

# ATTACHMENT A PROPOSAL COVER SHEET

**RFP# 25134; Oregon Department of Transportation**

**This Proposal is for:** PE/Design Services , (OR) Both PE/Design and CA/CEI Services

**Legal Name of Firm as provided to IRS:** T.Y. Lin International; a/an California Corporation;

**DBA Name (if different than legal name):** \_\_\_\_\_

<input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Professional Corporation <input type="checkbox"/> Ltd. Liability Company <input type="checkbox"/> Partnership or Joint Venture <input type="checkbox"/> Limited Partnership <input type="checkbox"/> Ltd. Liability Partnership <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other _____
Mailing Address <u>285 Liberty Street NE, Suite 350</u> <u>Salem, OR 97301</u>

Type name of primary Contact for this Proposal <u>Marty Andersen, PE</u>
Email address <u>marty.andersen@tylin.com</u>
Telephone <u>503.385.4200</u> Fax <u>503.641.1069</u>
Type name of person(s) authorized to sign Contract/Price Agreement: <u>John Ferguson, PE</u>

### “PASS/FAIL” - PROPOSAL SUBMISSION CHECKLIST (for Proposer use)

- Submission Deadline Date and Time met
- Proposal Does Not Include Conditional Language about Terms and Conditions

#### “REQUIRED” ITEMS – PROPOSAL SUBMISSION CHECKLIST (for Proposer use)

- Proposal Cover Sheet Included and authorized original signature obtained
- Minimum Qualifications met and indicated on Proposal Cover Sheet
- Proposal Format and Page Length Requirements met
- Correct number of Proposals included along with CD for electronic submittals
- Reference Questionnaire forms
- Subcontractor/Supplier Solicitation and Utilization Form, completed and signed
- Checked off appropriate Conflict of Interest Disclosure certification on Proposal Coversheet (and included COI Disclosure Form(s) if there are required disclosures).

### RESPONSES TO MINIMUM QUALIFICATIONS (See RFP Section 1.5.2)

#### ➤ Registered Professional Engineer

Proposers must provide information below for at least one Registered Civil Engineer intending to perform civil engineering services under the Contract/Price Agreement.

Name	Registration Number	Jurisdiction of Registration
Marty Andersen, PE	46846	Oregon

#### ➤ Registered Professional Land Surveyor (PLS)

Proposers must provide information below for at least one PLS intending to perform surveying services under the Contract/Price Agreement.

Name	Registration Number	Jurisdiction of Registration
Samantha Bianco, PLS	61303PLS	Oregon

**CERTIFICATIONS.** By signature below, the undersigned Authorized Representative on behalf of Proposer certifies that:

1. Agency shall not be liable for: a) any claims or be subject to any defenses asserted by Proposer based upon, resulting from, or related to, Proposer's failure to comprehend all requirements of the

RFP; or b) any expenses incurred by Proposer in either preparing and submitting its Proposal, or in participating in the proposal evaluation/selection or Contract/Price Agreement negotiation process, if any.

2. Neither the Proposer, a major partner or a major shareholder, (defined as a partner or shareholder owning 10% or more of your firm), a major subcontractor (defined as receiving 10% or more of the total Contract/Price Agreement amount), nor any principal officer of a Proposer, major partner, a major shareholder or major subcontractor:
  - a) is presently debarred, suspended, disqualified, proposed for debarment or declared ineligible for the award of contracts by any federal agency or agency of the State of Oregon, and is not listed on GSA's Excluded Parties List System which is available at <http://epls.gov>.
  - b) has, within the last 3-year period, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of federal or state antitrust statutes relating to the submission of bids or Proposals; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property? {A "principal officer of a Proposer, major partner or major subcontractor," means an officer, director, owner, or partner and any person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions)}.
3. Proposer has made all required **Conflict of Interest (COI) disclosures**, if any.  
The ODOT COI Guidelines and COI Disclosure Form are available at the following link: <http://www.oregon.gov/ODOT/CS/OPO/AE.shtml#Forms> (under "Misc. Procurement Related Forms")

**(Check one of the following two certifications as applicable)**

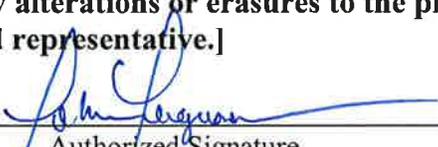
- Proposer understands and has provided to all Associates (which includes subcontractors) the COI Guidelines and COI Disclosure Form. Proposer and, to the best of the undersigned's information, knowledge and belief, Proposer's Associates (as defined in the COI Guidelines) are in conformance with the COI Guidelines, have no employees that were employed by ODOT within the last one-year period, and have no conflicts of interest or other disclosures required per the COI Guidelines. The response to each question on the COI Disclosure Form was "no".
- Proposer understands and has provided to all Associates (which includes subcontractors) the COI Guidelines and COI Disclosure Form. Proposer and, to the best of the undersigned's information, knowledge and belief, all Associates (as defined in the COI Guidelines) have provided on the COI Disclosure Form(s) submitted with this Proposal all disclosures required per the ODOT COI Guidelines.
4. Proposer has available (and can furnish to Agency upon request) the appropriate financial, material, equipment, facility and personnel resources and expertise, or ability to obtain the resources and expertise, necessary to indicate the capability of the Proposer to meet all contractual responsibilities.
  5. Proposer recognizes this is a public document open to public inspection. Any portion(s) of the Proposal that Proposer considers exempt from disclosure under Oregon Public Records Law is/are clearly designated in the Proposal and listed on a separate sheet attached to this Proposal Cover Sheet with justification and citation to the authority relied upon.
  6. Proposer does not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation or national origin. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is:
    - o a minority, women or emerging small business enterprise certified under ORS 200.055, or
    - o a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225.

7. Proposer has an operating policy supporting equal employment opportunity. If proposing firm has 50 or more people, Proposer also has a formal equal opportunity program.
- o Does Proposing firm have 50 or more employees?  Yes,  No.
  - o Does Proposing firm have a formal equal employment opportunity program?  Yes,  No

Agency is an equal-employment-opportunity employer and values diversity in its work force. Agency requires its Contractors to have an operating policy as an equal employment opportunity employer. Firms of 50 people or less do not need to have a formal equal employment opportunity program, but shall have an operating policy supporting equal employment opportunity. Firms of 50 people or more shall also have a formal equal employment opportunity program.

8. The Proposal submitted is in response to the specific language contained in the RFP, and Proposer has made no assumptions based upon either (a) verbal or written statements not contained in the RFP, or (b) any previously-issued RFP, if any.
9. Proposer, acting through its authorized representative, has read and understands the RFP instructions, specifications, and terms and conditions contained within the RFP (including the sample contract) and all Addenda, if any. Failure to provide information required by the RFP may ultimately result in rejection of the Proposal.
10. Proposer agrees to and shall comply with, all requirements, specifications and terms and conditions contained within the RFP (including the sample contract) and all Addenda, if any.
11. Proposer and Proposer's employees and agents are not included on the list entitled "Specially Designated Nationals and Blocked Persons" maintained by the Office of Foreign Assets Control of the United States Department of the Treasury and currently found at <http://www.treas.gov/offices/enforcement/ofac/sdn/t11sdn.pdf>.
12. All contents of the Proposal (including any other forms or documentation, if required under this RFP) and this Proposal Cover Sheet, are truthful and accurate and have been prepared independently from all other Proposers, and without collusion, fraud, or other dishonesty. **False Claims.** Proposer understands that any statement or representation it makes, in response to this solicitation, if determined to be false or fraudulent, a misrepresentation, or inaccurate because of the omission of material information could result in a "claim" {as defined by the Oregon False Claims Act, ORS 180.750(1)}, made under the resulting PA/WOC being a "false claim" {ORS 180.750(2)} subject to the Oregon False Claims Act, ORS 180.750 to 180.785, and to any liabilities or penalties associated with the making of a false claim under that Act.
13. The signatory of this Proposal Cover Sheet is a duly authorized representative of the Proposer, has been authorized by Proposer to make all representations, attestations, and certifications contained in the Proposal document and to execute this Proposal document on behalf of Proposer.

[Note: Any alterations or erasures to the proposal shall be initialed in ink by the undersigned authorized representative.]

  
\_\_\_\_\_  
Authorized Signature

Date December 12, 2012

\_\_\_\_\_  
John Ferguson, PE, Vice President  
(Print Name and Title)

**CONFLICT OF INTEREST (COI) DISCLOSURE FORM**

**Oregon Department of Transportation**

Firms under Contract or proposing to enter into a Contract with Agency must be in conformance with the "ODOT Conflict of Interest Guidelines" available on the Internet at:  
<http://www.oregon.gov/ODOT/CS/OPO/AE.shtml#Forms> (under "Misc. Procurement Related Forms")

The definitions of terms used in this COI Disclosure Form shall be those provided in the ODOT Conflict Of Interest Guidelines (note that "Public Official" includes all Agency employees).

**This COI Disclosure Form is submitted in response to (check only one):**

- Agency RFP# 25134 [or] ITB# \_\_\_\_\_
- Contract # \_\_\_\_\_.
- Price Agreement # \_\_\_\_\_ WOC# \_\_\_\_\_ [or] PO# \_\_\_\_\_.
- Changes to COI Disclosure Form previously submitted for (RFP # \_\_\_\_\_, ITB # \_\_\_\_\_, Price Agreement # \_\_\_\_\_, WOC # \_\_\_\_\_, Contract # \_\_\_\_\_)

**This COI Disclosure Form must be signed in ink by a principal of the Firm to certify that it is correct. A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.**

My signature certifies that as disclosed on or attached to the present form:

- (a) the Firm's disclosures are complete, accurate, and not misleading.
- (b) the Firm has provided the ODOT COI Guidelines to all Associates and Subcontractors (if any) and the present form includes or has attached any required COI disclosures from those sources.

**I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:**

**Complete Legal Name of Firm: Parametrix, Inc.**

**Address:**

700 NE Multnomah  
Suite 1000  
Portland, OR 97232

**Signature:** \_\_\_\_\_



**Name (type/print):** Richard Roché, RG

**Title:** Portland Office Principal

**Telephone:** (503) 233-2400

**Fax No.:** (503)233-4825

**Date:** 12/3/12

**Please answer all questions "Yes", "No" or "N/A" (if uncertain answer "Yes.") If the answer to any of the questions is "Yes," then use the applicable "Comments" fields to:**

- (a) furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and
- (b) identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. a) Is any Associate of the Firm a former employee of Agency within the last year? No  Yes

b) Is any Associate of the Firm a Relative or Member of the Household of a current Agency employee that had or will have any involvement with this Procurement or Contract Authorization? No  Yes

**If the answer to either of the above questions is “Yes”, complete the attached “Relatives and Former Agency Employees -Roles and Signatures” table (Part A and/or Part B, as applicable).**

2. Does the Firm or any Associate of the Firm have an Actual, Apparent or Potential Conflict Of Interest (“Individual” or “Organizational”) with regard to any member of an Agency Procurement evaluation or selection team? No  Yes  **Comments:**
  
3. Did the Firm or any Associate of the Firm conduct prior work on the Project described in the Procurement, or participate in preparing any part of the Procurement or any documents or reports related to the Procurement or to which the Procurement refers? No  Yes  **Comments:**
  
4. Does the Firm or any Associate of the Firm have any past, present or currently planned interests which are an Actual, Apparent or Potential Conflict of Interest (“Individual” or “Organizational”), with respect to the Procurement or award of this Contract or performing the work for Agency? No  Yes  **Comments:**
  
5. Has the Firm or an Associate of the Firm offered to a Public Official, or is the Firm aware of any Public Official that has solicited or received, directly or indirectly, any pledge or promise of employment or other benefit based on the understanding that the Public Official’s vote, official action or judgment would be influenced thereby? No  Yes : **Comments:**
  
6. Has (or will) the Firm or an Associate of the Firm provided a direct beneficial financial interest to any person within two years after the person ceased to hold a position as a Public Official who was involved in the Procurement or Authorization for the Contract, or is the Firm aware of any such person or Public Official who has or will receive a direct beneficial financial interest within the two year period? No  Yes  **Comments:**
  
7. Is the Firm aware of any current or former Public Official that has an Actual, Apparent or Potential Conflict Of Interest with respect to the Procurement or award of this Contract or performing the work for Agency? No  Yes : **Comments:**
  
8. Does the prospective Contract/WOC include development of an environmental assessment (EA), environmental impact statement (EIS) or Finding of No Significant Impact (FONSI)? No  Yes   
  
**If yes**, in accordance with the disclosure statement requirements of Council on Environmental Quality Regulation, 40 C.F.R 1506.5(c), does the Firm have any financial or other interest in the outcome of this Project; and/or does the Firm have any agreement, enforceable promise, or guarantee to provide any future work on this Project? No  Yes  **Comments:**
  
9. Have Subcontractors or other Associates furnished COI Disclosure Forms separate from the present form? (If yes, attach the disclosures.) No  Yes  N/A  **Comments:**
  
10. If the prospective Contract/WOC includes personal services for the purpose of administering, managing, monitoring, inspecting, evaluating compliance with or otherwise overseeing a public contract, is the Firm or an Associate or an Affiliate of the Firm a party to the subject public contract? No  Yes  N/A  **Comments:**

**Relatives and Former Agency Employees - Roles and Signatures**

For each employee of the Firm that was employed by Agency within the last year, state the job the employee performed for Agency, the role the employee now serves for the Firm and the date the employee left Agency. Use Part B for Firm Associates with Relatives or Members of the Household working for Agency that had or will have involvement with this Procurement or Contract.

<b>Part A: Employees that left Agency in the last year.</b>			
Employee Name/Signature	Job Performed for Agency	Current Role with Firm	Date left Agency
Name: Sara Morrissey Sign:  • Involved with this Procurement on behalf of ODOT? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> • Involved with Proposal development for this Procurement? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>	Project management, permit applications, grant writing for National Scenic Area Coordinator on ODOT Region 1 projects	Planner I	Still employed part-time with ODOT.
Name: _____ Sign: _____ • Involved with this Procurement on behalf of ODOT? No <input type="checkbox"/> Yes <input type="checkbox"/> • Involved with Proposal development for this Procurement? No <input type="checkbox"/> Yes <input type="checkbox"/>			
Name: _____ Sign: _____ • Involved with this Procurement on behalf of ODOT? No <input type="checkbox"/> Yes <input type="checkbox"/> • Involved with Proposal development for this Procurement? No <input type="checkbox"/> Yes <input type="checkbox"/>			
<b>Part B: Identify Associates of the Firm that are Relatives or Members of the Household of Agency employees currently working for Agency, if the Agency employee had or will have any involvement with this Procurement or Contract.</b>			
Firm Associate's Name	Name and Relationship of Relative or Member of Household Employed at Agency	Role at Agency	Agency employee's Role with this Procurement

(Make copies of this form as needed to list additional employees.)

