

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DEVELOPMENT SERVICES BUILDING

150 Beavercreek Road Oregon City, OR 97045

Board of County Commissioners Clackamas County

Members of the Board:

Approval of Amendment #1 with Contract #1868 with David Evans and Associates, Inc., for Consulting Engineering Services for the Canby Marquam Hwy: Bear Creek Bridge Project Total value of Amendment #1 is \$230,837.15. Funding through State Funded Local Project Program Fund and County Road Fund. County General Funds are not involved.

Purpose/Outcome	Execution of Contract #1868 Amendment #1 will provide consulting									
	engineering services during the construction of improvements for the									
	replacement of the Canby Marquam Hwy: Bear Creek Bridge Project.									
Dollar Amount	The original contract amount was \$529,737.26. Amendment #1 adds									
and Fiscal Impact	\$230,837.15 for a total not to exceed \$760,574.41.									
Funding Source	State Funded Local Project Program Funds and County Road Fund.									
Duration	Contract Execution through December 31, 2023.									
Previous Board	03/21/19: BCC approval of a Local Agency Agreement No. 33216 with									
Action/Review	Oregon Department of Transportation for the Canby Marquam Hwy: Bear									
	Creek Bridge #06027.									
	10/17/19: BCC approval of a personal services contract with David Evans									
	and Associates, Inc. for the Canby Marquam Hwy: Bear Creek Bridge.									
	04/07/22: BCC approval of a (construction) Contract with Carter and									
	Company, Inc. for the Canby Marquam Hwy: Bear Creek Bridge.									
	05/03/22: Discussion item at issues									
Strategic Plan	1. This item supports the DTD Strategic Focus on Safe Roads and Strategic									
Alignment	Result of "Travelers on Clackamas County roads will experience roads in									
	good condition."									
	2. This item aligns with "Build a Strong Infrastructure" by replacing a									
	functionally obsolete and structurally deficient bridge.									
Counsel Review	Counsel Date: April 11, 2022									
	Counsel Initials: AN									
Procurement	Was this project processed through Procurement? Yes.									
Review										
Contact Person	Joel Howie, Civil Engineering Supervisor 503-742-4658									
Contract No.	1868									

BACKGROUND: The County obtained federal Highway Bridge Program funds from the Oregon Department of Transportation (ODOT) Local Bridge Program to replace the existing bridge over Bear Creek on Canby Marquam Highway. The existing bridge, built in 1960, is showing signs of decay as a result of heavy truck traffic. The bridge is considered functionally obsolete (narrow) and structurally deficient, with a sufficiency rating of 27.2 out of 100. The bridge is composed of undersized timber

members that have shear and flexure damage, which were temporary repaired until the bridge can be replaced. The asphalt pavement wearing surface requires constant repair due to the bridge vibrating and shaking when trucks travel on the bridge.

The County requested to exchange the federal funds for state funds, which was approved by ODOT. The total cost of the project is estimated to be \$2,620,547, with \$2,076,172.74 in state exchange funds and \$544,374.26 in County Road Funds. The County requested and additional \$275,244 in state exchange funds from the ODOT Local Bridge Program, which would result in a total County Road Funds match of 10.27 percent. The construction phase costs are anticipated to be \$2,040,247, which includes construction engineering and inspection services, and the remaining costs were related to design (\$529,500) and right of way (\$50,800). Construction is anticipated to begin in early May of 2022.

The purpose of this contract amendment is to provide consulting engineering services during the project's construction. The services to be provided include support to County staff with construction engineering, contractor submittal reviews, inspection assistance, clarification of design details, and developing as-constructed plans. The proposed contract amendment is for \$230,837.15.

PROCUREMENT PROCESS: This Amendment is in accordance with LCRB C-047-0800(b) for an unanticipated amendment. Amendment #1 is a 44 percent increase to the original contract.

RECOMMENDATION: Staff respectfully recommends that the Board approve and sign this Amendment #1 with David Evans and Associates Inc., for the Design Services for the Canby Marquam Hwy: Bear Creek Bridge Project.

Sincerely,	
Joel Howie	
Joel Howie, Civil Engineering Supervisor Department of Transportation and Development	
Placed on the BCC Agenda	by Procurement

AMENDMENT #1

TO THE CONTRACT DOCUMENTS WITH DAVID EVANS AND ASSOCIATES FOR DESIGN SERVICES FOR CANBY MARQUAM HIGHWAY BEAR CREEK BRIDGE Contract #1868

This Amendment #1 is entered into between **David Evans and Associates**, **Inc.**, ("Contractor" or "Consultant") and Clackamas County ("County") and shall become part of the Contract documents entered into between both parties on **October 17**, **2019** ("Contract").

The Purpose of this Amendment #1 is to make the following changes to the Contract:

- 1. ARTICLE I, Section 1. **Effective Date and Duration** is hereby amended as follows: The Contract termination date is hereby changed from June 30, 2022 to **December 31, 2023**.
- 2. ARTICLE I, Section 2. Scope of Work is hereby amended as follows:
 County has requested additional services to be performed by Consultant. The additional services are described in Exhibit A.1, Supplement to Statement of Work, attached hereto and hereby incorporated by this reference herein.
- 3. ARTICLE I, Section 3. **Consideration** is hereby amended as follows: In consideration for Contractor performing Work during the extended term of this Contract, and for providing the additional services described in this Amendment #1, County will pay Contractor an amount not to exceed \$230,837.15. The total Contract compensation will not exceed \$760,574.41.

ORIGINAL CONTRACT	\$ 529,737.26
AMENDMENT #1	\$ 230,837.15
TOTAL AMENDED CONTRACT	\$ 760,574.41

Except as expressly amended above, all other terms and conditions of the Contract shall remain in full force and effect. By signature below, the parties agree to this Amendment #1, effective upon the date of the last signature below.

