIMOZICH, Chair  
Date: 8/3/17

Guy Hakanson  
(printed name)

John Phelan  
JOHN PHELAN  
Yamhill County Road Director  
Date: 8-7-17

Title: Vice President

Fed. Tax I.D. No: 93-0552628

APPROVED AS TO FORM

Contractor  
Registration No: 077184-14

By: Christian Boenisch  
CHRISTIAN BOENISCH,  
Yamhill County Legal Counsel

Accepted by Yamhill County  
Board of Commissioners on  
8-3-17 by Board Order  
# 17-309

Exhibit A  
Scope of Work/Fee Schedule



## WORK PLAN

### **Project Overview**

Palmer Creek, Palmer Creek Rd Bridge (Br.No. 11795A) is a seven span, 307 foot long, 28.9 foot wide, precast pre-stressed girder structure with a composite 6.5 inch concrete deck. The spans are simply supported. The structure was built in 1960. The September 2014 inspection report indicates the substructure is in "poor" condition. The inspector noted that there are several piles located at Bents 4A, 5A, 6A (both upper and lower piles) reduced to one inch shells due to rot. One pile at Bent 6B was noted previously to be reduced to a one inch shell. It was buried at the time of the latest inspection. The bridge is currently closed to all traffic.

The proposed project scope is to replace existing timber piles at Bents 2, 3, 6 and 7 with a steel pile supported crutch system similar to the repairs previously constructed at Bents 4 and 5 in 2008. Install multi-layer polymer concrete overlay to protect patches and address transverse cracks in the deck that are currently showing efflorescence and replace an existing drainage inlet grate. OBEC will additionally prepare plans and specifications to repair the end abutments and replace all remaining timber substructure as a bid added alternate.

### **Task 1: Project Management**

#### ***Subtask 1.1: Overall Project Management***

The purpose of this task is to provide project management and design oversight for the design team. Consultant shall prepare and maintain a milestone delivery schedule and a project decision log using an established format for use in collecting County design input, documenting key decisions, and tracking the resolution of design issues. Consultant shall plan and direct Quality processes in accordance with OBEC's existing Quality Program. Consultant shall collect and respond to County review comments. Consultant shall keep the County apprised of work progress, project issues, resolutions and changes affecting the design, schedule, or project budget on a regular basis. Consultant shall submit project invoices and progress reports monthly.

#### ***Assumptions***

- Level of effort is based on an assumed overall project duration of 6 months

#### ***Deliverables***

- Invoices and progress reports (monthly).
- Milestone Delivery Schedule (within 10 working days of NTP, and modifications as required by the County).
- Monthly progress emails.

#### ***Subtask 1.2: Project Meetings and Site Visits***

This task involves site visits and preparing for and leading the targeted review meetings listed below. The purpose of these meetings is to advance the design efforts and coordinate County input.

Meetings shall take place at the county offices or by conference call, as appropriate. Up to four project meetings are anticipated, as follows: Project Kickoff Meeting, 60% Design Review Meeting, Advanced Plans Review Meeting, and Pre-bid Meeting. Additionally task allows for up to 6 monthly one hour conference calls with the county.

**Assumptions**

- Design review meetings include up to two (2) OBEC employees and are assumed to be approximately 2-hours in duration. Task includes 2 hours of meeting prep and 2 hours of travel for each meeting.
- Monthly conference calls include up to one (1) OBEC employee and are assumed to be approximately 1-hour in duration
- Up to one site visit with up to two (2) OBEC employees is included in the scope. Task includes 2 hours of travel per site visit.

**Deliverables**

- Meeting agendas delivered electronically 48 hours prior to each meeting.
- Meeting minutes delivered electronically three days following each meeting.

**Subtask 1.3: Public Involvement**

This task involves assisting the county with public involvement and includes the production of exhibits and technical memos.

**Assumptions**

- Up to two 11x17 figures in .pdf format
- Up to two two-page technical memos.
- Attendance at public meetings is not included in the scope

**Deliverables**

- 11x17 Technical Figures
- Technical Memos

**Task 2: Environmental Coordination and Review**

Consultant shall coordinate with the County, project team, and natural resource and regulatory agencies to verify the project will not require permits.

**Subtask 2.1 Environmental Coordination, Review, and Documentation**

Consultant shall:

- Obtain and review any existing environmental or permit information.
- Coordinate and communicate with the County and project design team to identify any potential design or construction elements that could trigger the need for permits or environmental documentation.