## 2.2.1 PROPOSER'S PROJECT MANAGEMENT for PE-DESIGN SERVICES

### A. Management & Organizational Structure ... how it aids in delivery of services, chain of command

Successful delivery for this On-Call contract requires a team that has expertise to deliver any type of project, meet all expectations – yours and your stakeholders, and deliver under any schedule required! TYLI has that expertise: we have delivered a range of projects throughout Oregon for ODOT and Local Agency (LA) clients – from mega projects over \$200M in construction, to small culvert replacement, pavement rehabilitation, and bicycle/pedestrian facility projects. We have also performed design using several design standards and processes tailored to each client, using a variety of delivery methods, and meeting all schedule and budget requirements.

What sets our team apart is that we are extremely **nimble** - responsive to you and your needs. We have the flexibility to fashion our delivery approach to meet all technical and non-technical requisitions; the ability to immediately “pivot” when conditions change; and call upon our deep bench of resources to meet ANY schedule commitment, regardless of how stringent. Our team is also **innovative**, regularly looking for ways to push the engineering-based problem-solving envelope. We have produced several unique solutions in Oregon, such as bridge “skidding” for Rapid Replacement of two bridges on our OR38: Elk Creek to Hardscrabble Creek project, and also on our Sellwood Bridge project, to utilize the existing bridge as a detour and maintain traffic during construction while allowing the contractor to build the new bridge in one construction stage. And, we bring **value**, providing you with cost-effective solutions.

Beyond traditional Design-Bid-Build, we have delivered several projects in Oregon, numerous in the Pacific NW and hundreds around the world using Design-Build (DB), Construction Management/General Contractor (CMGC), Construction Management at Risk (CM@R), and Public-Private Partnership (P3). During these projects, we work directly with contractors, and our extensive resume has given us a deep understanding of construction means and methods and “what things cost” – from materials, to equipment, labor, and general conditions. We will use this knowledge to design every project under this contract, by first asking, how would a contractor build this most efficiently? Then, we craft solutions and develop designs around the most economical way to build it.

The TYLI Team is organized around a **single-point of contact for contract management** – Marty Andersen, PE. As Manager of TYLI's Oregon Operations, Marty has responsibility for resource management for all our projects throughout Oregon. His outlook, insights, and understanding of appropriate design were largely shaped by his 28 years at ODOT, which provided him the opportunity to understand each component of the ODOT process, and where he developed a reputation for *getting the job done*. Now as your consultant, Marty's charge has been to tailor project tasks to how ODOT conducts its business and what the Agency needs to accomplish. On projects, whether they were ODOT or LA facilities, partnering, balancing priorities and developing creative solutions have been his strengths. That vision and passion is essential to being able to deliver your projects efficiently and completely.

For Elk Creek to Hardscrabble Creek, ODOT R3 Design-Build, TYLI partnered with the contractor to propose an **innovative**, efficient and cost-effective solution, using **Rapid Replacement** techniques at the Elk Creek tunnel. This **innovative** solution resulted in the highest technical score and was deemed best **value** to the State of Oregon, resulting in our team's selection and the resulting highly successful project.

The TYLI team is staffed by a diverse and experienced group of Work Order Managers (WOMs) and a full contingent of resources to support work orders (WOs). To highlight a few:

- **Scott Nettleton, PE** has delivered projects to ODOT and LAs in every ODOT region, ranging from small (Deschutes River [Maupin Bridge Column Repair], installed by ODOT R4 maintenance) to large (Sellwood Bridge, Multnomah County; Elk Creek to Hardscrabble Creek, ODOT R3) projects.
- **Norm Smit, PE** has 32 years of structural and civil experience encompassing a wide range of project types. He is currently Delivery Manager for TriMet's Portland-Milwaukie LRT Bridge. He has worked on ODOT and LA projects throughout Oregon including Pleasant Valley Interchange, Crooked River, Catherine Creek, Sand Creek and Fork John Day River Bridges.
- **John Ferguson, PE** has 20 years' experience leading multidisciplinary teams on transportation projects throughout Oregon, including ODOT Regions 1-4, many of which have included multiple work locations, complex staging and traffic control, crossings over environmentally sensitive waterways, and compressed delivery timelines.
- **Justin Acacio, PE** brings significant expertise in design, construction administration, and scheduling on projects throughout Oregon. He has earned rave reviews from his clients for his diligence and excellent schedule control (see page 12).



• **Dan Pavela, PE** brings 30 years as a construction PM. His experience in resident engineering, materials engineering, project documentation and claims prevention and analysis has proven to be invaluable to our clients. As an example, in the disposition of the Claim for the Depot Street Bridge project in Jackson County, Dan’s forensic analysis of the Construction Contractor’s (CC) specific claims against the Owner involving equipment material and schedule resulted in the CC dropping their \$4.6M claim against the Owner.

For each effort, Marty will select **WOMs based on their relevant project history, complete availability for project duration, and overall compatibility with ODOT and LA’s project expectations.** WOMs will serve as the day-to-day project delivery leads, responsible for project management and coordination of technical work. Our WOMs, technical discipline leaders, and project staff have previously consulted and/or worked for ODOT and LAs, which enables us to provide teams that intimately understand how to deliver projects the ODOT way while retaining a full understanding of the flexibility needed to satisfy LAs when needed -- based on ODOT/LA policies and standards that result in products that look exactly as if produced by ODOT/LA staff. Marty will be briefed weekly by each WOM on the progress of each WOC assignment. This interaction will ensure performance at levels expected by ODOT and the LAs and that each assignment is adequately resourced. Marty is also available to meet with ODOT and LA project/program staff on a monthly basis to discuss projects and TYLI Team performance. He is also available at any time to address unforeseen events, effect of related actions, new directions by leadership, etc.

**Streamlined project delivery and documentation.** Unique to TYLI, our Oregon WOMs and staff are very well-versed in alternative delivery options. This has allowed us to streamline our project delivery and documentation processes. 17 of the subconsultants we selected for our team have partnered with us on these types of challenging, schedule-driven projects, including Sellwood Bridge, Elkhead to Knowles and Elk Creek to Hardscrabble Creek.

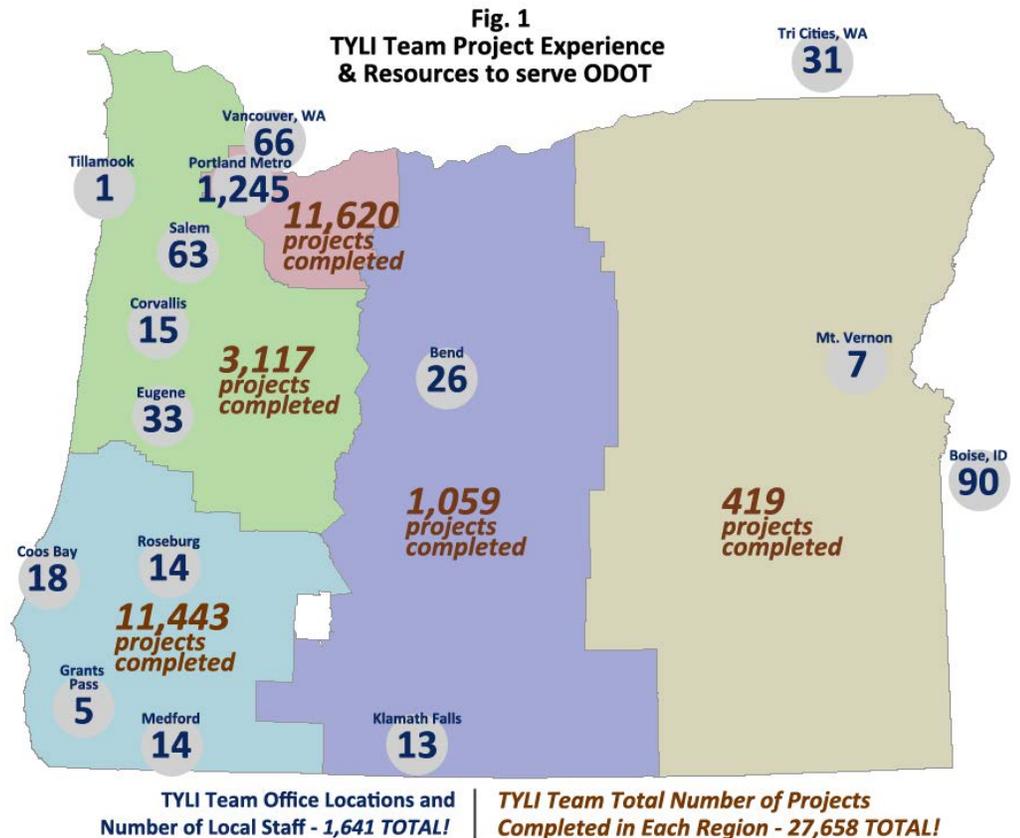
**How subcontractors will be selected for specific assignments, utilized and managed to complete projects**

As shown in *Figure 1*, our team brings strong geographic coverage and depth of resources throughout Oregon. We bring over 1,600 team members, with over 27,000 projects completed throughout the five ODOT regions!

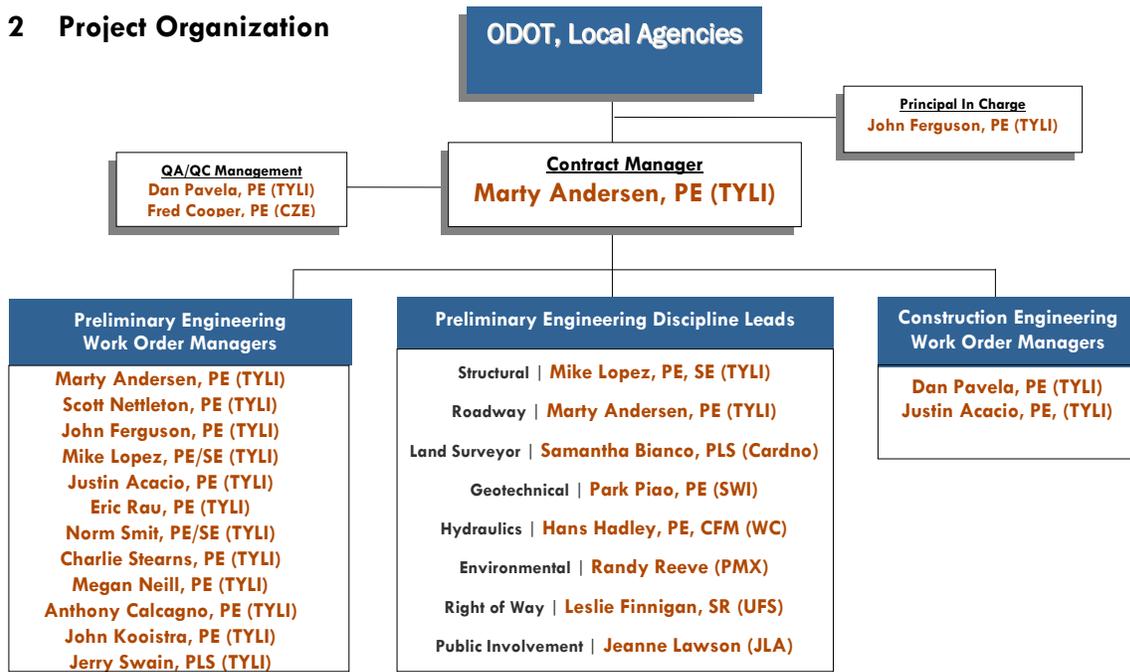
Given the potential for multiple assignments, we have included redundancies in each discipline to provide depth and flexibility to accommodate any project anywhere in the state. In response to an RFP or RFQ, Marty will assign a WOM who will work with him to identify the services required on the project and begin a process to assess our subconsultants’:

- Service capability and staff’s previous experience with ODOT/LA and with similar projects;
- Proximity to project location;
- Complete availability of proposed staff throughout the WOC’s project schedule;
- Compatibility with ODOT and LA’s project expectations;
- Cost effectiveness of utilization;
- D/M/WBE/ESB status

Once assigned the work order, the WOM will work with ODOT/LA to develop the final contract documents and be the sole source contact for that specific work. Unless otherwise agreed to, ODOT will receive services from the staff identified in our submitted proposal. Our subconsultants are held to the same internal controls and standards as our TYLI staff, are fully integrated into our Work Plans, and are included in all related project management matters; e.g., team correspondence, work sessions, and QC and cost protocols.