David Evans and Associates		Clackamas County	
	4/7/2022		
Authorized Signature	Date	Chair	Date
Joel Tubbs			
Printed Name		Recording Secretary	
		APPROVED AS TO	FORM
		M	04/19/2022
		County Counsel	Date

EXHIBIT A.1 -

Statement of Work and Delivery Schedule for Construction Contract Administration and Construction Engineering & Inspection ("CA/CEI")

Construction Project Name: Canby Marquam Highway Bear Creek Bridge (the "Project")

Project Location: <u>Clackamas County</u>
Agency: <u>Clackamas County</u>
Contract No.: <u>1868</u>; Amendment No.: 1

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A. PROJECT DESCRIPTION AND OVERVIEW OF SERVICES

This Exhibit A.1 includes the statement of work for CA/CEI Services (CA/CEI SOW) required for the Project. The delivery schedule is provided in the "Deliverables and Schedule" section of each task in section E.2.

The CA/CEI Services will culminate when Agency issues Final Acceptance of the Project and Consultant has completed all tasks and provided all deliverables as required.

Background

The background for the Project is unchanged.

Phases of Services

The Services are divided into the following 2 phases:

- Preliminary Engineering/Design, Right of Way, and Final Design
- CA/CEI

Definitions and Acronyms

	DEFINED TERMS								
Acceptance	In this CA/CEI SOW, "Acceptance" or "Accept" means that Agency has reviewed the								
	deliverable(s) submitted by Consultant and finds the deliverable(s) submitted in reasonable								
	compliance with applicable requirements. Agency Acceptance does not release Consultant								
	from liabilities due to any Errors or Omissions with respect to Consultant's Services and								
	deliverables.								
Change Orders	Include Contract Change Order (CCO), Extra Work Order (EWO), and State Force Order								
	(SFO)								
Inspector	Representative of Consultant, with appropriate certifications, authorized to inspect and								
	report on construction contract performance.								
Standard	Oregon Standard Specification for Construction ("OSSC")- current version in effect								
Specifications	during CA/CEI phase for this Project								
Specifications	Includes both the Oregon Standard Specifications for Construction and the Project Specific								
	Special Provisions, collectively referred to as the "Specifications".								

	ACR	RONYMS					
			ORS	Oregon Revised Statutes			
AASHTO	American Association of State		OSSC	Oregon Standard Specifications for			
	Highway and Transportation Officials			Construction			
CA/CEI	Contract Administration,	PA Price Agreement		Price Agreement			
	Construction Engineering and						
	Inspection						
CC	Construction Contractor		PE	Preliminary Engineering			
CCO	Contract Change Order		PM	Consultant's Project Manager for			
				CA/CEI Phase			
CE	Construction Engineering		POR	Professional of Record			
CECI	Certified Environmental Construction		PS&E	Plans, Specifications and Estimates			
	Inspector						
CPS	ODOT Contract Payment System		QA	Quality Assurance			
DBE	DBE Disadvantaged Business Enterprises		QAC	Quality Assurance Coordinator			

EEO	Equal Employment Opportunity	QA/CA		Quality Assurance & Contract				
			Plan	Administration Plan				
EWO	Extra Work Order		QC	Quality Control				
FIR	Field Inspection Report		QCCS	Quality Control Compliance Specialist				
IA Independent Assurance			RAS	Region Assurance Specialist				
IQAP Inspection Quality Assurance			RFI	Request for Information				
	Program							
APM	Agency project manager		RFP	Request for Proposal				
AGENCY	Clackamas County		ROW	Right of Way				
LRFD	Load and Resistance Factor Design		SFM	Survey Filing Map				
NTE	Not to Exceed		SFO	State Force Order				
NTP	Notice to Proceed		SOW	Statement of Work				

B. STANDARDS and GENERAL REQUIREMENTS

1. Standards applicable to CA/CEI Services

Consultant shall perform all Services in accordance with the professional standard of care set forth in the Contract.

Consultant shall complete the CA/CEI Services in accordance with the current version in effect of the <u>ODOT Construction Manual</u>, the <u>Quality Control Compliance Specialist ("QCCS") Handbook</u>, the Manual of Field Test Procedures, the ODOT Inspector's Manual, and the PA or Contract.

The standards, manuals, directives and other procedural guidance identified are not exhaustive and may not include all applicable standards for a given project. Consultant shall be responsible for determining all applicable practices and standards to be used in performing Professional Services and Related Services. Consultant shall inform and demonstrate to Agency if standards, directives or practices required by Agency in performance of the work are insufficient, in conflict with applicable standards, or otherwise create a problem for the design or construction. Should the requirements of any reference, standard, manual or policy referenced conflict with another, Consultant shall request Agency in writing to resolve the conflict.

2. Communication

Communication is an important element to the successful completion of the Project and CA/CEI Services. All communication and deliverables covered under this CA/CEI SOW shall be directed to the APM (or such other individual as designated in writing to Consultant). In addition, Consultant shall submit deliverables specific to the administration of the construction contract, excluding claims, via email. To the extent possible, all transmittals from Consultant to APM must include the Contract#, if applicable, Project name and the Agency's project number. The project number must be used as part of the document control system established by Agency and Consultant. Formats for the document control system shall be discussed at the initial meeting between APM and Consultant pertaining to the CA/CEI Services.

The CC for the Project will be determined through the competitive bidding or proposal process. When the CC has been determined, Agency will establish appropriate contacts with that firm prior to the Pre-Construction Conference.

3. Roles and Responsibilities

The following describes the roles and responsibilities of the parties relative to the construction phase of the Project and the CA/CEI SOW tasks contained herein. These roles and responsibilities are changed for this Amendment No. 5 only and will have no effect on the original contract or prior amendments. The Agency remains the primary point of contact for Consultant.

Agency

The Agency's Project Manager has the authority to review and accept, or recommend Acceptance of, all Consultant deliverables. Agency has overall authority in scope, schedule and budget of the Project. All construction Change Orders [Contract Change Orders ("CCO"), Extra Work Orders ("EWO") and State Force Orders ("SFO")] prepared by Consultant are subject to Agency review and approval through the APM prior to implementation by the CC.