- Assist the County and design team in designing the appropriate solution that will not trigger the need for permits or environmental clearances.
- Coordinate and communicate with the regulatory agencies (USACE and DSL) regarding the projects potential impacts to protected resources and assist them in making a determination that no permits are necessary for the project.
- Provide project information, figures, and construction information necessary for the regulatory agencies to make a determination on the need for permits or not.
- Provide a brief memorandum summarizing the coordination and communication with the resource agencies and documenting the reasons why the resource agencies determined no permits or environmental documentation is needed for the project.
- 

It is assumed that the project can be designed and constructed in such a manner that the resource agencies can make a determination that no permits or environmental documentation is necessary for the project. If the resource agencies determine that a Joint Permit Application is required, an amendment to this scope of work will be required.

***Deliverables***

- Environmental and Permitting Memorandum

**Task 3: Hydraulics (Contingency)**

Consultant shall provide a hydraulic analysis for the Project site. Consultant shall perform the following subtasks for the bridge rehabilitation site as necessary to complete the preparation of the Hydraulic deliverables:

- Research and compile available local information.
- Perform site inspection of hydraulic conditions.
- Determine contributing drainage area.
- Determine flood frequency versus peak discharge.
- Investigate local knowledge of past floods.
- Perform Hydraulic Engineering Center-River Analysis System (HEC-RAS) hydraulic analysis modeling for natural conditions, existing bridge, and proposed bridge.
- Assess potential effects of scour.
- Prepare hydraulic report.

***Subtask 3.1 Review Existing Data/Site Inspection***

Consultant shall obtain and review available data related to hydraulics at the Project site. Consultant shall visit the Project site. Consultant shall assess stream channel, scour conditions, identify sections for the hydraulic model, and estimate hydraulic model parameters. Consultant shall develop a photographic log of the Project site.

***Deliverables***

- See Task 3.5.

### ***Subtask 3.2 Site Hydrology***

Consultant shall follow the guidelines established in the ODOT Hydraulics Manual, 2011 to develop the 2-year, 10-year, 50-year, 100-year and 500-year flows in the vicinity of the repaired bridge.

#### ***Deliverables***

- See Task 3.5.

### ***Subtask 3.3 Hydraulic Analysis***

Consultant shall develop one (1) site specific hydraulic model for the Project using HEC-RAS. The site specific hydraulic model must contain three (3) conveyance alternatives: (1) the "natural" channel, (2) the existing structure, and (3) the repaired bridge. The model analyses will determine water surface profiles, velocities, channel characteristics, and changes in backwater elevations.

#### ***Deliverables***

- See Task 3.5.

### ***Subtask 3.4 Scour Analysis and Design***

Consultant shall perform scour analyses for the hydraulic conditions resulting from the design alternative in accordance with the current ODOT Hydraulics Manual, 2014. The analysis will include combinations of scour types to determine what scour potential exists. Using Agency, HEC-18, and HEC-23 criteria, Consultant shall size abutment rip rap for the replacement bridge. As necessary, Consultant shall also make recommendations for protection of retaining walls. Protection measures shall be included in the final design.

#### ***Deliverables***

- See Task 3.5.

### ***Subtask 3.5 Hydraulic Report***

Consultant shall summarize findings and recommendations from tasks 4.1 through 4.4 in a Hydraulic Report in accordance with current ODOT Hydraulics Manual. The Report must include:

- A description of the impacts of the recommended bridge opening on hydrology and hydraulics including design recommendations for stream bank erosion protection.
- Site hydrology, flood history (if known from Project information), flood flows, velocities and water surface elevations, and summary and output from the HEC-RAS hydraulic analysis.

Consultant shall summarize design flood characteristics and determine the proposed hydraulics and flood plain elevations at the bridge replacement site.

Consultant shall submit the Hydraulic Report with the 60% plans for review by Agency and County. Consultant shall respond to review comments with a letter of response, and revised or amended Hydraulic Report as required.

**Assumption:**

- A "no rise" certification will not be required.