**Figure 2 Project Organization**



**Bridge Engineering**

- Mike Lopez, PE (TYLI)
- Scott Nettleton, PE (TYLI)
- Lisa Vernon, PE (EEE)
- Raj Bharil, PE, SE (HH)

**Roadway/Civil Engineering**

- Marty Andersen, PE (TYLI)
- Steve Katko, PE (CH2M)
- Aaron Isenhart, PE (HHPR)
- Tony Roos, PE (Cardno)
- Greg Jellison, PE (HDJ)
- Ralph Dunham, PE (STZ)
- John Wilcox, PE (HEA)
- Scott Souders, PE (ZCS)
- Hardy Li, PE (CP)
- Adam Heberly, PE (HE)
- David T. Buhl, PE (IEE)
- Douglas Ferguson, PE (FSE)
- Tina Adams, PE (CC)

**Stormwater Design**

- Jerry Swain (TYLI)
- Ken Vigil, PE, LEED AP (VAI)
- Doug Gates, PE (PMX)

**Transportation Planning**

- Sorin Garber (TYLI)
- Anne Sylvester, PTE (PMX)
- Bill Ciz (PMX)
- Mia Birk (APD)

**Traffic Engineering/ITS/TP&DT**

- Thomas Errico, PE (TYLI)
- Brian Copeland, PE (DKS)
- Charles Radosta, PE (KAI)
- Sam T. Johnston, PE (STJ)

**Utility/RR Coordination**

- Jerry Swain (TYLI)
- Scott Nebeker, PE (PMX)

**Surveying/ROW Mapping**

- Samantha Bianco, PLS (Cardno)
- Jerry Swain, PLS (TYLI)
- Dave Mills, PLS (DMC)
- Hayes McCoy, PLS, PE (AKS)
- Corey Woodruff, PLS (STZ)
- Robert Lennox, PLS (BD)
- Scott Smith (DSA)
- Kenneth Delano, PLS (FSE)

**ROW Appraisal/Acquisition**

- Leslie Finnigan, SR/WA (UFS)
- Roger D. Hanna (HMA)
- David Feinauer (ROWA)
- Casey Overcamp, SR/WA (ELS)

**Architecture**

- Michael Fitzpatrick (TYLI)
- Paddy Tillett (ZGF)

**CADD**

- Ryan Elwood (TYLI)
- Vijay Deodhar (3DI)

**ODOT, Local Agencies**

**Contract Manager**

**Marty Andersen, PE (TYLI)**

**Principal In Charge**

**John Ferguson, PE (TYLI)**

**QA/QC Management**  
**Dan Pavela, PE (TYLI)**  
**Fred Cooper, PE (CZE)**

**Preliminary Engineering Work Order Managers**

- Marty Andersen, PE (TYLI)
- Scott Nettleton, PE (TYLI)
- John Ferguson, PE (TYLI)
- Mike Lopez, PE/SE (TYLI)
- Justin Acacio, PE (TYLI)
- Eric Rau, PE (TYLI)
- Norm Smit, PE/SE (TYLI)
- Charlie Stearns, PE (TYLI)
- Megan Neill, PE (TYLI)
- Anthony Calcagno, PE (TYLI)
- John Kooistra, PE (TYLI)
- Jerry Swain, PLS (TYLI)

**Preliminary Engineering Discipline Leads**

- Structural | Mike Lopez, PE, SE (TYLI)
- Roadway | Marty Andersen, PE (TYLI)
- Land Surveyor | Samantha Bianco, PLS (Cardno)
- Geotechnical | Park Piao, PE (SWI)
- Hydraulics | Hans Hadley, PE, CFM (WC)
- Environmental | Randy Reeve (PMX)
- Right of Way | Leslie Finnigan, SR (UFS)
- Public Involvement | Jeanne Lawson (JLA)

**Construction Engineering Work Order Managers**

- Dan Pavela, PE (TYLI)
- Justin Acacio, PE, (TYLI)

**Geotechnical Engineering**

- Park Piao, PE (SWI)
- George Machan, PE (CCI)
- William L. Nickels, Jr., PE, GE (FEI)
- Timothy J. Pfeiffer, PE (FEI)
- Rick Thrall, PE, PhD (PBS)
- Alan P. Bean, PE (NGI)
- Patrick Flynn, PE (KF)
- Rajiv Ali (RO)
- Dave Thielen, PE (GEO)

**Hydraulics**

- Hans R. Hadley, PE, CFM (WC)

**Landscape Arch/Erosion Control**

- Ben Ngan (NNA)
- Colin McArthur, AICP (CMGS)
- Steve Durrant, ASLA (APD)
- Mike Faha, ASLA, LEED AP (GW)

**Cultural Resources**

- Jo Reese, MA, RPA (AINW)
- K. Toepel, PhD, RPA (HRA)
- Kimberly Demuth (Cardno)

**ESA Permitting**

- Randy Reeve (PMX)
- Mark Hynson (MBG)

**Public Involvement/Outreach**

- Jeanne Lawson (JLA)
- Lois Cohen (LDC)

**Environmental/Land Use Permitting**

- Randy Reeve (PMX)
- Stuart Myers (MBG)
- Colin McArthur, AICP (CMGS)
- Susan Cunningham (VAI)
- Guy Neal, PE (PBS)
- Jean Oschner (ESA)
- Frank Angelo (APG)

**Hazardous Materials**

- Patrick Flynn (KF)
- Dulcy Berri, RG, LG, LHG (PBS)
- Kim Elliott (SWI)

**NEPA**

- Mark Wigg (ICF)
- Bob Carson (MBG)
- John Vlastelicia (VAI)

**Wetlands**

- Paul Agrimis, RLA (VAI)
- Anita Cate, PWS (WSD)

**Watershed Restoration**

- Stuart Myers (MBG)

**Air Quality & Noise**

- Michael Minor (MMA)

**Electrical Engineering**

- Allen Morris, EE (TYLI)

**Inspectors**

- Thomas Siniscal (TYLI)
- Jay Greene (TYLI)
- Alan Heiman (CZE)
- Larry Carson (HEA)
- Dan Moyer (CMTS)

**Environmental Compliance**

- Tamara Schurian, PE (CZE)

**Construction Quality Compliance**

- Justin Acacio, PE (TYLI)
- Vince Shevham, QCCS (PMX)

**Contract Documentation**

- Rick McNichols (CZE)

**Scheduling**

- Dan Pavela, PE (TYLI)
- Justin Acacio, PE (TYLI)
- John Kooistra, PE (TYLI)

**Construction Surveyors**

- Project Surveyors

**Shop Drawings/RFI's**

- Project Engineers

**Constructability/Cost Estimates**

- Dan Pavela, PE (TYLI)
- John Kooistra, PE (TYLI)

**Legend**

- TYLI – T.Y. Lin International
- 3DI – 3D InFusion<sup>1,3,4</sup>
- AINW – Archeological Investigations NW
- AKS – AKS Engineering & Forestry
- APD – Alta Planning + Design
- APG – Angelo Planning Group<sup>1,2</sup>
- BD – BlueDOT<sup>4</sup>
- CMGS – Cameron McCarthy Gilbert & Scheibe
- Cardno – Cardno
- CC – Casso Consulting<sup>1,2,3,4</sup>
- CH2M – CH2M Hill
- CMTS – CMTS
- CP – Convergent Pacific, Inc.<sup>1,3,4</sup>
- CZE – Cooper Zietz Engineering<sup>1,3</sup>

- CCI – Cornforth Consultants
- DKS – DKS Assoc.
- DSA – David Smith & Associates
- DMC – Dave Mills Consulting, Inc.<sup>4</sup>
- EEE – Elite Edge Engineers<sup>1,2</sup>
- ELS – Epic Land Solutions<sup>1,2</sup>
- ESA – Environmental Science & Assessment<sup>1,2,4</sup>
- FEI – Foundation Engineering, Inc.
- FSE – Ferguson Surveying and Engineering
- GEO – GeoEngineers
- GW – Greenworks
- HMA – Hanna, McEldowney Assoc.<sup>4</sup>
- HH – Hardesty & Hanover
- HEA – Hardey Engineering Associates

- HDJ – HDJ Design Group
- HHPR – Harper, Houf, Peterson, Righellis
- HE – Heberly Engineering<sup>3,4</sup>
- HRA – Heritage Research Assoc.<sup>1,2,4</sup>
- ICF – ICF Jones and Stokes
- IEE – IE Engineering
- JLA – Jeanne Lawson Assoc.<sup>1,2</sup>
- KAI – Kittelson & Assoc.
- KF – Kleinfelder
- LDC – Lois D Cohen & Assoc.<sup>1,2,4</sup>
- MBG – Mason, Bruce and Girard
- MMA – Michael Minor Assoc.<sup>1,3,4</sup>
- NNA – Nevue Ngan Assoc.<sup>3,4</sup>
- NGI – Northwest Geotechnical Inc.<sup>1,3</sup>

- PBS – PBS Engineering & Environmental
- PMX – Parametrix
- RO – RhinoOne<sup>1,3</sup>
- ROWA – Right of Way Associates<sup>4</sup>
- STJ – STJ Inc.<sup>4</sup>
- STZ – Stuntzner Engineering & Forestry
- SWI – Shannon & Wilson, Inc.
- UFS – Universal Field Services
- VAI – Vigil-Agrimis, Inc.<sup>1,3</sup>
- WC – West Consultants
- WSD – Westbrook Science & Design<sup>1,2,4</sup>
- ZCS – Zbinden Carter
- ZGF – ZGF Architects

**D/W/MESB Firms in RED**

- DBE – 1 WBE – 2 MBE – 3 ESB – 4



**B. COORDINATING AND EXPEDITING PROJECT ELEMENTS ...To Meet Schedules Without Sacrificing Quality**

TYLI has served Oregon for over 30 years, beginning with design work on the Glenn Jackson Memorial Bridge by our firm’s founder, T.Y. Lin. As our primary client, we have worked diligently to develop a strong understanding of how ODOT needs, and wants, projects delivered.

**Partnering with our clients:** Partnering is a strong component of successful project delivery, and we will work with you to incorporate the needs and goals of stakeholders in development discussions. You can depend on us to deliver high-quality products and provide exceptional cost-effective services within schedule, the way you want them delivered.

**Knowledge of our clients’ processes and those elements that drive projects:** Our team has a thorough knowledge of the various manuals, standards and guidelines outlined in the ODOT Project Delivery Guidebook and the LAG Manual. The elements that drive ODOT/LA projects and schedules is critical in coordinating multi-discipline projects and meeting delivery goals, including:

- **Submittal Milestones** – complete understanding of “lock-in dates” from bid let for submittal of the DAP, Advance Plans, Final Plans, and PS&E submittals,
- **Environmental Permits and Clearances** – clear understanding of regulatory agency review periods of State and local permit applications, biological assessments, FHWA 4(f) processes, etc. so that timelines can be back-calculated from the PS&E date to determine when applications and documentation need to be submitted, and used as a reality check on the defined DAP submittal date.
- **Basis of Design Memo and Design Exceptions** – establishing design criteria early and conducting the appropriate level of work up front to justify exceptions and provide the information necessary for approval.
- **R/W Acquisition** – ODOT has overall responsibility to FHWA for R/W acquisition. Federal regulations require that ODOT provide the R/W certification. Therefore, it is critical to have an understanding of the ODOT R/W Manual and statutory-defined (and other) timelines involved in programming, appraisal, acquisition, and certification. These timelines can also be back-calculated from the PS&E date to determine when legal descriptions and exhibit maps need to be submitted to and approved by ODOT, and used as a reality check on the defined DAP submittal (when the project footprint is frozen).
- **Guidelines for Pre-Letting** – use of the Project Completeness Checklists to ensure that PS&E submittals are thorough. Office of Project Letting will no longer approve a project for PS&E without a PD02 Letter.

By having a complete understanding of the processes and associated timelines involved in State and Local Program projects, activities are thoroughly scheduled from the onset, minimizing the potential for surprises. Combined with carefully controlling project activities using proven project management tools, such as Primavera scheduling, earned value analysis, and good old communication, TYLI nimbly coordinates the many moving parts of a transportation project and meets all delivery schedules without compromising quality.

**Flexibility and Approach to Making Adjustments to Schedules**

Our approach to project management and coordination revolves around early and frequent communication with all team members, including ODOT staff, subconsultants, and stakeholders, as well as attention to detail – making sure that issues and action items do not slip through the cracks. Integrating the entire team, we use the following approach:

- **Conduct on-site meetings** with ODOT/LA staff during scope development and to establish Agency objectives and expectations.
- **Prepare a Work Plan** that addresses staffing and assignments, scope of work, deliverables, budget, and schedule. The Work Plan provides definitive directions to the project team (to keep them focused on work product quality and schedule) and includes specific statements regarding assumptions and study methodologies agreed to by ODOT and the LAs during scope negotiations, as applicable.

TYLI is currently **delivering two of the largest Local Agency projects in Oregon** – Multnomah County’s Sellwood Bridge and TriMet’s Portland–Milwaukie LRT Bridge – meeting **stringent schedule demands** to deliver **high quality products**.

We are coordinating and expediting project elements while maintaining an extremely high quality product. We do this through strong partnering relationships with our clients, bringing in–depth knowledge of their processes, standards, and the factors driving their projects.

As an example –for the \$209M Sellwood project TYLI has proven extremely **nimble**, delivering 1,389 plan sheets in under 12 months; we separated the design work into large and small design packages, and expedited and sequenced design of the many project elements; we provided **innovation** by moving the old bridge to the north as a detour; thus delivering a high level of **value** by saving at least a year on construction and several million dollars.

**Figure 3 TYLI Schedule Performance**

<b>Project</b>	<b>Schedule</b>	<b>Actual</b>
<b>I5: Elkhead to OR126: Knowles</b>	7/2010	7/2010
<b>Elk Creek to Hardscrabble Creek</b>	6/2009	6/2009
<b>I5: Camas Swale to Saginaw Rd</b>	4/2010	4/2010
<b>OR39: Alameda Ave Part Viaduct</b>	5/2011	5/2011
<b>Tillamook County Bridge Applications</b>	4/23/12	4/17/12



- **Primavera P6** – for each project, regardless of size, we develop a resource-loaded CPM schedule. This keeps our staff carefully scheduled and monitored for delivery, earned value and budget constraints. This strict attention to work planning is a key element to the success of our project delivery. It allows us to constantly monitor our team's progress and look ahead for key issues and opportunities to improve the process.
- **Conduct frequent (typically weekly) project team meetings** to facilitate informed discussions and decisions and team consensus on solutions and action items. Regardless of the frequency of team meetings, ODOT and LA staff are always invited to participate. We produce thorough meeting minutes to accurately dictate discussions, highlight decisions and resulting action items, and prompt follow-through. Project schedule, including milestones and deliverables, is discussed at every team meeting.
- **Consistently use project tracking tools**, such as Issues Logs, Decision Logs, frequent progress reports and schedule updates, earned value graphs, and action plans. These documents are frequently maintained and submitted to all team members and discussed at team meetings.
- **Effective use of communication mediums** tailored to meet the project needs and the ODOT/LA PM's style.
- **Actively schedule QC processes**, including both internal design team and external (ODOT/LA) QC reviews so that it is clear from day one when designs need to be completed to provide ample time for thorough QC reviews.

In particular, TYLI works to freeze design decisions during project development through strategy work sessions with project stakeholders. TYLI also understands that changes happen. If a change or external force beyond the control of team members occurs and project schedule is or could potentially be impacted, TYLI will execute the following process:

- **Meet** with the ODOT/LA PMs and other stakeholders to identify and quantify the schedule impediment.
- **Review** impacts to the bid letting schedule; major deliverable "lock-in" dates prior to bid letting; and in-water construction work windows.
- **Identify** schedule areas that may be accelerated (e.g., compressing design activity timelines).
- **Work** with our project partners to identify other schedule recovery options, such as compressing standard review timelines, environmental review and clearance timelines, or ROW certification timelines.