Consultant:

- Unless specifically stated otherwise in a particular task, Consultant shall provide all labor, equipment, and materials to manage, coordinate and complete all tasks and provide all deliverables as set forth in this CA/CEI SOW (collectively, the "CA/CEI Services") in accordance with the delivery schedules identified.
- Changes to Consultant's Project Manager are subject to Agency approval and will require written notice to Agency prior to the change.
- If Consultant is performing the Construction Inspection, Quality Control Manager and Quality Control Compliance Specialist functions, then Consultant's Key Persons (as identified on the approved QA/CA Plan) may not be substituted or replaced unless approved in writing by Agency.
- Consultant is not responsible for the means, methods, operating procedures or safety precautions of any CC or other entity.

Clackamas County "Agency" is responsible for the following:

- Access to publicly owned ROW and easements
- Attend Project meetings
- Concrete and Asphalt mix design review
- Providing access to construction related forms referenced in this CA/CEI SOW, Agency's construction forms, and hardcopy forms as needed
- Reviewing and processing monthly pay estimates for construction contract through the County's Contract Payment System
- Providing County construction forms as needed
- Performing periodic quality, quantity and labor compliance documentation reviews
- Final Project Acceptance
- Review and comment on progress submittals
- Coordination with other outside agencies
- Approving CCOs, EWOs, SFOs and Request for Increase/Overrun in Project Authorizations prepared by Consultant prior to submittal to Agency for concurrence
- Provide a Letter of Acceptance for Project at completion (per task CE 5.4)
- Provide public outreach on the Project

C. REVIEW, COMMENT and SCHEDULE REQUIREMENTS

- Consultant shall complete all CA/CEI tasks and deliverables in a timely manner to avoid unnecessary delays in the construction Project. Consultant shall provide written notice to Agency at the first sign of delays caused by Agency, Consultant, CC, or any other entity that may delay completion of the Project or otherwise have a negative impact on the construction schedule.
- Consultant shall notify APM immediately (within 2 business days) upon discovery of any changes in the Project that may impact scope, schedule, or budget of the Project or CA/CEI Services.
- Consultant shall submit all construction contract administration deliverables, excluding claims, via email to the APM. Consultant shall submit all other deliverables to APM or designee unless otherwise stated in specific tasks.
- All deliverables are considered draft until reviewed and accepted by Agency. Consultant shall make the necessary revisions to address Agency comments and submit revised deliverable(s) to APM within 5 business days of receipt of Agency review comments, unless a different timeframe is stated in specific tasks or otherwise agreed to in writing by Agency. If no revisions are necessary, the submittal will be considered final.

D. FORMAT REQUIREMENTS

- Deliverables shall be submitted to Agency in the format described in the ODOT Construction Manual and individual tasks. Following NTP, Consultant shall submit all construction contract deliverables, excluding claims, to the Agency. Agency Claims must be submitted on paper documents according to Section 00199.
- The time zone is Pacific Standard Time (PST) to determine time of receipt of notices and other documents. Non-business days are Saturdays, Sundays and legal holidays as defined by ORS 187.010 and 187.020. If received before 5:00 p.m. PST on a business day, it shall be considered as received on the business day on which it was received. If recorded as received on a non-business day, or after 5:00 p.m. PST on a business day, it shall be considered as received at 8:00 a.m. PST on the next business day.
- **ODOT Forms** Consultant shall use ODOT forms where required. Construction related forms referenced in this CA/CEI SOW are available online at: https://www.oregon.gov/ODOT/Construction/Pages/Forms.aspx
- Each draft and final text-based or spreadsheet-based deliverable shall be provided in MS Office file formats (i.e., Word, Excel, MS Project, etc.) and must be fully compatible with version used by the Local Agency.
- Additional format requirements may be listed with specific tasks or deliverables throughout the CA/CEI SOW or Contract.

E.1 TASKS, DELIVERABLES and SCHEDULE

Task Numbering: For convenience to the reader, the task numbering for the CA/CEI phase will use the standard task number prefaced with "CE" (CE-1, CE-2).

TASK CE-1 PROJECT MANAGEMENT OF CA/CEI SERVICES

This activity is continuous throughout the duration of these CA/CEI Services. Consultant shall guide and direct the CA/CEI Services and Consultant's team in conformance with all applicable requirements of the CA/CEI Services and the Project's goals and objectives. Consultant shall monitor progress of the Project and CA/CEI Services

Task CE-1.1 Coordination

Consultant shall provide leadership, direction, and control of these CA/CEI Services.

Consultant shall:

- Direct Consultant's team on all CA/CEI activities and team meetings.
- Maintain liaison, communication, and coordination between Consultant's staff, APM, if applicable, CC and Agency staff to facilitate timely, efficient operations for all involved.

Deliverables and Schedule:

• On-going coordination and communication as needed to appropriately manage the CA/CEI Services (no tangible deliverables for this task).

Task CE-1.2 Status Reports and Invoices

Consultant shall prepare up to 12 Monthly Status Reports throughout the duration of the CA/CEI Services. See Section E.2, Project Schedule.

The Monthly Status Report must:

- Describe the previous month's Consultant activities. For fixed-price method of compensation, identify staffing used for that reporting period. For other compensation methods, the staffing used must be identified in the invoice backup documentation.
- Describe the planned activities for the next month.
- Identify any issues or concerns that may affect the CA/CEI Services and budget or the Project schedule and Project budget.

If the construction Project schedule milestones are significantly revised, Consultant shall attach the updated Project schedule and submit with Monthly Status Report. Consultant shall submit the Monthly Status Reports to APM with the monthly Consultant invoice.

Deliverables and Schedule:

Monthly Status Report - Submitted to APM with the monthly invoice no later than the 20th calendar day of the month following the reporting month.

TASK CE-2 CONSTRUCTION CONTRACT ADMINISTRATION/CONSTRUCTION ENGINEERING and INSPECTION (CA/CEI)

Consultant shall support the Project's needs by providing CA/CEI Services required for the Consultant to certify, at Second Notification and Third Notification that the Project was completed according to the Plans and Specifications for the Project. Consultant shall engage the Professional of

Record ("POR") as required to provide engineering Services required to administer design changes that may become necessary during the construction phase of the work.