**Deliverables**

- Draft and Final Hydraulics Report

**Subtask 3.6    *Hydraulic Cross Section Survey***

Consultant shall provide cross section data for hydraulic analysis of the Palmer Creek stream channel. Consultant shall prepare the cross section locations to include: two (2) upstream from the existing bridge at a point 75 and 150 feet northerly of the bridge , one (1) at each side of the existing bridge , three (3) downstream from the existing bridge at a point 75 feet, 80 feet and 150 feet downstream. Consultant shall extend Cross Sections lengths to an elevation above the 100-year flood elevation on both banks and include the channel bottom.

**Task 4: Geotechnical Engineering**

**Subtask 4.1: *Geotechnical Design Memo***

Consultant shall review existing geologic and geotechnical information, including driving records from prior foundation mitigation work. The Geotechnical Investigation report prepared by OGD Consulting, Inc., dated October 30, 2007, will be reviewed for completeness with the current project objectives.

Consultant shall complete analysis and recommendations for the new piling and retaining walls. The level of pile analysis effort will be based on the results of Subtask 4.1. The consultant update and/or modify the pile foundation recommendations, as required, for conformance the current project. The analysis and design for the foundation and retaining wall shall be conducted by Consultant in accordance with current ODOT GDM, FHWA, and/or AASHTO design guidelines. The geotechnical analysis must verify the following information in the Geotechnical Investigation report is applicable for the current work, and that the information is in conformance with current design guidelines:

- Estimate pile resistance and downdrag;
- Estimate pile size, length, minimum and estimated tip elevations, settlement, uplift and lateral resistance, and driving criteria (Gates, WEAP) as required;
- Provide parameters for p-y curve development using L-pile for deep foundation elements;
- Provide static and seismic earth pressures for retaining walls;
- Provide an updated Site Response Spectrum using the current AASHTO guidelines.

Consultant shall prepare a Geotechnical Technical Memorandum summarizing the literature review, foundation design, and construction recommendations. The memorandum shall summarize the results and geotechnical recommendations for the replacement foundations and new retaining walls.

**Assumptions:**

- The existing subsurface information provided in the Geotechnical Investigation report (2007) will be used for all required analyses. No additional drilling is planned.
- One soil profiles will be developed to evaluate the pile resistance if the current information requires updating.

**Deliverables:**

- One (1) electronic copy of the draft Geotechnical Technical Memorandum submitted with the Preliminary Plans Submittal.
- One (1) electronic copy of the final Geotechnical Technical Memorandum submitted within ten (10) business days of receipt of all comments on the draft memorandum.

**Task 5: Roadway Design**

***Subtask 5.1: Roadway (60%) Design***

This task shall include the 60% design and QC of roadway plans, specifications and cost estimates associated with the design of bridge repairs.

***Assumptions***

- The roadway drawings shall be 11"x17" in microstation (.dgn) format and shall be assumed not to exceed one (1) sheets. This task shall also include the production of a preliminary cost estimate and a listing of technical specifications.
- With the bridge being closed to traffic, no temporary detours or traffic control is anticipated
- Erosion control measures will be handled by technical specifications
- A small amount of repaving at the approaches is anticipated but will be shown on the bridge design sheets. A roadway profile will be shown on the bridge design sheets.
- It is assumed that no guardrail adjustments or signing and striping will be required.
- The assumed 60% design sheet list is as follows:
  - Title Sheet (1 sheet)

***Deliverables***

- One 11"x17" hard copy and one electronic copy of 60% drawings, cost estimate, and specifications list to the county.

### **Subtask 5.2: Roadway Final Design**

Consultant shall prepare draft (90%), and Final roadway drawings, cost estimate and specifications.

#### **Assumptions**

- The roadway drawings shall be 11"x17" in microstation (.dgn) format and shall be assumed not to exceed one (1) sheets. This task shall also include the production of cost estimate and technical specifications.
- Technical specifications shall follow APWA format

#### **Deliverables**

- One 11"x17" hard copy and one electronic copy of advanced (90%) roadway drawings, cost estimate and 8.5"x11" specifications to the county.
- One 11"x17" hard copy and one electronic copy of final (100%) stamped roadway drawings, cost estimate and 8.5"x11" specifications to the county.

### **Task 6: Bridge Design**

#### **Subtask 6.1: Bridge (60%) Design**

This task shall include the 60% design and QC of the bridge repairs. Task shall include: repairs at Bents 2, 3, 6, 7; the replacement of timber substructure members at bents 4 and 5; abutment repairs at bents 1 and 8; structural repairs to the deck and a PPC overlay. OBEC shall prepare plans, cost estimate and a list of required technical specifications.