This practical understanding of project development is a healthy advantage in any development approach. TYLI is always looking for strategies to deal with "what if" scenarios so that when they happen they are non-events.

### **Flexibility and Approach to Staffing to Meet a Schedule**

The TYLI Team is structured to overlap in disciplines anticipated under this contract. Collectively, the TYLI Team brings together our area's industry leaders in specialty services. By having disciplines overlapped with resources from two or more firms, our team offers ODOT and LAs a deep bench and wide breadth of WOMs technical experts, and production staff. With a large national team accustomed to working on projects anywhere at any time, if you need us to bring on additional expertise or staff resources at a moment's notice, they are ready and available to you.

If assumptions made during scope development do not materialize, at times it is necessary to adjust level-of-effort in order to maintain budget. This can be accomplished by working with ODOT and LA PMs to discuss modifications to current task approaches, and assigning tasks to staff with appropriate skills at various levels (ex: junior or mid-level staff with oversight provided by senior-level staff).

### **C. QUALITY CONTROL Procedures and Policies**

Quality control (QC) is a performance issue. Delivery of quality product is the expectation of all owners hiring consulting firms. At TYLI, we understand that process never replaces the actual performance of quality engineering. However, record-keeping and documentation of QC is paramount for communication of this performance. In-house TYLI staff and our subconsultants will provide Quality Assurance Management on our WOC assignments. These team members' main function is to manage, track, and report on QC tasks - which benefits ODOT/LAs by ensuring that the QC Plan is followed by eliminating potential conflicting priorities due to workload or otherwise. All deliverables are reviewed prior to submittal to ODOT and the LAs. Our QC Plan establishes policies, procedures and protocols that are implemented independently of the WOM, as well as the design and construction staff, to ensure that the work is completed accurately; responds to the program requirements; and provides a means to verify and validate environmental compliance, design, and construction activities from DAP through final acceptance during construction. Our Plan emphasizes thorough and traceable documentation demonstrating our quality performance.

#### **Quality Control - Preliminary Design**

Each work order will be provided with a tailored QA/QC plan that details requirements for the following:

- **Schedule** – our schedules highlight the QC process and build design development timelines around those appropriately needed for internal and external reviews. This enables the Quality Manager and all checkers and reviewers to clearly understand the timing and duration of reviews.



- **Check and Review Staffing** – appropriate levels of all checks and reviews are implemented per current ODOT office practice. For each WOC, a staffing plan, developed by the WOM in consultation with the Quality Manager, is assembled to identify checkers and senior reviewers who will conduct independent reviews of all documents to verify the facts and judgments presented in deliverables; the product’s adherence to guidelines and the Work Plan; and the maintenance of QC records.
- **Plans and Specifications Review Checklists** – we maintain design review checklists for each technical discipline and for each major phase of project development (DAP, Advance Plans, Final Plans, PS&E). The Quality Manager ensures that the process is implemented. Review checklists, marked-up check prints, and comment forms are kept on file for easy accessibility.
- **Cross-Discipline, Environmental Compliance, and Constructability Reviews** – are performed prior to submittal of milestone deliverables to ensure compatibility between disciplines, and that designs are constructible and can be permitted. Checklists, certifications, and comment forms are also completed for these reviews as necessary.
- **Reports, Design Calculations, and Comment Review Forms** – all reports and design calculations are reviewed by senior staff. Reviewers initial the marked-up report and complete a comment review form. Comment forms are completed for all reviews and submitted to the designer and Quality Manager, who is responsible for tracking review comments, responses, and facilitating closure of unresolved issues. Design reviewers back-check all revisions and note that all design comments have been resolved in an agreeable manner.
- **Progress Meetings** – proactive and regular use of meeting minutes and action and decision logs resolve project issues that left unattended can hamper review processes. Focused Design Review meetings, attended by project staff, are also conducted to discuss resolution of comments.
- **Quality Assurance** –for each project, a team member will be assigned to assure the QC process was met. They will regularly check in with ODOT/LAs to make sure our team is providing exactly what you need, meeting all contractual obligations, and exceeding your expectations for quality and responsiveness.

**nimble** For Elkhead to Knowles, ODOT Regions 2 and 3, our team designed 8 projects on 6 separate sites – each of which had specific constraints and features to address.

The TYLI team consisted of staff from our local offices, our deep pool of expert staff resources, and our subconsultant partners. Because team members were working from multiple locations, to deliver the highest quality product our design team maximized our use of **communication tools**; used **Primavera** to keep a tight hold on the project schedule; and ensured the entire team strongly adhered to the **project’s Quality Control Plan**. Subconsultants were held to the same standards as TYLI’s internal QC processes. Project was successfully delivered on time and on budget.

**D. APPROACH TO MANAGING CHANGES IN BUDGET**

Our typical approach can be illustrated by the following: **I-5: N. Umpqua Rd. Bridges (Winchester) Repair/ODOT R3**. During the DAP, in an attempt to “squeeze” the most repair work possible from the budget, TYLI proposed load rating the truss spans in 3-dimensions. This allowed for engineers to consider lateral bracing effects and increased truss member capacities compared to traditional load rating methods. The result was fewer truss members requiring repairs than originally anticipated, and lower project costs. TYLI also facilitated a discussion with OBDP and ODOT on the need for a scoped maintenance walkway on the northbound bridge to compare the benefits with the cost, use feasibility, and additional repairs for truss members due to the additional weight of the walkway system. “Keep it small” was the theme used to evaluate deficient element repair alternatives. Alternatives that required large amounts of temporary shoring, large amounts of intricate “form-fitting” work, or large pieces of equipment were not recommended as these items lead to higher construction costs. **Budget shortfalls should be identified as soon as they are realized**. Through our use of earned value analysis, TYLI is able to predict cost overruns well in advance of the end of a project. This enables our WOMs to effectively judge the ability of a project to accept additional work without a contract amendment or, conversely, to inform ODOT when any additional effort is likely to result in exceeding established budgets. Our process ensures that shortfalls are identified well before solutions and project footprints are frozen upon DAP approval. If a budget shortfall is discovered, TYLI will notify the ODOT CPM immediately and facilitate a work session to present the background information and data used to identify the shortfall, as well as discuss options for a cost recovery plan. *The following illustrates our process:*

Approach	Result
Utilize our team’s CA/CEI staff to develop initial baseline construction cost estimate within the first two weeks of NTP.	If a shortfall is identified at this stage, the ODOT CPM is immediately contacted and a work session held to brainstorm ideas to “right-scope” project to fit the budget.
Construction budget is continuously monitored during design development and linked to all design development decisions.	If the baseline construction estimate is altered, the team will meet to find solutions to mitigate impacts and control decisions that could lead to cost escalation.
During design development, fluctuations in material prices are monitored through frequent contact with local providers	Ensures developed estimates and budget monitoring stay current.
Contractor means and methods are incorporated through our internal staff’s knowledge as well as our ongoing work (as a design or construction engineer) with contractors.	Allows us to effectively collaborate with CEI/CA staff to accurately develop constructible solutions and construction cost estimates.



## 2.2.2 PROPOSER'S COST EFFECTIVENESS FOR PE-DESIGN

### A. MANAGING COST

TYLI determines and maintains the most cost-effective manner to perform tasks by:

- **Discussing means and methods during WOC negotiations.** For each assignment, Contract Manager Marty Andersen will select a WOC Manager with the requisite background and experience to successfully manage the project. In the course of agreeing to the steps involved in completing tasks, ODOT and LA PMs and our WOC Managers will discuss the most cost-effective means and methods to meet project goals. Together, Marty and the WOC Manager will select the appropriate Discipline Task Leads from the TYLI team to scope, estimate, and successfully deliver the project.
- **Conveying means and methods to production staff during project kick-off.** During internal work sessions, Discipline Leads will convey the agreed upon task approaches to address project issues, objectives, and expectations as discussed during the WOC negotiations.
- **Conducting Team Strategy Worksessions.** These provide comprehensive information to team members and facilitate informed decisions that are frozen. This eliminates additional costs and schedule threats through rework.
- **Monitor production work.** In the course of managing and mentoring younger production staff, our tasks leaders and senior staff perform frequent “check-ins” to monitor progress, offer problem-solving assistance, and provide direction to keep efforts focused. TYLI also conducts staff meetings in which production efforts on all on-going projects are discussed and action items defined to minimize costs and maintain schedules.
- **Optimizing means and methods.** TYLI utilizes new information discovered during the course of project delivery to revisit approaches and seek ways to further optimize means and methods to complete project under WOC budget.

We believe that open, honest conversation between all team members throughout the entire project is key to ensuring costs are kept at a minimum and tasks are completed as efficiently as possible.

### Ensuring Accurate Tracking of Costs

In addition to defining the most streamlined approach to completing tasks, cost-effective project completion is achieved through accurate cost monitoring. This is achieved through application of several different cost tracking methods. This also includes tracking progress (e.g., percent complete) and comparing to costs incurred in order to assess project status and ensure cost-effectiveness. Our WOMs monitor costs and progress on a weekly basis using the following methods:

- **Resource-loaded scheduling** – We use Primavera P6 to establish and track task progress against project schedules. Our WOMs are well-versed in and use this tool to track individual task budgets versus task schedules and determine earned values. In fact, we resource-load every project we undertake.
- **Labor “burn rate” projections** – weekly task charges are extrapolated to the end task dates and adjusted to consider varying levels of production (e.g., reduced production during Agency/Owner submittal reviews.)
- **Review of weekly accounting system labor expense postings** – our WOMs can quickly detect anomalies in project charges due to untimely work being performed. This allows for immediate communication with staff to identify and remediate production issues.
- **Sub-milestone definitions** – tasks are broken down into subtasks with sub-milestones (dates) and assigned a target percent complete based on the relative levels of effort between subtasks. Each time a subtask is completed, the corresponding percent-complete is immediately compared to the amount of effort spent completing the subtask.

### Expense Reduction Strategies

Through our effective staff management and use of work-load leveling tools, the TYLI team will efficiently accommodate project locations anywhere in the State. Creative solutions for saving costs will be brainstormed and employed, accounting for each project’s particular needs. Our approach to ensure that travel, lodging, and per diem expenses are as low as possible includes:

- Combining task assignments with assignments from nearby projects to minimize overall travel expenses.
- Selecting team members located near the project for WOC assignments to take advantage of project/site familiarity and/or local knowledge.
- Leveraging the TYLI team’s comprehensive coverage of Oregon by utilizing local team offices to minimize travel costs and to efficiently respond to planned or impromptu site visits or

**value** TYLI understands ODOT and LAs are entrusted with public monies and we are dedicated to good financial stewardship, keeping project costs down and quality high.

TYLI is currently providing field verification and construction management for *TriMet’s PMLRT East Segment* project; engineering and construction services for *Sellwood Bridge*; engineering for *TriMet PMLRT Bridge*; and scheduling services for *OR26: Glencoe Road*.

Team members are carpooling to project sites and project offices; consolidating site visits and work meetings to keep travel costs low and allow travel time to be shared between the projects.



team meetings, and “quick hit” tasks, such as pick-up survey work, ROW staking, and construction-related tasks.

- Seeking alternatives to traveling such as conducting meetings using video-conferencing, virtual internet meetings, conference calls and web-conferencing.
- TYLI will also seek opportunities to hire temporary local help rather than relocate a current permanent employee.
- If the opportunity presents itself, we seek to reduce administration efforts and total costs by establishing central field offices that service multiple nearby projects.

**B. COST ESTIMATE METHODOLOGY, TOOLS & PROCESSES**

**Developing PE Services Summary of Estimate**

While the types and sizes of projects anticipated under this contract are numerous, most will involve PE services. TYLI’s approach to estimating PE services involves estimating a level of effort to complete tasks defined in the WOC, then employing several methods to check those estimates. Estimates proposed are those in which the results of the following methods converge to particular task and overall costs.

- **Estimate of hours** – approximately how long it should take (and by whom), along with required expenses, to complete each subtask necessary to accomplish the various scope of services. This method is the primary method used in all estimate development.
- **Historical data** – how much did it cost during the previous project involving the same services? Historical costs are adjusted to account for differences in the specific parameters associated with the previous and upcoming projects.
- **Cost per sheet** – applies historical data “rules of thumb” costs per developed contract drawing for technical disciplines. The number of sheets is estimated using past LA project plan sets, the ODOT Plans Preparation Manual, ODOT Roadway Design Manual, and ODOT Bridge Engineering and Bridge Office Practice Manuals, as LAs typically refer to these documents as their standards.
- **Hours per sheet** - applies historical data “rules of thumb” levels of effort in hours per developed contract drawing for technical disciplines.
- **Percentage of construction** – applies an industry standard percentage to planning or scoping construction cost estimates. Percentages vary depending on the complexity and size of the project. A variation of this method utilizes the ACEC “curves” or algorithms to calculate appropriate median compensation as a percentage of construction. It is necessary to adjust the ACEC curves as they do not consider DAP efforts, high-end analyses (such as seismic design for bridges), inflation, and fluctuations between construction cost increases versus increases in engineer salaries. In addition, discipline-specific estimating tools are also used for comparison of task level of effort estimates in hours. For example, considering bridge design, this includes *ODOT Bridge Office Practice Manual Bridge Design Cost Curves* – these cost-calculating algorithms are adjusted to consider inflation for the year the latest curves were developed, differences in consultant and ODOT staff labor mark-up rates, changes to current LRFD design specifications, and fluctuations between construction cost increases versus increases in engineer salaries.

**Ensuring Estimates are Fair and Reasonable**

For preliminary and construction engineering estimates, our experience has been that when the majority of the various aforementioned methods converge to particular task costs and overall costs, the resulting final costs have represented a fair and reasonable balance that provides ODOT and the LAs with cost-effective services.

TYLI’s approach to work order negotiations embraces a collaborative exchange. We share all information and data used in developing WOC estimates with the ODOT and LA PMs and staff. Using this approach, negotiations are completed quickly, as differences in opinion on the cost of performing a task are typically not due to the estimated number of hours to complete the work, but rather to different perceptions of the appropriate steps needed to complete it.

Once the appropriate steps to task completion are agreed upon, the costs are typically agreed upon as well. This approach also facilitates a forum for collaboration and learning by ODOT, LA and TYLI staff, and fosters building relationships that starts the project off on the right foot.