Task CE-2.1 Pre-Construction Conference

Consultant shall attend the Pre-Construction Conference. Attendees will include the CC, Agency, and others as may be appropriate to discuss the construction schedule, utility involvement, permit concerns, required documentation submittals, materials, and other items relevant to the construction of the Project.

Agency will consult with the CC and Consultant to determine participants and schedule the Pre-Construction Conference at an agreed upon time and place. Up to three Consultant staff shall attend the 2-hour Pre-Construction Conference.

Consultant shall:

• Attend and participate in Pre-Construction Conference.

Deliverables and Schedule:

N/A

Task CE-2.2 Project Progress Meetings

Consultant shall attend periodic Project Progress Meetings with the CC and others as needed, including but not limited to, Agency, and others if required. The Project Progress Meetings are intended to promote Project progress, proper communications, effective working relationships, and timely issue resolution.

Consultant shall attend additional activity-specific technical kick-off meetings for various activities required by the construction contract. These activities may include, but are not limited to:

- Concrete Deck Placement
- Protection of Fish or Fish Habitat

Consultant shall:

Attend and participate in Project Progress Meetings.

ASSUMPTIONS FOR BUDGETING PURPOSES: Project Progress Meetings are assumed to be weekly (during active construction) with no more than _3_ Consultant staff attending and 30_ meetings are assumed, see Section E.2 Project Schedule.

Deliverables and Schedule:

• Attendance and participation at Project Progress Meetings

Task CE-2.3 Working Drawings, Shop Drawings, and other Submittal Reviews

Consultant shall coordinate and review construction Working Drawings, shop drawings, and other submittals submitted electronically by the CC. When electronic Working Drawings, shop drawings,

and other submittals are received, according to 00150.35(c)(2), 00150.37, & 00170.08, Consultant shall ensure the review is complete and the Working Drawings, shop drawings, and other submittals are returned to the CC within the timeframes specified in the construction contract Consultant shall log in the submittal when it arrives, track the submittal to ensure timely response, and log out the reviewed submittal when it is returned to the CC. Consultant shall conduct submittal review in accordance with the Specifications in 00150.35, 00150.37, 00170.08, and the ODOT Construction Manual, Chapter 16 – Working Drawings and Submittals.

Consultant shall:

- Maintain 1 of the as-submitted copies in the Project files
- Conduct review and prepare mark-up/comment copies of the Working Drawings, shop drawings, and other submittals. Stamped Drawings must be signed and dated by the POR and marked as either RV = Reviewed, or RVC = Reviewed with Comment. Unstamped Drawings shall be marked as either AP = Approved, AX = Approved as Noted, or RC = Returned for Correction.
- Include construction contract number on all Working Drawings, shop drawings, and other submittals.

Consultant shall review the following submittals as required using the guidelines in ODOT's Construction Manual, Chapter 16 – Working Drawings and Submittals, and the Specifications in 00150.35, 00150.37, & 00170.08:

- Work containment plans and systems
- Bridge removal plans
- Shoring and falsework calculations and drawings
- Reinforcing steel Working Drawings, shop drawings, and other submittals
- Prefabricated steel Working Drawings, shop drawings, and other submittals
- Prefabricated concrete Working Drawings, shop drawings, and other submittals
- Pile and driving equipment submittal
- Bridge rail Working Drawings, shop drawings, and other submittals

Deliverables and Schedule:

- Return approved Working Drawings, shop drawings, and other submittals with comments (within time frame established in construction contract specified requirements):
 - o 1 copy maintained in Project files
 - o Electronic Submittals
 - Submit 1 electronic PDF mark-up/comment via email as required by the construction contract.

Consultant shall provide notification of approved Working Drawings, shop drawings and other submittals to ODOT Structure Services/Materials Unit when applicable (Portland office for steel Working Drawings, shop drawings, and other submittals; Portland or Eugene office for pre-cast Working Drawings, shop drawings, and other submittals, depending on location of fabrication facility)

Files Retained by Consultant:

Consultant shall maintain files of all reviewed Working Drawings, shop drawings, and other submittals according to the retention period set forth in the terms and conditions of the Contract.

Agency may request these files at any time during the retention period. Consultant shall provide the files to Agency within 14 calendar days of the request.

Task CE-2.4 Consultation During Construction

Consultant shall provide consultation and technical Services regarding design issues raised during construction of the Project. Consultant shall clarify construction contract documents and provide written responses to Requests for Information ("RFIs"). The design consultation will occur only as required and may be ongoing throughout the CA/CEI Services and the Project.

Upon request of the CC or Agency during construction, Consultant shall:

- Clarify construction contract documents.
- Respond to field inquiries.
- Engage the services of the POR on all matters involving design changes.

NOTE: Design requests must be initiated by either Agency or Consultant using a Change Request Form or a RFI. A response to a RFI may also initiate a Change Request or a formal contract amendment for Consultant or CC. No work shall be conducted on a Change Request until the Agency approves the request and the appropriate change order document is approved. The Change Request must clearly outline Consultant's cost, the estimated construction cost, and the cause of the change.

ASSUMPTIONS FOR BUDGETING PURPOSES: This task assumes up to _30_ RFIs, each requiring up to _4_ hours of staff time for preparation and documentation of the response.

Deliverables and Schedule:

• Written documentation of responses to CC or Agency inquiries. Submit 1 electronic copy to Agency within 2 business days of inquiry unless other delivery date is agreed to by APM.

Task CE-2.5 Design Modifications [CONTINGENCY TASK, See CA/CEI SOW Section F]

If Agency, Consultant or CC determines that design modifications may be necessary, Consultant shall discuss potential changes with Agency and POR prior to verbally agreeing on changes with CC or preparing the appropriate Change Order documents, depending upon the type of work (changed work, extra work, or force account work). Upon request of the Agency, Consultant shall work with the POR to prepare detailed engineering design revisions necessitated by conditions encountered during construction. These design revisions must be accompanied by the necessary Change Order documents (CCO, EWO or SFO) to make them a part of the construction contract.