#### **Assumptions**

- The bridge drawings shall be 11"x17" in microstation (.dgn) format and shall be assumed not to exceed thirteen (13) sheets. This task shall also include the production of a preliminary cost estimate and a listing of technical specifications.
- The assumed preliminary design sheet list is as follows:
  - Plan and Elevation
  - General Notes
  - Foundation Plan
  - Deck Plan
  - Typical Deck Section
  - Bent Elevations (4 sheets)
  - Abutment Repair Sections (2 sheets)
  - Miscellaneous Details (2 sheets)
- Design shall be in accordance with County design standards, AASHTO Design Specifications, and the ODOT BDDM

**Deliverables**

- One 11"x17" hard copy and one electronic copy of Preliminary (30%) bridge drawings, cost estimate, and specifications list to the county.

**Subtask 6.2: Bridge Final Design**

Consultant shall prepare draft (90%), and Final bridge repair drawings and specifications. This task shall include the design, drafting, cost estimate, technical specifications and QC of the bridge repair.

**Assumptions**

- The bridge drawings shall be 11"x17" in microstation (.dgn) format and shall be assumed not to exceed thirteen (13) sheets. This task shall also include the production of cost estimate and technical specifications.
- Technical specifications shall follow APWA format
- Design shall be in accordance with County design standards, AASHTO Design Specifications, and the ODOT BDDM

**Deliverables**

- One 11"x17" hard copy and one electronic copy of advanced (90%) bridge drawings, cost estimate and 8.5"x11" specifications to the county.
- One 11"x17" hard copy and one electronic copy of final (100%) bridge drawings, cost estimate and 8.5"x11" specifications to the county.

**Task 7: Compile Specifications and Cost Estimate****Subtask 7.1: Advanced and Final Specifications**

Compile 90% and final specifications and cost estimate for all technical disciplines associated with the project. Prepare Special Provisions utilizing ODOT standard specifications and boiler plate special provisions. Write any additional special provisions needed and prepare construction cost estimates based on the 90% design drawings. Review the county's boiler plate general conditions and bid documents and provide edits, as necessary.

**Assumptions**

- Cost estimate will be completed with a target accuracy of +/- 5% with a construction contingency of 5% of the total construction costs at Final
- Up to one added alternative will be developed to include additional substructure repair work.
- Cost estimate will include all external construction costs including construction engineering costs

- County shall provide all non-technical specifications and general conditions in .doc format for review by the consultant

#### ***Deliverables***

- 90% Specifications delivered electronically in .doc format
- Cost estimate delivered electronically in .xls format
- Stamped Final Specifications delivered electronically in .pdf format

### **Task 8: Quality Assurance**

#### ***Subtask 8.1 QA Reviews***

OBEC shall provide senior level quality assurance (QA) of all major deliverables in accordance with OBEC's Quality Management Plan (QMP) and project-specific Project Quality Plan (PQP). All major deliverables shall be reviewed internally by senior level discipline experts, a principal level engineer, and construction inspection staff.

#### ***Assumptions***

- OBEC Shall undergo a formal internal QA process for the following deliverables:
  - 60% Design.
  - 90% Design.
  - Final Design
- All QA related comments shall be reviewed and verified to the satisfaction of the reviewer.

#### ***Deliverables***

- The QA comment logs, and PQP documentation shall be available to the contractor, at any time, in electronic format within five days of request.

### **Task 9: Bid Support**

#### ***Subtask 9.1 Pre-Bid Services***

Provide engineering services necessary to support the bidding that includes answering questions, attending the pre-bid meeting, and assisting the county with evaluating estimates and selecting a prospective bidder. Anticipated level of effort is limited to 20 hours of total engineering services.

#### ***Deliverables***

- Written (E-mail) responses to bidder questions

#### ***Schedule***

- Respond to any requests for service during the bidding process within two (2) days of request.

**Subtask 9.2 Prepare Technical Addenda**

Prepare up to two technical addenda, as required, to address contractor questions and resolve documented inconsistencies in the plans and specifications. Each addenda is assumed to require modifications of up to 2 plan sheets and 2 specification sheets.

**Deliverables**

- Addenda shall be submitted, as required, to the County electronically in .pdf format.

**Schedule**

- Addenda will be provided to County within five (5) days of request.