TYLI fully understands that public money has been entrusted to ODOT for projects awarded under this contract, and that we are part of a stewardship agreement with you. Our goal is to maintain public trust and credibility with responsible and efficient spending.

**Figure 4 TYLI Budget Performance**

Project	Budgeted\$	Actual\$ Expended	\$ Back to Agency
Pacific Hwy Ped Xng Ck, R1	\$25,541	\$24,303	\$1,238
Sisters IC Ramp Ck, R4	\$22,355	\$21,942	\$413
LRT O’xing Design Ck, R1	\$29,932	\$18,930	\$11,002
Pirates Cove, R2	\$60,121	\$41,106	\$19,016
Redmond Reroute, R4	\$108,546	\$97,321	\$11,225
Madras Bridges, R4	\$44,564	\$18,072	\$26,492
Kuebler Br Ck, R2	\$224,155	\$172,261	\$51,894
Ochoco Rail Repairs, R4	\$50,957	\$17,344	\$33,613
Astoria Signals, R2	\$219,207	\$43,322	\$175,885



## 2.2.3 PROJECT TEAM & QUALIFICATIONS for PE-DESIGN SERVICES

### Experience of Project Manager(s) with Similar Interdisciplinary Teams

Marty Andersen, PE, Contract Manager, will also be available to serve as a WOM. He brings over 29 years' experience, including 28 years at ODOT where he served as Manager of ODOT's Local Government Section, and ODOT Local Agency Liaison where he served as ODOT's Project Manager for LA projects. His management experience overseeing multi-disciplinary teams ranges in the hundreds – from small culverts to large, multi-modal facility improvements, and emergency response. His unique experience encompasses a breadth of interdisciplinary projects that sets him apart – roads, bridges, transit, rail, ports, marine, aviation, bike and pedestrian, ferries, and historic restorations. Because of his unique position at ODOT, Marty brings relationships with ODOT and LA staff throughout the state. He has spent his career partnering with ODOT, LAs and consultant teams to successfully deliver projects. He is currently serving as PM/WOM for SW Leahy Road Improvements, Washington County; Foss Road Slide Repair, Tillamook County and serving as Resource Manager for Sellwood Bridge, Multnomah County.

**A Nimble, Innovative, High-Value Team:** Marty is supported by a strong team of WOMs who deliver solid technical expertise and exceed our clients' goals and expectations. They bring strong experience collaborating with and managing interdisciplinary teams for transportation projects – from small to large, ranging from the most high-profile and complex transportation improvements to small street enhancements. Marty will assign WOMs to projects that match their background and ODOT/LA experience, and balance each WOM with a team of experienced discipline leads for every project need. He will also verify with the ODOT/LA PM if there is any particular WOM they would like assigned to their project. This provides flexibility to ODOT/LA that they will receive the WOM whom they feel will best represent their goals and needs.

This team of WOMs is extremely well-suited to providing on-call services encompassing a wide range of disciplines and geographic areas. An area in which TYLI really excels is our talented staff, trained in a variety of project delivery options. We are particularly skilled in managing tight deadlines, budget constraints, and diverse site conditions, providing the project results needed by ODOT and LAs to get projects completed successfully and quickly.

TYLI is a leader in scheduling for both construction and design. Fully integrated schedules are the norm for our project delivery and a key to a successful delivery of our projects within the State. These schedules access the same skills as demonstrated on the successful scheduling effort for OR 43: Willamette River Bridge (Oregon City) bridge construction.

*“The (OR43) project is complex both in the nature of the work and in the inter-relationships of the parties needed to accomplish it. TYLI has provided **skilled and experienced** scheduling personnel...have been **cooperative** in working with all of the parties involved...has made a **significant contribution** to what is going to be a **successful project**.”* –Wayne Statler, ODOT PM

As an example, on Multnomah County's high-visibility, \$209M Sellwood Bridge Final Design project, our team has proven our ability to be nimble, innovative and high-value – meeting the changing needs of the owner/client and requiring constant assessment and adjustment to design goals throughout the development process. **The TYLI team delivered PS&E (1,389 sheets) in just under 12 months**, and the design was developed according to the NEPA document and public input asking for a signature bridge. However, at that point it was determined that the price exceeded the project's budget. We then participated in a VE process to determine which project elements could be revised, allowing Multnomah County to still deliver a signature bridge but at a lower cost. A number of design elements were revised requiring both structural and architectural changes. The TYLI design team reworked the VE items and delivered the new PS&E documents in just three months in order to meet the necessary fish windows – which allowed the project to stay on the original construction schedule.

*“I am very happy with the TYLI Team's performance on the Sellwood Bridge, for which they have delivered **high-volume, high-speed** production of 1,389 plan sheets in just 12 months. **Responsive and flexible**, they worked alongside our staff as members of the County project team. **TYLI has moved mountains** to meet our fast-track schedule, and their performance has driven the project along smoothly and efficiently. I have great confidence in their **expertise and commitment to the project's success!**”*  
–Ian Cannon, Multnomah County PM

Our team members were extremely flexible and provided whatever resources were necessary to keep this project on track while meeting the needs of multiple parties and stakeholders.

The TYLI Team offers ODOT and LA industry-leaders in each technical or support discipline required under this on-call contract. Our team is proficient at developing transportation designs in compliance with federal aid requirements, and we are very well-versed in working with ODOT to move projects through the project delivery process. We routinely lead project teams for ODOT and Local Agencies, and through those relationships we stay abreast of the most up-to-date information on project delivery and execution. We have long-standing relationships with several subconsultant firms with whom we team on a regular basis, providing our clients with well-integrated project teams.



**Figure 5 Key Team Members' Selected Experience**

Senior Management (*=will also serve as a WOM)		Relevant Experience
<b>Marty Andersen, PE, Contract Manager*, Roadway Design Lead</b>		<b>RESUME INCLUDED IN KEY STAFF RESUMES</b>
<b>John Ferguson, PE, Principal In Charge*</b> has 20 years' experience leading multidisciplinary teams for infrastructure projects. Recent projects he has managed include the \$209M Sellwood Bridge Final Design; the \$110M Portland-Milwaukie LRT Bridge; and the \$46M OR 38: Elk Creek to Hardscrabble Creek project.	<ul style="list-style-type: none"> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> </ul>	
<b>Dan Pavela, PE, QA/QC Lead, Construction PM*</b> . With 30+ years of engineering and construction management experience, Dan manages a statewide On-Call contract with ODOT for Construction Scheduling. An expert QA/QC Manager, he is performing that role on current projects including Sellwood Bridge Final Design, Portland-Milwaukie LRT Bridge, and Willamette River Bridge.	<ul style="list-style-type: none"> <li>• OR 43: Willamette River Bridge Const Scheduling, ODOT R1</li> <li>• OR 26: Glencoe Road Overpass Const Scheduling, ODOT R1</li> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• Depot Street Bridge, Jackson County, OR</li> <li>• Gordon Rd Overpass RR Bridge Replcmt, North Plains, OR</li> </ul>	
<b>David Goodyear, PE, Chief Engineer.</b> With 37 years' experience, David is known for delivering innovative, constructible designs. He is currently serving as Chief Engineer for Multnomah County's Sellwood Bridge, and Engineer of Record for TriMet's PMLRT bridge.	<ul style="list-style-type: none"> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>• Crooked River Bridge, ODOT R4, Terrebonne, OR</li> <li>• Alsea Bay Bridge, Waldport, OR</li> <li>• Hoover Dam Bypass Bridge, NV/AZ</li> <li>• Willamette River (Eugene) Peer Study, ODOT R2, Eugene, OR</li> </ul>	
Work Order Managers		Relevant Experience
<b>Scott Nettleton, PE, Civil and Structural Engineer</b>		<b>RESUME INCLUDED IN KEY STAFF RESUMES</b>
<b>Mike Lopez, PE/SE, Civil and Structural Engineer</b>		<b>RESUME INCLUDED IN KEY STAFF RESUMES</b>
<b>Justin Acacio, PE, Civil/Structural Engineer, Constr. Specialist</b> brings 10 years' experience, including serving as PM/Asst. PM on multiple ODOT projects. He is Construction PM on Multnomah County's Sellwood Bridge and Lead Scheduler for ODOT's OR43: Willamette River Bridge. For this effort, TYLI provided a thorough review of the CC's CPM schedule, and an assessment for meeting critical path. Justin and Dan Pavela participated in real-time sessions with ODOT and CC to develop a modified schedule that led to the CC meeting critical "Bridge Open to Traffic" milestone.	<ul style="list-style-type: none"> <li>• OR 43: Willamette River Bridge Const Scheduling, ODOT R1</li> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• UPRR field verification &amp; CM for TriMet PMLRT East Segment</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>• Viaduct Extension, ODOT R2 and City of Springfield, OR</li> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>• I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> <li>• I-5 Camas Swale, Saginaw Rd., ODOT R2, Lane County, OR</li> <li>• Redmond Reroute Ph1, Unit 2 Sign/Signal Bridges, ODOT R4</li> <li>• Rail Retrofit / Ochoco Hwy, ODOT R4, Crook County, OR</li> <li>• Depot Street Bridge, Jackson County, OR</li> <li>• Pirates Cove Sidewalk Support Structure, ODOT R2</li> </ul>	
<b>Eric Rau, PE, Civil and Structural Engineer</b> has over 8 years' experience providing design and analysis services on projects ranging from rural county road bridge replacements to signature LRT structures. He has been involved with all phases of the engineering process and has significant experience providing engineering support during construction. Most recently, for Sellwood Bridge, Eric led superstructure design for the main arch spans crossing the river.	<ul style="list-style-type: none"> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Sauvie Island Bridge Replacement, Multnomah County, OR</li> <li>• I-5: McKenzie River – Goshen Grade DB, Lane County, OR</li> <li>• I-5: Weaver DB Bundle 306, Douglas County, OR</li> <li>• US30 &amp; PNWR at Eilertsen Ck, ODOT, Columbia County, OR</li> <li>• I-84 over Mosier Creek, Wasco County, OR</li> <li>• Rogue River Bridge Replacement, Jackson County, OR</li> <li>• Central OR Hwy Bridges DB, Harney &amp; Malheur Counties, OR</li> <li>• Mt. Hood Chemult DB, Clack., Jeffrsn, Deschutes, Klamath Clys</li> <li>• Coos Bay Rail Inspection, Coos Bay, OR</li> </ul>	



<p><b>Norm Smit, PE/SE, Civil and Structural Engineer</b> has 32 years' experience, from civil works projects to major segmental bridge design and construction, marine structures and heavy foundations. He is currently Delivery Manager for TriMet's Portland-Milwaukie LRT Bridge.</p>	<ul style="list-style-type: none"> <li>Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>Port Mann Bridge DB, Vancouver, BC</li> <li>Pleasant Valley Intchg Bridges, ODOT R5, LaGrande, OR</li> <li>4<sup>th</sup>/5<sup>th</sup> Ave. Corridor Improvement, Olympia, WA</li> <li>Crooked River Bridge, ODOT R4, Terrebonne, OR</li> <li>Catherine Ck, Sand Ck &amp; N. Fork John Day River Bridges, OR</li> </ul>
<p><b>Charlie Stearns, PE, Civil and Structural Engineer.</b> During the past 7 years, Charlie has garnered excellent experience in design and analysis of a variety of bridge types. Charlie is very competent in design and checking services for multi-span bridge structures, including reinforced and prestressed concrete, and retaining walls projects. He is serving as Design Engineer for TriMet's Portland-Milwaukie LRT Bridge.</p>	<ul style="list-style-type: none"> <li>Old Hwy 47 Br over Scoggins Ck, Washington County, OR</li> <li>Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>Sellwood Bridge, Multnomah County, OR</li> <li>I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>US: 26 Marks Creek Bridges, ODOT R4, Crook County, OR</li> <li>184: Cascade Locks - 2nd St, ODOT R1, Hood River, OR</li> </ul>
<p><b>Megan Neill, PE, Civil and Structural Engineer</b> has over 5 years' experience. She served as a Designer for Sellwood Bridge east approach superstructure, checker for Sellwood's multi-use path pedestrian bridge on the west interchange and provided PE and quantity estimates for east approach superstructure alternatives during EIS.</p>	<ul style="list-style-type: none"> <li>Sellwood Bridge, Multnomah County, OR</li> <li>I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>Cardwell Creek Bridge, Coos County, OR</li> <li>N Portland Rd/N Columbia Blvd Intersection Dev., Portland, OR</li> </ul>
<p><b>Anthony Calcagno, PE, Civil and Structural Engineer</b> has 5 years' experience, including civil and structural design on many ODOT projects. He has served as Designer for Sellwood Bridge east approach spans. During the construction phase of the detour he was responsible for designing the cradle beams and the steel truss, during the bridge translation, or "slide". He also handled submittal reviews, and RFIs during this phase of the project.</p>	<ul style="list-style-type: none"> <li>Sellwood Bridge, Multnomah County, OR</li> <li>N Portland Rd/N Columbia Blvd Intrscion Dev., Portland, OR</li> <li>Panther &amp; Cardwell Cks-Culvert Replcmnts, Coos County, OR</li> <li>I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>Redmond Reroute Ph1, Unit 2 Sign/Signal Bridges, ODOT R4</li> <li>I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> <li>OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>US97: Willowdale to Madras Bridge, Madras, OR</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>I-5 Camas Swale, Saginaw Rd., ODOT R2, Lane County, OR</li> </ul>
<p><b>John Kooistra, PE, Civil and Structural Engineer</b> has over 10 years of experience. He is adept at design and construction documents related to geometric design, site grading, erosion control, stormwater management, utilities, QA/QC and scheduling. For Sellwood Bridge, John has been in charge of writing and maintaining the P6 CPM schedule. As a result of his commitment, the schedule has remained on course with no critical slippage over 1.5 years.</p>	<ul style="list-style-type: none"> <li>Sellwood Bridge, Multnomah County, OR</li> <li>OR 43: Willamette River Bridge Const Scheduling, ODOT R1</li> <li>OR 26: Glencoe Road Overpass Const Scheduling, ODOT R1</li> <li>I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> <li>I-5 Camas Swale, Saginaw Rd., ODOT R2, Lane County, OR</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> </ul>
<p><b>Jerry Swain, Senior Roadway Designer</b> Jerry has over 32 years' of experience including design of highways, major urban arterials and collectors, LRT, utility design, land surveying and construction management.</p>	<ul style="list-style-type: none"> <li>Sellwood Bridge, Multnomah County, OR</li> <li>I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>Lovejoy Off-Ramp Utilities, Portland, OR</li> </ul>

**Types of Services TYLI has Qualifications and Experience to Self-Perform**

TYLI has the ability, qualifications and experience to self-perform a wide range of project types. With TYLI you have immediate access to expert professionals from across the nation, with depth and breadth to self-perform:

**transportation planning**  
**civil and structural engineering**  
**bicycle/pedestrian facilities**  
**construction engineering, scheduling and inspection**  
**traffic and transit**

**light and heavy rail**  
**environmental**  
**ports and marine**  
**aviation**  
**water resources**



**The TYLI Team brings you:**

**Breadth:** a wealth of expertise in multi-modal, multi-disciplinary projects.

**Depth:** Our team has delivered transportation projects throughout the Pacific Northwest of ALL sizes—from the \$1.2B Port Mann Bridge (B.C.) to the \$95k Foss Road Slide Repair project (Tillamook County).