Deliverables and Schedule:

- Design details for modifications (prepared or approved by the POR for appropriate changes to Project design) Submit to APM at date agreed to when work was requested.
- Draft CCO and EWO or SFO documents with supporting documents (cost estimate and justification) Submit to APM at date agreed to when work was requested.

TASK CE-3 CONSTRUCTION, ENVIRONMENTAL COMPLIANCE AND WORK ZONE MONITORING AND INSPECTION

Consultant shall provide on-site monitoring and inspection of construction for conformance with, and shall enforce compliance with, construction contract documents. Consultant shall coordinate and conduct on-site monitoring and inspections, so they do not cause unnecessary adverse impacts to the construction schedule. On-site monitoring and inspections must occur at critical times during the construction process as requested by the APM.

Consultant shall have certified Inspector(s) on site when requested by the APM during the construction process. Consultant shall monitor the CC's quality control process for compliance with the construction contract requirements. All persons involved in performing inspection duties must be certified through the ODOT's Inspection Quality Assurance Program ("IQAP") in the discipline for the work they will be inspecting. Consultant's Inspectors must be certified prior to commencement of any on-site work by the CC.

If circumstances occur that prevent the use of a Certified Inspector, Consultant may assign specific tasks to a non-certified individual. Refer to the IQAP for a list of limited duties that may be performed by non-certified personnel.

The following are the approved ODOT Inspector Certifications currently in place in the Inspection Quality Assurance Program:

- Certified Bridge Construction Inspector ("CBCI")
- Certified Environmental Construction Inspector ("CECI")
- Certified Traffic Signal Inspector ("CTSI")
- Certified General Inspector ("CGI")
- Certified Asphalt Concrete Pavement Inspector ("ACP")
- Certified Drilled Shaft Inspector ("CDSI")
- Certified ADA Inspector ("ADAI")

When on-site consultant shall perform work zone monitoring as required by the ODOT Construction Manual, ODOT Inspectors Manual and the construction contract documents. Accordingly, Consultant shall monitor and enforce the following for compliance to construction contract requirements:

- Permit compliance during construction
- Temporary Traffic Control measures
- Erosion Control installation and maintenance
- Turbidity Monitoring (if required)

Assumptions:

- Assume one (1) inspector at an average of twenty (20) hours per week for up to seven (7) months, including travel time to and from the site.

- Assume that the Agency will provide 48 hour notice prior to needing consultant inspector onsite.

Task CE-3.1 Environmental Compliance and Mitigation Monitoring

This task involves conducting environmental inspection site visits during the construction phase of the Project, typically to document compliance with the environmental permits, including effectiveness of best management practices, avoidance and minimization measures, challenges encountered and corrective actions.

Consultant shall:

- Perform compliance and mitigation monitoring related to environmental conservation measures agreed upon with State and Federal regulatory agencies through permit conditions and as included in the construction contract.
- Conduct site environmental inspections site visits to assist CC Agency in maintaining compliance with issued regulatory permits and the special provisions.
- Provide documentation of the construction process relative to this environmental compliance.
- Coordinate and schedule monitoring visits coincident with activities that have significant environmental components.
- Evaluate onsite conditions and construction techniques during environmental inspections site visits to assess compliance with Project permits, the Pollution Control Plan, the Erosion and Sediment Control Plan, proposed site rehabilitation measures, and general environmental conservation measures.
- Identify deficiencies and potential permit compliance issues and provide guidance to Agency and CC to aid in avoiding potential regulatory agency involvement or violations.
- Provide input and clarifications during construction activities to facilitate biological functioning as outlined in Project permits, based on the Project's significant site rehabilitation measures (to offset Project impacts)

In the event that deficiencies are noted, Consultant's Environmental Specialist shall immediately bring the deficiency to the attention of the CC and APM, and recommend a corrective course of action to comply with environmental regulations, performance standards, and permit conditions.

Consultant shall review the CC's following submittals for compliance with the construction contract and permits:

- Temporary Water Management Plan ("TWMP"),
- Work Containment Plan and System ("WCP/WCS"),
- Erosion and Sediment Control Plan ("ESCP")

Consultant shall conduct up to 3 environmental inspection site visits and prepare brief construction environmental inspection report or monitoring memorandums summarizing site conditions and providing recommended measures to facilitate permit compliance and correct deficiencies.

Deliverables and Schedule:

• Reviewed CC-submitted Erosion Control Monitoring Reports (Form 734-2361) for compliance no later than 14 calendar days after each inspection site visit. Submit to APM as Project work

- progresses along with following protocol provided in Task 5.4 Submittal of Final Project Documentation.
- Completed Consultant construction monitoring memorandums— If compliance issues are noted, document the deficiencies, recommendations and corrective action taken to correct deficiencies. Submit 1 electronic copy each to CC and APM within 5 business days after the monitoring site visit.
- General Daily Progress Reports / Project Diary Complete daily when performing onsite visits.
 Submit to APM as Project work progresses along with following protocol provided in Task 5.4 –
 Submittal of Final Project Documentation.
- Project Photography / Photo Logs Submit with reports (when applicable) along with following protocol provided in Task 5.4 Submittal of Final Project Documentation.

Task CE-3.2 Construction Activity Monitoring [CONTINGENCY TASK, See CA/CEI SOW Section F]

Consultant shall monitor construction activities to supplement Agency construction monitoring activities during construction of the Project utilizing Agency-certified Inspectors and require compliance with the construction contract documents. Consultant shall provide inspection concurrently with the CC's operation as requested by the APM. Consultant shall coordinate closely with CC to ensure on-site inspections are coordinated with the construction schedule. Consultant shall perform inspections as detailed in the ODOT Construction Manual and the ODOT Inspectors Manual. Consultant shall prepare General Daily Progress Reports of construction for days Consultant is on site. Consultant shall take photos of the various construction activities that are occurring while on-site and keep a digital photo-log. The photo-log must be kept up to date throughout construction and available for review by Agency.

Consultant shall perform geotechnical monitoring services during pile driving and to check pavement subgrade.

Consultant shall assist Agency inspector in determining and documenting all pay quantities for work and materials incorporated into the Project. As required by the ODOT Construction Manual, Chapter 12D – Quantities, Consultant shall help prepare source documents ("Paynotes") for all pay items and include supporting documentation to support each payment.