**Resources:** ODOT/LAs have the commitment of more than 2,300 TYLI staff worldwide, 700 in the U.S. and over 1600 local TYLI Team members who can be called on to resource your projects anytime, anywhere.

TYLI has immediate access to expert professionals from across the nation for project delivery in Oregon. Additionally, we have provided expert staff to resource projects in other states and countries, which has provided our team with opportunities to hone their expertise in a variety of areas benefitting ODOT/LA projects.

As an example, in 2011, WOM Justin Acacio was brought on as the owner’s representative to provide forensic scheduling for the largest single construction project Delaware DOT had ever awarded, the \$150M Indian River Inlet Bridge DB. Under the management of the design builder, the project had fallen behind schedule. Due to Justin’s diligence, a potential 4-month delay was mitigated and the project met the revised open to traffic date that had been committed to the public.

TYLI opened our first OR office in Salem 8.5 years ago, and the first full service design project we completed in OR was the **I-5: Camas Swale to Saginaw Road**. At that time, with limited in-state staff, we pulled from our deep bench of resources across the region to deliver this project successfully, while maintaining good **value** to ODOT.

Our quality performance on that and many other ODOT and LA projects led to strong growth of our Oregon operations, which now has 32 staff dedicated to transportation projects. Our clients have ongoing access to TYLI’s deep pool of resources—available to immediately staff your projects to meet any budget or schedule needs.

“Bringing Justin on for schedule review and analysis is one of the **best decisions I have made on this project.**” –Doug Robb, DelDOT

**Client-Focused Service:** TYLI is focused on the highest quality deliverables – both in consultant product and in client experience. We are dedicated to working collaboratively with our clients and developing an in-depth familiarity and thorough understanding of your needs; and developing a detailed understanding of schedule and budget requirements for each project, then working diligently to exceed your expectations and goals.

Figure 6 Multi-Discipline Projects, Last 5 years, where TYLI was Responsible for >51% PE-Design Work			
<b>I-5: Elkhead Rd to OR 126: Knowles Creek DB, ODOT R2&amp;3</b> <b>Location: Lane and Douglas Counties, OR</b>		<b>Year started:</b>	2009
<b>Tasks Self-Performed by TYLI:</b> Project management, bridge design, roadway geometrics engineering, drainage site civil engineering, temporary traffic control including design of detour alignments, signage, striping, construction inspection; participated in public involvement.		<b>TYLI contract \$ amount:</b>	\$7.35M
		<b>% of contract \$ to TYLI:</b>	56%
<b>OR 42: Beaver Creek–Mid Fork Coquille Road, ODOT R3</b> <b>Location: Coos County, OR</b>		<b>Year started:</b>	2008
<b>Tasks Self-Performed by TYLI:</b> Inspection, load rating, repairs, strengthening, Phase I seismic retrofit of 9 bridges along a 50-mile stretch of Hwy 42. Erosion control, traffic control, bridge design, striping, landscaping; participated in public involvement. <i>“TYLI has raised the bar for future expectations regarding customer service expected from other consultant firms.” Petr Lovasik, ODOT Construction Mgr</i>		<b>TYLI contract \$ amount:</b>	\$2.14M
		<b>% of contract \$ to TYLI:</b>	76%
<b>Foss Road Culvert Replacement</b> <b>Location: Tillamook County, OR</b>		<b>Year started:</b>	2012
<b>Tasks Self-Performed by TYLI:</b> Roadway design, culvert design, hydraulic and geotechnical evaluation, utility coordination, PS&E, construction administration.		<b>TYLI contract \$ amount:</b>	\$96k
		<b>% of contract \$ to TYLI:</b>	87%

TYLI brings you innovative, high value, cost-effective solutions; attention to detail; and nimble, responsive service. Our experience and drive to make our clients successful will benefit ODOT and Local Agencies. We are experienced, skilled, and ready to work on your projects. We ask that you select TYLI to serve as one of your consultants for this contract!



**\*\*Proposal has been formatted using TW Cent MT at 12 pt. and EucrosialUPC at 15 pt.\*\***

## 2.2.6 PROPOSER'S PROJECT MANAGEMENT FOR CA/CEI SERVICES

### A. Management & Organizational Structure ... how it aids in delivery of services, chain of command

Successful delivery for this on-call contract requires a team that has expertise to deliver any type of project, meet all expectations – yours and your stakeholders, and deliver under any schedule required! TYLI has that expertise: we have delivered a range of projects throughout Oregon for ODOT and Local Agency (LA) clients – from mega projects over \$200M in construction, to small culvert replacement, pavement rehabilitation, and bicycle/pedestrian facility projects. We have also performed construction services using several design standards and processes tailored to each client, using a variety of delivery methods, and meeting all schedule and budget requirements.

What sets our team apart is that we are extremely **nimble** - responsive to you and your needs. We have the flexibility to fashion our delivery approach to meet all technical and non-technical requisitions; the ability to immediately “pivot” when conditions change; and call upon our deep bench of resources to meet ANY schedule commitment, regardless of how stringent.

Our team is also **innovative**, regularly looking for ways to push the problem-solving envelope. We have produced several unique solutions in Oregon, such as bridge “skidding” for Rapid Replacement of two bridges on our OR38: Elk Creek to Hardscrabble Creek project, and also on our Sellwood Bridge project, to utilize the existing bridge as a detour and maintain traffic during construction while allowing the contractor to build the new bridge in one construction stage.

And, we bring **value**, providing you with cost-effective solutions. We have delivered several projects in Oregon and hundreds around the world using Design-Build (DB), Construction Management/General Contractor (CMGC), Construction Management at Risk (CM@R), and Public-Private Partnership (P3). During these projects, we work directly with contractors, and our extensive resume has given us a deep understanding of construction means and methods and “what things cost” – from materials, to equipment, labor, and general conditions. With this knowledge, we have become incredibly adept at resolving construction/field engineering issues. We are also able to liaise between design engineers and contractors to mitigate in-field construction issues, resulting in a more efficient and cost effective project for you.

The TYLI Team is organized around a **single-point of contact for contract management** – Marty Andersen, PE. As Manager of TYLI's Oregon Operations, Marty has responsibility for resource management for all our projects throughout Oregon. His outlook, insights, and understanding of appropriate design were largely shaped by his 28 years at ODOT, which provided him the opportunity to understand each component of the ODOT process, and where he developed a reputation for *getting the job done*.

TYLI is providing construction assistance and engineering services for the largest project ever undertaken by Multnomah County, the Sellwood Bridge Replacement.

For this \$209M project TYLI has provided **innovation** by moving the old bridge to the north as a detour; thus delivering a high level of **value** by saving at least a year on construction and several million dollars. We have also proven ourselves extremely **nimble**, adjusting to the construction contractor's needs for additional construction engineering design and support for implementation of the moving system.

The Sellwood bridge move epitomizes our emphasis on communication. The TYLI team identified risks and critical coordination areas between the design team, construction management and inspection team, and the construction contractor. One such area concerned the “cradles” used to support the existing bridge during the bridge move. We identified this as a risk area early on, which allowed the owner to initiate discussions with the contractor, which eventually lead to TYLI completing this design on short notice to keep the bridge move on schedule.



Now as your consultant, Marty's charge has been to tailor project tasks to how ODOT conducts its business and what the Agency needs to accomplish. On projects, whether they were ODOT or LA facilities, partnering, balancing priorities, and developing creative solutions have been his strengths. That vision and passion is essential to being able to deliver your projects efficiently and completely.

Marty not only understands ODOT's construction practices, he literally helped 'write the book' on them. As the ODOT Region 1 Local Agency Liaison, Marty worked with ODOT Construction Section's Dan Anderson to develop a series of trainings for LAs on construction administration, project documentation, etc. From that training, a Local Agency Construction Guide was developed and used for about two years before becoming the foundation for a major rewrite of the ODOT Construction Manual. This background knowledge supplements the extensive experience of the team.

Under Marty's direction, the TYLI Team is ready to hit the ground running on your construction projects. The TYLI team is staffed by a diverse and experienced group of Work Order Managers (WOMs) and a full contingent of resources to support work orders (WOs). To highlight a few:

- **Dan Pavela, PE** brings 30 years as a construction PM. His experience in resident engineering, material engineering, project documentation and claims prevention and analysis has proven to be invaluable to our clients. As an example, in the disposition of the Claim for the Depot Street Bridge project in Jackson County, Dan's forensic analysis of the Construction Contractor's (CC) specific claims against the Owner involving equipment material and schedule resulted in the CC dropping their \$4.6M claim against the Owner.
- **Justin Acacio, PE** brings significant expertise in construction administration and scheduling, receiving rave reviews from clients for his excellence in keeping projects on schedule. In fact, a DOT client said of Justin, "Bringing Justin on for schedule review and analysis is one of the best decisions I have made on this project." (see page 12)
- **Vince Shevham, QCCS** has 21 years' experience as a contractor, construction inspector, project manager, and construction program manager for roadways and bridges. Vince's work history includes 9 years as a construction engineering specialist for ODOT, where he was responsible for construction management, inspection, and QV/QC documentation and reporting on federally funded projects.

The TYLI Team brings you **value** and **innovation** with our extensive construction engineering experience. In addition to the daily construction management and inspection requirements, TYLI brings unique specialty skills, which include:

- concrete, steel, and timber bridge construction
- paving of "superpave" highways
- mechanical bridge structure
- "weigh-in-motion" projects
- mass concrete design and monitoring
- deep foundations / drilled shafts
- special utilities construction (forced mains)
- marine infrastructure
- post-tensioning
- segmental bridge construction
- accelerated bridge construction
- bridge translation
- MSE walls
- soils densification (vibra-flotation)

For each effort, Marty will select **WOMs based on their relevant project history, complete availability for project duration, and overall compatibility with ODOT and LA's project expectations.**

WOMs will serve as the day-to-day project delivery leads, responsible for project management and coordination of work. Our WOMs and project staff have previously consulted and/or worked for ODOT and LAs, which enables us to provide teams that intimately understand how to deliver projects the ODOT way while retaining a full understanding of the flexibility needed to satisfy LAs when needed -- based on ODOT/LA policies and standards that result in products that look exactly as if produced by ODOT/LA staff.



Marty will be briefed weekly by each WOM on the progress of each WOC assignment. This interaction will ensure performance at levels expected by ODOT and the LAs and that each assignment is adequately resourced. Marty is available to meet with ODOT and LA project/program staff on a monthly basis to discuss projects and TYLI Team performance.

TYLI construction staff have worked both in the field on fast-paced construction projects, and also on the design side. Team members have served in the roles of Design Project Manager, Constructability Reviewer, Plan Set Reviewers, General Contractors, and Schedule Consultants. This brings to our team a unique ability to relate to field personnel and also have excellent working relationships with design personnel. Our years of experience in the field and the design office provides us with the ability to identify issues and / or suggest modifications that could be applied to the delivery of the project, translating into value to ODOT/LAs.

**Streamlined Project Delivery:** Unique to TYLI, our Oregon WOM's and staff are very well-versed in delivery options including design/bid/build, design/build, CM/GC and P3 contracting – this has allowed us to streamline our project delivery and documentation processes for all types of project delivery. Many of the subconsultants we selected for our team have partnered with us on several challenging schedule driven projects, including the Sellwood Bridge Final Design CM/GC, I-5: Elkhead Road to Knowles Creek DB, OR 38: Elk Creek to Hardscrabble Creek DB, and the Portland-Milwaukie Light Rail Transit Bridge DB.

#### **How subcontractors will be selected for specific assignments, utilized and managed to complete projects**

Our team brings strong geographic coverage and depth of resources throughout Oregon and covering all five ODOT regions. TYLI selected sub-consultants based on the successful working relationships we have enjoyed with them, their demonstrated competence in working with ODOT and LAs on previous projects, and their reputation in providing responsive service. Given the potential for multiple assignments, we have provided depth and flexibility to accommodate any project anywhere in the state.