Deliverables and Schedule:

- General Daily Progress Reports Complete each day Consultant is on-site. Submit via email to APM as Project work progresses along with following protocol provided in Task 5.4 – Submittal of Final Project Documentation.
- Current Digital Photo-log of construction activities Submit via email to APM via email or email link as Project work progresses along with following protocol provided in Task 5.4 Submittal of Final Project Documentation.
- Source Documents "Paynotes" Field notes, calculations, receipts, invoices, reports used to determine Project pay quantities, installation sheets, and other supporting documentation Complete and submit via email as work is performed. In addition, follow protocol provided in Task 5.4. Submittal of Final Project Documentation.

Task CE-3.3 Quality Control Monitoring (Non-Field Tested and Field-Tested Materials) Consultant shall document the work and Non-Field-tested materials incorporated into the Project by completing Field Inspection Reports (FIRs) as required by the ODOT Construction Manual, Chapter 12C — Quality and the Non-Field-Tested Materials Acceptance Guide. Consultant shall log the FIRs and other supporting quality documentation into the applicable Test Summary and keep up to date and available for review by Agency. Consultant shall maintain the Non-Field-Tested Materials Test Summary (Test Summary "A") as detailed in the ODOT Construction Manual.

Consultant shall monitor the CC's Quality Control ("QC") program for conformance with requirements of the ODOT Manual of Field Test Procedures and the construction contract documents.

Agency or another consultant's staff will perform the verification and IA testing; it is **not** a Consultant task under this CA/CEI SOW.

Consultant shall monitor the CC's QC Program. Oversight of the QC Program is conducted by the QCCS who is experienced and certified in all areas of field material testing and documentation. According to the Agency's Technician Certification Program, the QCCS is required to maintain certification in at least the following disciplines: CAgT, CEBT, CAT 1, CDT and QCT. The QCCS is required to maintain certification in these material testing disciplines throughout the duration of all the CA/CEI Services. The QCCS shall follow the requirements of the Quality Assurance Program located in Section 2 of the ODOT Manual of Field Test Procedures and the roles and responsibilities outlined in the QCCS Handbook. The following are the approved Technician Certifications currently in place in the Technician Certification Program:

- Certified Aggregate Technician ("CAgT")
- Certified Embankment and Base Technician ("CEBT")
- Certified Density Technician ("CDT")
- Certified Asphalt Technician I ("CAT-I")
- Certified Asphalt Technician II ("CAT-II")
- Certified Mix Design Technician ("CMDT")
- Quality Control Technician ("QCT")
- Concrete Control Technician ("CCT")
- Concrete Strength Testing Technician ("CSTT")

Consultant shall:

- Review and monitor the CC's documentation for the quality of all materials incorporated into the Project.
- Verify that all materials furnished and placed on the Project comply with the approved specifications.
- Certify that the documentation confirms that all materials comply with construction contract requirements.
- Maintain the Test Summary for Non-Field-Tested Materials and Field-Tested Materials (Test Summary "A", "B" and "B-QA") as detailed in the ODOT Construction Manual, Chapter 12B Quality.

- Identify and monitor CC's quality control technicians and require proper and current certification(s), and require that proper testing frequencies and procedures are being followed. Monitoring must be done by Consultant staff experienced in all areas of field testing and documentation and certified by ODOT's Technician Certification Program for the specific tests being monitored.
- Take appropriate action if CC's quality contract technicians do not have proper or current certifications or if proper testing frequencies and procedures are not being followed.
- Obtain, review and compile all required Project quality documentation in accordance with the ODOT Construction Manual and the construction contract documents.
- Communicate with Agency's QAC to facilitate timeliness and efficiency in the verification and IA testing work and compliance with all requirements of the ODOT Manual of Field Test Procedures and contract documents.
- Compare CC's QC test results to Agency or ODOT's verification test results to verify they are within IA parameters.
- Take appropriate action and work with APM to resolve any discrepancies between CC's QC test results and the ODOT verification test results.
- Prepare quality price adjustments as necessary for materials.

Deliverables and Schedule:

- Field Inspection Reports ("FIRs") and Non-Field-Test Summaries Submit via email as Project work progresses along with following protocol provided in Task 5.4 Submittal of Final Project Documentation.
- Field-Test Summaries and other Project field-tested materials quality documentation Submit via email as Project work progresses along with following protocol provided in Task 5.4 Submittal of Final Project Documentation.

TASK CE-4 RESERVED

TASK CE-5 PROJECT CLOSE-OUT

Consultant shall complete interim and final on-site inspections and submit all Project records required for final payment and Project Acceptance.

Task CE-5.1 Final Inspection(s) and Submittals

LPA Agency shall issue Second Notification when all on-site bid item and CCO, EWO and SFO work is completed per the Specifications, in 00150.90(a) and 00180.50(g) (Refer to the ODOT Construction Manual, Chapter 13 – Contract Time.)

Consultant shall:

- Attend a review of the Project at a time close to completion of on-site work.
- Attend and lead a Project Final Inspection with CC and Agency within 15 days after receiving notice from the CC that all punch list items, final trimming and cleanup according to the Specifications in 00140.90 have been completed.
- Prepare a punch-list of items to be corrected by the CC.
- Once the punch-list items have been corrected, meet at Project site with Agency a follow-up to the Final Inspection.
- Include a letter from the Agency that it accepts the Project as being complete.

• Recommendation to Agency to issue Third Notification to CC after all construction contract work and inspections are complete, and all required documentation is submitted per Oregon Standard Specifications for Construction, according to the Specifications in 00150.90. (Refer to the ODOT Construction Manual, Chapter 40 – Third Notification.)

Deliverables and Schedule:

- Recommendation of Second Notification due within 2 business days of completion of on-site work. Submit 1 electronic copy to APM.
- Recommendation of Project Acceptance (form 734-1384) Submit electronic copy to APM via email upon completion of final inspection per Construction Manual Chapter 36.
- Agency or other funding source letter of Project Acceptance.
- Recommendation of Third Notification due within 2 business days of completion of all construction contract work. Submit 1 electronic copy to APM.

Task CE-5.2 As-Constructed Plans

Consultant shall prepare as-constructed plans in conformance with the following reference documents as applicable to the Project:

1. Bridge Plans, ODOT Bridge CAD Manual ("BCM")

The following clarifications or exceptions or both to the above reference documents apply to Consultant-prepared as-constructed plans:

- As-constructed plans must be reviewed and approved by the POR prior to submittal to ODOT.
- The submittal and distribution requirements are specified in the "Deliverables" section of this task.
- Following submittal to ODOT, the APM will coordinate any needed reviews by the ODOT Tech Center for projects on or connected to ODOT facilities.

Deliverables and Schedule:

In addition to the deliverables listed below, Consultant shall submit paper format of as-constructed mark-ups to APM (if requested) for Tech Center reviews when projects are on or connected to ODOT facilities.

Consultant shall submit as-constructed plans within 90 calendar days of issuance of Second Notification as follows:

- Electronic files package: Stamped and signed PDF file (11 inch x 17 inch) that shows all redline as-constructed markups of plan sheets (and additional files listed below, if applicable to the Project)
- Follow the file naming convention required in the Bridge CAD Manual (linked above).
- If applicable, place the MicroStation and PDF files in the appropriate ProjectWise folder. If not in ProjectWise, submit files using a file transfer method (do not send as an email attachment).
- Also, place copies in the appropriate ProjectWise folder or send using a file transfer method, the following reports/records prepared/submitted in earlier phases:
 - o Copy of Final Foundation Geotechnical report
 - o Copy of Pile Record Books. (when applicable)

- Copy of Final Hydraulic Reports (scour analysis report included in this report when applicable)
- Send email notification to APM and to mailto:ODOTBridgeEngineeringSection@odot.state.or.us after placing files in ProjectWise or sending them via file transfer.

1. Roadway Plans

Consultant shall submit stamped and signed as-constructed plans within 90 calendar days of issuance of Second Notification as follows:

- Electronic PDF file that includes all roadway plan sheets showing red-line as-constructed markups.
- Use file naming convention as shown in Contract Plans Development Guide, Vol 1.
- Send email notification to APM.

Task CE-5.3 Structure Load Rating

ODOT Bridge Section has implemented the Load and Resistance Factor Rating ("LRFR") method, based on the AASHTO Manual for Bridge Evaluation ("MBE") with interim revisions. All bridges in Oregon (regardless of the owner) will be rated following the <u>ODOT LRFR Load Rating Procedures</u>. ODOT owned bridges will use the Oregon Specific Live Load Factors and all other bridges will use the re-calibrated National Live Load Factors.

Consultant shall perform load ratings in conformance with the LRFR procedures and software specified in the ODOT LRFR Manual (current edition at time load rating work is performed), including all reference standards incorporated into the manual in section 1.3.1.

The ODOT LRFR Manual and all resources and templates that must be used for LRFR load rating procedures, as described in the ODOT LRFR Manual, are available on line at the following link: ttp://ftp.odot.state.or.us/Bridge/LoadRating/LRFR.

Consultant shall base load rating on the final construction contract plans and modified to reflect asconstructed conditions. Consultant shall develop load rating reports for the bridge completed for the Project based on the ODOT load rating format.

Deliverables and Schedule:

Load Rating Report conforming to the requirements detailed in Section 22: "Deliverables" of the ODOT LRFR Manual, due within 90 calendar days after Second Notification.

E.2 PROJECT SCHEDULE

Schedule Assumptions

The Project is scheduled for a February 11, 2022 bid opening for the CC. It is anticipated that the CC will receive NTP no later April 30, 2022. Agency shall issue the CC Notice of Award and NTP in accordance with the Specifications in Section 00130.

- All construction work, with the exception of plant establishment work is assumed to be completed by June 30, 2023.
- The plant establishment period is assumed to be a 1-year period.
- All work for this CA/CEI SOW is to be completed within 30 calendar days of Agency issuing Third Notification to the CC.
- Construction Contract Completion Date as specified in the Specifications in 00180.50(h)(2) of the construction contract is April 30, 2023.
- Third notification to the CC is assumed to be issued on or before December 31, 2023.

F. CONTINGENCY TASKS

The table below is a summary of contingency tasks that Agency, at its discretion, may authorize Consultant to produce. Details of the contingency tasks and associated deliverables are stated in the task section of this CA/CEI SOW. Consultant shall complete only the specific contingency task(s) identified and authorized via written (email acceptable) NTP issued by APM, if requested by the LPA. Consultant shall submit a detailed cost estimate (within the NTE amount(s) in the Contingency Task Summary Table) for the agreed-to contingency Services within the scope of the contingency task.

If LPA chooses to authorize some or all of these tasks, Consultant shall complete the authorized tasks and deliverables per the schedule identified for each task. The NTP will include the contingency task name and number, due date for completion, and agreed-to NTE for the authorized contingency task.

Each contingency task is only billable (up to the NTE amount identified for the task) if specifically authorized per NTP. In the table below, the "NTE for Each" amount for a contingency task includes all labor, overhead, profit, and expenses for the task. The funds budgeted for contingency tasks may not be applied to non-contingency tasks without a fully executed amendment. The total amount for all contingency tasks authorized shall not exceed the maximum identified in the table below. Each authorized contingency task must be billed as a separate line item on Consultant's invoice.

Contingency Task Summary Table

CONTINGENCY TASK DESCRIPTION	(UNIT) NTE	MAX QUAN.	METHOD OF	CONTINGENCY NTE AMOUNT			
			COMP.				
Task CE-2.9 Design Modifications	\$	1	TMM	\$ 8,764.97			
Task CE-3.2 Construction Activity	\$	1	TMM	\$85,098.18			
Monitoring							
Total NTE For All Contingency Tasks:				\$93,695.54			

DAVID EVANS AND ASSOCIATES, INC.