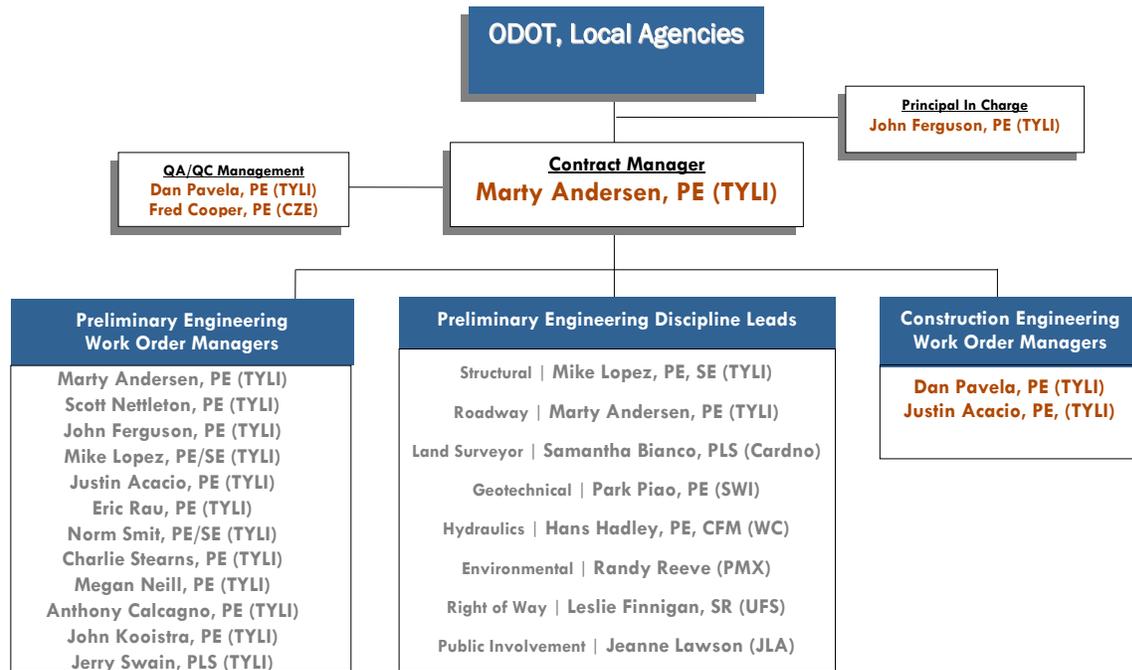
In response to an RFP or RFQ, Marty will assign a WOM who will work with him to identify the services required on the project and begin a process to assess our subconsultants':

- Service capability and staff's previous experience with ODOT/LA and with similar projects;
- Proximity to project location;
- Complete availability of proposed staff throughout the WOC's project schedule;
- Compatibility with ODOT and LA's project expectations;
- Cost effectiveness of utilization; and
- DBE/MBE/WBE/ESB status.

Once assigned the work order, the WOM will work with ODOT/LA to develop the final contract documents and be the contact for that specific work. Unless otherwise agreed to by written consent, ODOT will receive services from the staff identified in our submitted proposal.

Our subconsultants are held to the same internal controls and standards required of our TYLI staff, are fully integrated into our Work Plans, and are included in all related project management matters; e.g., team correspondence, work sessions, and QC and cost protocols.

It is from our working relationships with our subconsultants (on past and current projects) that we understand what to expect from one another to affect a smoothly run and successful project. This knowledge enables project staff to concurrently focus on their respective tasks while maintaining vision of overall project goals and expectations.



**Bridge Engineering**

- Mike Lopez, PE (TYLI)
- Scott Nettleton, PE (TYLI)
- Lisa Vernon, PE (EEE)
- Raj Bharil, PE, SE (HH)

**Roadway/Civil Engineering**

- Marty Andersen, PE (TYLI)
- Steve Katko, PE (CH2M)
- Aaron Isenhardt, PE (HHPR)
- Tony Roos, PE (Cardno)
- Greg Jellison, PE (HDJ)
- Ralph Dunham, PE (STZ)
- John Wilcox, PE (HEA)
- Scott Souders, PE (ZCS)
- Hardy Li, PE (CP)
- Adam Heberly, PE (HE)
- David T. Buhl, PE (IEE)
- Douglas Ferguson, PE (FSE)
- Tina Adams, PE (CC)

**Stormwater Design**

- Jerry Swain (TYLI)
- Ken Vigil, PE, LEED AP (VAI)
- Doug Gates, PE (PMX)

**Transportation Planning**

- Sorin Garber (TYLI)
- Anne Sylvester, PTE (PMX)
- Bill Ciz (PMX)
- Mia Birk (APD)

**Traffic Engineering/ITS/TP&DT**

- Thomas Errico, PE (TYLI)
- Brian Copeland, PE (DKS)
- Charles Radosta, PE (KAI)
- Sam T. Johnston, PE (STJ)

**Utility/RR Coordination**

- Jerry Swain (TYLI)
- Scott Nebeker, PE (PMX)

**Surveying/ROW Mapping**

- Samantha Bianco, PLS (Cardno)
- Jerry Swain, PLS (TYLI)
- Dave Mills, PLS (DMC)
- Hayes McCoy, PLS, PE (AKS)
- Corey Woodruff, PLS (STZ)
- Robert Lennox, PLS (BD)
- Scott Smith (DSA)
- Kenneth Delano, PLS (FSE)

**ROW Appraisal/Acquisition**

- Leslie Finnigan, SR/WA (UFS)
- Roger D. Hanna (HMA)
- David Feinauer (ROWA)
- Casey Overcamp, SR/WA (ELS)

**Architecture**

- Michael Fitzpatrick (TYLI)
- Paddy Tillet (ZGF)

**CADD**

- Ryan Elwood (TYLI)
- Vijay Deodhar (3DI)

**Geotechnical Engineering**

- Park Piao, PE (SWI)
- George Machan, PE (CCI)
- William L. Nickels, Jr., PE, GE (FEI)
- Timothy J. Pfeiffer, PE (FEI)
- Rick Thrall, PE, PhD (PBS)
- Alan P. Bean, PE (NGI)
- Patrick Flynn, PE (KF)
- Rajiv Ali (RO)
- Dave Thielen, PE (GEO)

**Hydraulics**

- Hans R. Hadley, PE, CFM (WC)

**Landscape Arch/Erosion Control**

- Ben Ngan (NNA)
- Colin McArthur, AICP (CMGS)
- Steve Durrant, ASLA (APD)
- Mike Faha, ASLA, LEED AP (GW)

**Cultural Resources**

- Jo Reese, MA, RPA (AINW)
- K. Toepel, PhD, RPA (HRA)
- Kimberly Demuth (Cardno)

**ESA Permitting**

- Randy Reeve (PMX)
- Mark Hynson (MBG)

**Public Involvement/Outreach**

- Jeanne Lawson (JLA)
- Lois Cohen (LDC)

**Environmental/Land Use Permitting**

- Randy Reeve (PMX)
- Stuart Myers (MBG)
- Colin McArthur, AICP (CMGS)
- Susan Cunningham (VAI)
- Guy Neal, PE (PBS)
- Jean Oschner (ESA)
- Frank Angelo (APG)

**Hazardous Materials**

- Patrick Flynn (KF)
- Dulcy Berri, RG, LG, LHG (PBS)
- Kim Elliott (SWI)

**NEPA**

- Mark Wigg (ICF)
- Bob Carson (MBG)
- John Vlastelicia (VAI)

**Wetlands**

- Paul Agrimis, RLA (VAI)
- Anita Cate, PWS (WSD)

**Watershed Restoration**

- Stuart Myers (MBG)

**Air Quality & Noise**

- Michael Minor (MMA)

**Electrical Engineering**

- Allen Morris, EE (TYLI)

**Inspectors**

- Thomas Siniscal (TYLI)
- Jay Greene (TYLI)
- Alan Heiman (CZE)
- Larry Carson (HEA)
- Dan Moyer (CMTS)

**Environmental Compliance**

- Tamara Schurian, PE (CZE)

**Construction Quality Compliance**

- Justin Acacio, PE (TYLI)
- Vince Shevham, QCCS (PMX)

**Contract Documentation**

- Rick McNichols (CZE)

**Scheduling**

- Dan Pavela, PE (TYLI)
- Justin Acacio, PE (TYLI)
- John Kooistra, PE (TYLI)

**Construction Surveyors**

- Project Surveyors

**Shop Drawings/RFI's**

- Project Engineers

**Constructability/Cost Estimates**

- Dan Pavela, PE (TYLI)
- John Kooistra, PE (TYLI)

**Legend**

- TYLI – T.Y. Lin International
- 3DI – 3D InFusion<sup>1, 3, 4</sup>
- AINW – Archeological Investigations NW
- AKS – AKS Engineering & Forestry
- APD – Alta Planning + Design
- APG – Angelo Planning Group<sup>1, 2</sup>
- BD - BlueDOT<sup>4</sup>
- CMGS – Cameron McCarthy Gilbert & Scheibe
- Cardno – Cardno
- CC – Casso Consulting<sup>1, 2, 3, 4</sup>
- CH2M – CH2M Hill
- CMTS - CMTS
- CP – Convergent Pacific, Inc. <sup>1, 3, 4</sup>
- CZE – Cooper Zietz Engineering <sup>1, 3</sup>

- CCI – Cornforth Consultants
- DKS – DKS Assoc.
- DSA – David Smith & Associates
- DMC – Dave Mills Consulting, Inc. <sup>4</sup>
- EEE – Elite Edge Engineers<sup>1, 2</sup>
- ELS – Epic Land Solutions<sup>1, 2</sup>
- ESA – Environmental Science & Assessment<sup>1, 2, 4</sup>
- FEI - Foundation Engineering, Inc.
- FSE – Ferguson Surveying and Engineering
- GEO – GeoEngineers
- GW – Greenworks
- HMA – Hanna, McEldowney Assoc. <sup>4</sup>
- HH – Hardesty & Hanover
- HEA – Hardey Engineering Associates

- HDJ – HDJ Design Group
- HHPR – Harper, Houf, Peterson, Righellis
- HE – Heberly Engineering<sup>3, 4</sup>
- HRA – Heritage Research Assoc. <sup>1, 2, 4</sup>
- ICF – ICF Jones and Stokes
- IEE – IE Engineering
- JLA – Jeanne Lawson Assoc. <sup>1, 2</sup>
- KAI - Kittelson & Assoc.
- KF – Kleinfelder
- LDC – Lois D Cohen & Assoc. <sup>1, 2, 4</sup>
- MBG – Mason, Bruce and Girard
- MMA - Michael Minor Assoc. <sup>1, 3, 4</sup>
- NNA – Nevue Ngan Assoc. <sup>3, 4</sup>
- NGI – Northwest Geotechnical Inc. <sup>1, 3</sup>

- PBS – PBS Engineering & Environmental
- PMX - Parametrix
- RO – RhinoOne<sup>1, 3</sup>
- ROWA – Right of Way Associates<sup>4</sup>
- STJ – STJ Inc. <sup>4</sup>
- STZ – Stuntzner Engineering & Forestry
- SWI - Shannon & Wilson, Inc.
- UFS - Universal Field Services
- VAI – Vigil-Agrimis, Inc. <sup>1, 3</sup>
- WC - West Consultants
- WSD – Westbrook Science & Design<sup>1, 2, 4</sup>
- ZCS – Zbinden Carter
- ZGF – ZGF Architects

**D/W/MESB Firms in RED**

- DBE – 1 WBE – 2 MBE – 3 ESB – 4



## B. COORDINATING AND EXPEDITING PROJECT ELEMENTS

### ...To Meet Schedules Without Sacrificing Quality

TYLI has served the State of Oregon for over 30 years, beginning with design work on the Glenn Jackson Memorial Bridge by our firm's founder, T.Y. Lin. As our primary client, we have worked diligently to develop a strong understanding of how ODOT needs, and wants, projects delivered.

With this knowledge, we can be depended upon to deliver high-quality products and provide exceptional cost-effective services within schedule; we use your proven methods and practices to help us do so.

**Partnering with our clients:** Partnering is a strong component of successful project delivery, and we will work with you to form a strong working relationship with the contractor, thereby taking a proactive approach to achieving project success.

**Knowledge of our clients' processes and those elements that drive projects:** Our team has a thorough knowledge of the various manuals, standards, and guidelines outlined in the ODOT Construction Manual. The elements that drive ODOT/LA projects and schedules are critical in coordinating multi-discipline projects and meeting delivery goals, including:

- **Construction Milestones** – These include construction contractor notice to proceed; 1st, 2nd and 3rd notices; and final project closeout. Examples of other milestones that the TYLI team regularly works with are in-water work windows, specified contract completion dates, and specific closures dates.
- **Environmental Compliance** – All of the environmental compliance and mitigation requirements must be included in the contract plans and specifications directly or by reference. The TYLI team makes sure that all of these requirements are known and followed. These requirements are not only supported by the contract, but many are enforced by law, and nonconformance can result in fines or criminal charges. We take this very seriously and follow these requirements to the letter. As such, we hold meetings at the beginning and periodically during the project with the contractor to make sure all environmental aspects of the project are in place and remain in place.
- **R/W Compliance** – The construction phase of a project brings the first real impact to property. The TYLI team works with the Agency and contractor to ensure that we have a full understanding of all agreements and issues related to R/W files. This can be a very contentious issue, so communication and attention to the detail is critical. TYLI will hold a start up meeting in the beginning of the project with the contractor to affirm what R/W constraints are in place and make sure all parties have a clear understanding.
- **Experience with Best Practices in Construction** – “Lessons Learned” are effectively put into practice to ensure that both typical and unique construction issues are anticipated. Our deep experience enables us to head many issues off before they occur, thus saving potential delays, costs and claims. TYLI WOM's keep “Lessons Learned” folders to reference during the course of the project so as not to have a learning curve twice.
- **Authorities** – ODOT does not delegate contract change authority to the consultant working on construction. We understand that our authority is limited to enforcement of the existing contract. Our role for contract changes includes justifications, supporting documents, recommendations and identification of potential issues associated with the change.

By having a complete understanding of the processes and associated timelines involved in State and Local Program projects, activities are thoroughly scheduled from the onset, minimizing the potential for surprises. Combined with carefully controlling project activities using proven project management tools, such as Primavera scheduling, earned value analysis, and proactive communication, TYLI nimbly coordinates the many moving parts of a transportation project and deliver without compromising quality.

**nimble.** You can depend on us to deliver high-quality products and provide exceptional cost-effective services within schedule, the way you want them delivered.

A prime example of our dedication to this is our work on the **OR43: Willamette River Bridge in Oregon City** on which we provided external scheduling expertise.

The project had fallen behind schedule and TYLI was added to the project team about 18 months after the project had started. Joining an established project team facing potential delays could have easily resulted in a confrontational relationship. However, due to our construction experience and our emphasis on open communication, we were able to understand the Contractor's concerns and needs and facilitate a good working relationship.

Having the contractor on board with revising the scheduling and meeting the milestone dates was critical to the success of this project. Through our experience, communication, and building of relationships, we were able to help bring a project that was behind schedule to opening ahead of schedule.