ATTACHMENT B

Design Services for Canby-Marquam Highway: Bear Creek Bridge Project CA/CEI Engineering Services

Cost Estimate (03/15/2022)

													Labor	Non	-Labor	Task
Task No.	Description	Project Manager IV (Joel Tubbs)	Construction Services Manager I (Eric Bortvedt)	Scientist IV (John Macklin)	Engineer IV (Anthony Calcagno)	Designer IV (Jim Culpepper)	Engineering Designer I (Aaron Smith)	QA/QC Specialist III (Cyndi Twite)	QA/QC Specialist III (Michelle Jory)	Construction Inspector III (Kris Beck)	Project Coordinator V (Angie Jones)	Total Hrs	Total	Expenses	Sub- Consultants	Total
CE-1	PROJECT MANAGEMENT OF CA/CEI SERVICES	112.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		168	\$32,233.24	\$0.00	\$0.00	\$32,233.24
	Coordination	80.00									16.00	96	\$20,068.86		\$0.00	\$20,068.86
CE1.2	Status Reports and Invoices	32.00									40.00	72	\$12,164.38		\$0.00	\$12,164.38
05.0	CONCEDIOTION CONTRACT ADMIN / CONCEDIOTION ENGINEERING AN	00.00	00.00	0.00	70.00	0.00	045.00	50.00	00.00	00.00	0.00	570	*77.000.50	\$4.050.00	* 0.000.00	* 00.054.55
CE-2	CONSTRUCTION CONTRACT ADMIN / CONSTRUCTION ENGINEERING AN		60.00	0.00	70.00	0.00	215.00	53.00	20.00	98.00		578	\$77,903.53	\$1,058.00	\$3,390.02	\$82,351.55
	Pre-Construction Conference	4.00			40.00		75.00	3.00		3.00		10	\$1,693.28	\$50.00	\$0.00	\$1,743.28
	Project Progress Meetings	25.00			40.00		75.00	10.00	20.00	75.00		225	\$30,381.46	\$1,008.00	\$0.00	\$31,389.46
	Working Drawings, Shop Drawings, and other Submittal Reviews	8.00 25.00	60.00		30.00		70.00 70.00	20.00 20.00	20.00	20.00	<u> </u>	138 205	\$16,812.90 \$29,015.89		\$3,390.02 \$0.00	\$20,202.92 \$29,015.89
CEZ.4	Consultation During Construction	25.00	60.00		30.00		70.00	20.00				205	\$29,015.69		Φ0.00	ֆ29,015.69
CE-3	CONSTRUCTION, ENVIRONMENTAL COMPLIANCE AND WORK ZONE MO	0.00	0.00	60.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00	108	\$16,534.92	\$302.40	\$0.00	\$16,837.32
	Environmental Compliance and Mitigation Monitoring	0.00	0.00	60.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	60	\$9,758.40	\$302.70	\$0.00	\$9,758.40
	Quality Control Monitoring (Non-Field Tested and Field-Tested Materials)			00.00				48.00				48	\$6,776.52	\$302.40	\$0.00	\$7,078.92
025.5	Quality Control Monitoring (Non-Field Fested and Field Fested Materials)							70.00					ψ0,770.02	ψ502.40	ψ0.00	Ψ1,010.52
CE-4	CONSTRUCTION SURVEYING [RESERVED]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00
<u> </u>		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Ţ O.O.O.	Ţ0.00	40.00	ψο.σο
CE-5	PROJECT CLOSE-OUT	6.00	0.00	0.00	0.00	8.00	20.00	0.00	0.00	8.00	0.00	42	\$5,685.89	\$33.60	\$0.00	\$5,719.49
	Final Inspection(s) and Submittals									8.00		8	\$972.80	\$33.60	\$0.00	\$1,006.40
	As-Constructed Plans	2.00				8.00	8.00					18	\$2,578.04		\$0.00	\$2,578.04
CE5.3	Structure Load Rating	4.00					12.00					16	\$2,135.05		\$0.00	\$2,135.05
	Total Non-Contingency	180	60	60	70	8	235	101	20	106	56	896	\$132,357.59	\$1,394.00	\$3,390.02	\$137,141.61
	CONTINGENCY TASKS	12.00	0.00	0.00		0.00		0.00	0.00	609.00	0.00	669	\$82,651.76	\$1,646.40	\$9,397.38	\$93,695.54
	Design Modifications	12.00			16.00		32.00					60	\$8,597.36	\$0.00	\$0.00	\$8,597.36
CE3.2	Construction Activity Monitoring									609.00		609	\$74,054.40	\$1,646.40	\$9,397.38	\$85,098.18
	Total Including Contingencies	192	60	60	86	8	267	101	20	715	56	1565	\$140,954.95	\$3,040.40	\$12,787.40	\$230,837.15

\$162.64 \$162.64 \$163.19 \$102.51 \$141.18 \$128.59 \$121.60 \$123.12

\$14,259

\$27,370

\$226.24

\$43,437

\$141.36

\$8,482

\$9,758

\$13,987

\$1,305

Loaded Billing Rate (based on contracted rate table, OH, FCCM & Profit %)

Labor Totals

Total Non-Contingency Labor: \$132,357.59

\$6,895

Direct Non-Labor: \$1,394.00 **Sub-Consultants:** \$3,390.02

Total Non-Labor: \$4,784.02

\$215,009.35

Total Estimate (Without Contingency Tasks): \$137,141.61

\$86,944

Total Not to Exceed: \$137,141.61

Total DEA Contingency Labor: \$82,651.76

Total Direct Contingency Non-Labor: \$1,646.40

Contingency Sub-Consultants: \$9,397.38

Total Contingency Estimate: \$93,695.54

Grand Total Estimate (with Contingency Tasks): \$230,837.15

Total Not to Exceed (with Contingency Tasks): \$230,837.15

14.6% 8.9% 1.3% 22.9%

14.7% 21.2%

> 0.0% 7.1% 5.2%

0.0% 0.7% 1.9% 1.6%

40.6% 9.2% 90.8%

59.4%

100.0%

^{*} Note: Rates shown are average rates for classifications for budgeting purpose. Actual rates for staff will be used for invoicing which may vary from that shown, and may be adjusted.