### **Flexibility and Approach to Making Adjustments to Schedules**

Our approach to project management and coordination revolves around early and frequent communication with all project team members, including ODOT staff, subconsultants, project stakeholders, and the construction contractor. We also emphasize attention to detail – making sure that issues and action items do not slip through the cracks. Integrating the entire team, we use the following approach:

- **Conduct weekly meetings with ODOT/Local Agency** staff and the construction contractor to track construction progress, resolve outstanding action items, and to reinforce ODOT and LA objectives and expectations throughout construction. We produce thorough meeting minutes to accurately dictate discussions, to highlight decisions and resulting action items, and to prompt follow-through. Schedule progress, including milestones and deliverables, is discussed at every meeting.
- **Prepare a Construction Schedule** that addresses staffing and assignments, scope of work, and provides continuity with the Construction Contractor's schedule and other resources. The Construction Schedule allows our team to identify critical, high risk construction activities; identify QCCS reviews; and to ensure appropriate staffing, oversight and attention.
- **Consistently use project tracking tools**, such as Issues Logs, Decision Logs, frequent Progress Reports, schedule updates, earned value graphs, and action plans. These documents are frequently maintained and submitted to all team members and discussed at team meetings.
- **Effective use of communication** mediums tailored to meet the project needs of the Agency PM and Contractor PM.

TYLI understands that changes happen. If a change or external force beyond the control of our team members occurs and the project schedule is or could potentially be impacted, TYLI will execute the following process:

- Meet with the ODOT/LA PM's Construction Contractor, and other stakeholders to identify and quantify the schedule impediment.
- Review impacts to the construction milestone dates, such as in-water construction work windows, opening to traffic, and contract completion dates.
- Identify project schedule areas that may be accelerated or re-sequenced for further discussion with the Construction Contractor.

This practical understanding of project development is a healthy advantage in any development approach. TYLI is always looking for strategies to deal with "what if" scenarios so that when they happen they are non-events – **The difference between a problem and a non-problem is the timing.**

### **Flexibility and Approach - Staffing to Meet a Schedule**

Collectively, the TYLI Team brings together our area's industry leaders in specialty construction engineering services. By having disciplines overlapped with resources from two or more firms, our team offers ODOT and LAs a deep bench and wide breadth of WOMs, technical experts, and production staff. With a large national staff accustomed to working on projects anywhere at any time, if you need us to bring on additional expertise or staff resources at a moment's notice, they are ready and available to you.

### **C. QUALITY CONTROL ...Procedures and Policies**

Quality Control is a performance issue. Delivery of quality product is the expectation of all owners hiring consulting firms. At TYLI, we understand that process never replaces the actual performance of quality engineering and construction services. However, record-keeping and documentation of Quality Control is paramount for communication of this performance. In-house TYLI staff and our subconsultants will provide Quality Assurance Management on our WOC assignments. These team members' main function is quality assurance - to manage, track, and report on quality control tasks - which benefits ODOT/LAs by ensuring that the Quality Control Plan is followed thereby eliminating potential conflicting priorities due to workload or otherwise.



Our Quality Control Plan establishes policies, procedures and protocols that are implemented independently of the WOM, as well as the design and construction staff, to ensure that the work is completed accurately; responds to the program requirements; and provides a means to verify and validate environmental compliance, design, and construction activities from DAP through final acceptance during construction. Our Plan emphasizes thorough and traceable documentation demonstrating our quality performance.

### Quality Control - Construction

The role of the Construction Engineering (CE) WOMs will include daily coordination with the Prime Contractor and specialty subcontractors, overseeing QC testing and inspection activities, maintaining and reviewing QC documentation, and resolving non-conformances. In addition, the CE WOMs will provide ODOT with reports and briefings as to the overall status of the project schedule, quantity and quality of the work. CEI/CA activities follow the procedures outlined in the ODOT Construction Manual (CM). Activities in which our team has developed specific procedures and methods of documentation include:

- **Daily Progress Reports** – thorough and concise reports, including use of supplemental inspection checklists (concrete placement, pile driving, drilled shafts, deck pours, crack injection, pre-cast plant, etc.) are used to document material installation quality and daily quantity tools.
- **Material Certifications** – consistent and complete attention to construction material certification; completion of Field Inspection Reports; and use of Field Inspection Stickers, as shown in ODOT CM Chapter 12.
- **Quantities Review** – regular review of installed quantities to ensure adequate frequency of field testing. Quality and quantity documentation are entered into the Test Summary Sheets, per the ODOT CM.
- **Inspection and Testing** – use of appropriately trained and certified construction inspectors and testing technicians. Non-certified personnel are not allowed to perform field or non-field materials testing.
- **Plans Monitoring and Maintenance** – monitoring of traffic control, safety and environmental compliance plans and activities and consistent maintenance of red-lined plans, non-conformance and other field logs.
- **Quality Assurance** – fully completed and available documentation for ODOT QCCS review and Regional Assurance activities and Quality & Quantity audits; and submittal of material samples for ODOT quality verification. Quality Assurance will be provided by an internal QA specialist for each project, similar to an ODOT Regional Assurance Specialist (RAS) review. The QA specialist will regularly check in with ODOT/LAs to make sure our team is providing exactly what you need, meeting all contractual obligations, and exceeding your expectations for quality and responsiveness.
- **Contractor/Contract Oversight** – maintain and verify contractor labor compliance; workforce utilization; QC program; installed quantity, progress payment, and materials on-hand documentation; contract change orders; and subcontracting (including D/M/W/ESB participation) and force account work.

**nimble.** For **Elkhead to Knowles, ODOT Regions 2 and 3**, our team delivered 8 projects on 6 separate sites – each of which had specific constraints and features to address.

The TYLI team consisted of resources from our local offices, our deep pool of expert staff resources, and our subconsultant partners. Because team members were working from multiple locations, to deliver the highest quality product, our team maximized our use of **communication tools**; used **Primavera** to keep a tight hold on the project schedule; and ensured the entire team strongly adhered to the project's **Quality Control plan**. Subconsultants were held to the same standards as TYLI's internal QC processes. Project was delivered successfully on time and on budget.

## 2.2.7 PROPOSER'S COST EFFECTIVENESS FOR CA/CEI SERVICES

### A. MANAGING COST

TYLI's team of highly qualified CA/CEI professionals have been providing ODOT and Local Agencies with cost-effective CA/CEI services for many years. TYLI determines and maintains the most cost-effective manner to perform tasks by:

- **Discussing means and methods during WOC negotiations.** For each assignment, Contract Manager Marty Andersen will select a WOC Manager with the requisite background and experience to successfully manage the project. In the course of agreeing to the steps involved in completing tasks, ODOT PMs, LA PMs, and consultant WOC Managers will discuss the most cost-effective means and methods to meet project goals.



Together, Marty and the WOC Manager will select the appropriate office and field leads from TYLI and our subconsultants to scope, estimate, and successfully deliver the project.

- **Conducting Team Strategy Work-sessions.** These are used to provide comprehensive information to team members and facilitate informed decisions that are frozen. This eliminates additional costs and schedule threats through rework.
- **Same Day Documentation.** Field quality and inspection staff is provided with appropriate equipment and are required to complete their paperwork onsite during the day of construction. Therefore, “office time” at the end of the day for filling out project documentation is greatly reduced since the work is completed in the field. Same day documentation not only ensures cost-effective services, but also ensures that daily details are accurately documented while they are fresh in everyone’s memory.
- **Conduct Weekly Meetings.** TYLI facilitates weekly meetings that include the owner, construction contractor, and lead field personnel. Meeting minutes are delivered to ensure there is no misunderstanding of decisions made or direction given within the meetings.
- **Facilitate and Encourage Open Communication.** We believe that open, honest conversation between all team members throughout the entire project is paramount to ensuring costs are kept at a minimum and tasks are completed as efficiently as possible.

### Ensuring Accurate Tracking of Costs

In addition to defining the most streamlined approach to completing tasks, cost-effective project completion is achieved through accurate cost monitoring. Accurate tracking of costs is achieved through application of several different cost tracking methods. This also includes tracking progress (e.g., percent complete) and comparing to costs incurred in order to assess project status and ensure cost-effectiveness. Our WOMs monitor costs and progress on a weekly basis using the following methods:

- **Resource-loaded Scheduling –** We will use Primavera P6 to track task progress against project schedules. We use this tool to track individual task budgets versus task schedules and determine earned values.
- **Labor Burn Rate Projections –** Weekly task charges are extrapolated to the end task dates and adjusted to consider varying levels of production (e.g., reduced production during Agency/Owner submittal reviews).
- **Review of Weekly Accounting System Labor Expense Postings –** Our WOMs can quickly detect anomalies in project charges due to untimely work being performed. This allows for immediate communication with staff to identify and remediate production issues.
- **Sub-Milestone Definitions –** Construction activities are broken down into subactivities with applicable milestones (dates) and assigned a target percent complete based on the relative levels of effort between subactivity. Each time a subactivity is completed, the corresponding percent-complete is immediately compared to the amount of effort spent completing the activity.

### Expense Reduction Strategies

Through our effective staff management and use of work-load leveling tools, the TYLI team will efficiently accommodate project locations anywhere in the State. Our approach to ensure that travel, lodging, and per diem expenses are as low as possible includes the following:

- Combining task assignments with assignments from nearby projects to minimize overall travel expenses.
- Selecting team members located near the project for WOC assignments to take advantage of project familiarity and/or local knowledge.
- Leveraging the TYLI team’s comprehensive coverage of Oregon by utilizing local team offices to minimize travel costs and to efficiently respond to planned or impromptu site visits or team meetings, and “quick hit” tasks, such as pick-up survey work, right-of-way staking, and construction-related tasks.
- TYLI will also seek opportunities to hire temporary local help rather than relocate a current permanent employee.



- Seeking alternatives to traveling, such as conducting meetings using video-conferencing, virtual internet meetings, conference calls and web-conferencing.
- If the opportunity presents itself, we seek to reduce administration efforts and total costs by establishing central field offices that service multiple nearby projects.

Furthermore, if our staff are not required on site daily, as is the case in some smaller projects, our project team will typically work at the site project office on days when weekly meetings or site visits are required. This eliminates the potential for lost time during the work day due to travel to and from meetings. Our team also puts an emphasis on planning project meetings, site visits, and other site activities to coincide with one another to reduce travel expenses for the duration of the project.

Creative solutions for saving costs will be brainstormed and employed accounting for each project's particular needs.

## **B. COST ESTIMATE METHODOLOGY, TOOLS & PROCESSES**

### **Developing Construction Engineering Services Summary of Estimate**

TYLI's approach to estimating CE services includes matching project requirements to "Basic Services" including CPM schedule review; contractor observation and enforcement of contracted services; price negotiation of specialty items and change orders; inspections monitoring and documentation; project cost reconciliation; and general project administration through project closeout.

After reviewing available contract documents, our approach involves estimating a level of effort by resource-loading the construction schedule developed during preliminary engineering. This involves taking the schedule in its native program (such as Microsoft Project or Primavera P6), and adding our office and field inspection personnel to the construction activities. If the engineer's construction schedule is not detailed enough, we develop additional detail using the plans and specifications in order to provide a more accurate estimate of construction tasks.

In addition to a resource loaded schedule, we take a global look at the overall construction duration and apply a reasonable manpower estimate. We also rely on our team's documented history of delivering thorough, responsible CEI/CA services at fair and reasonable costs.

### **Ensuring Estimates are Fair and Reasonable**

For preliminary and construction engineering estimates, our experience has been that when the majority of the various aforementioned methods converge to particular task costs and overall costs, the resulting final costs have represented a fair and reasonable balance that provides ODOT and the LAs with cost-effective services.

TYLI's approach to work order negotiations embraces a collaborative exchange. We share all information and data used in developing WOC estimates with the ODOT and Local Agency PMs and staff.

Using this approach, we have found that negotiations are completed quickly, as differences in opinion on the cost of performing a task are typically not due to the estimated number of hours to complete the work, but rather to different perceptions of the appropriate steps needed to complete it.

Once the appropriate steps to task completion are agreed upon, the costs are typically agreed upon as well. This approach also facilitates a forum for collaboration and learning by ODOT, LA and TYLI staff, and fosters building relationships that starts the project off on the right foot.

TYLI fully understands that public money has been entrusted to ODOT for projects awarded under this contract, and that we are part of a stewardship agreement with you. Our goal is to maintain public trust and credibility with responsible and efficient spending.

**value.** TYLI understands ODOT and LAs are entrusted with public monies and we are dedicated to good financial stewardship, keeping project costs down and quality high.

TYLI is currently providing field verification and construction management for *TriMet's PMLRT East Segment* project; construction services for *Sellwood Bridge*; and scheduling services for *OR26: Glencoe Road*. Team members are carpooling to project sites and project offices; consolidating site visits and work meetings to keep travel costs low and allow travel time to be shared between the projects.

The *US 26/Glencoe Road Construction Scheduling* project is located a considerable distance from TYLI's office; our team has co-scheduled our on-site review visits to correspond with planned Construction Contractor coordination & schedule review meetings. This practice saves the cost of multiple roundtrip expenditures.



## 2.2.8 PROJECT TEAM & QUALIFICATIONS for CA/CEI SERVICES

### A. Experience of Project Manager(s) with Similar Interdisciplinary Teams

Marty Andersen, PE, Contract Manager, will also be available to serve as a WOM. He brings over 29 years' experience, including 28 years at ODOT where he served as Manager of ODOT's Local Government Section, and ODOT Local Agency Liaison where he served as ODOT's Project Manager for LA projects. His management experience overseeing multi-disciplinary teams ranges in the hundreds – from small culverts to large, multi-modal facility improvements, and emergency response. His unique experience encompasses a breadth of interdisciplinary projects that set him apart – roads, bridges, transit, rail, ports, marine, aviation, bike and pedestrian, ferries, and historic restorations. Because of his unique position at ODOT, Marty brings relationships with ODOT and LA staff throughout the state. He has spent his career partnering with ODOT, LAs and consultant teams to successfully deliver projects. He is currently serving as PM/WOM for SW Leahy Road Improvements, Washington County; Foss Road Slide Repair, Tillamook County and serving as Resource Manager for Sellwood Bridge, Multnomah County.

**A Nimble, Innovative, and Cost-Effective Team:** Marty is supported by a strong team of WOMs who deliver solid technical expertise and exceed our clients' goals and expectations. They bring strong experience collaborating with and managing interdisciplinary teams for transportation projects – from small to large, ranging from the most high-profile and complex transportation improvements to small street enhancements. Marty will assign WOMs to projects that match their background and ODOT/LA experience, and balance each WOM with a team of experienced discipline leads for every project need. He will also verify with the ODOT/LA PM if there is any particular WOM they would like assigned to their project. This provides flexibility to ODOT/LA that they will receive the WOM whom they feel will best represent their goals and needs.

This team of WOMs is extremely well-suited to provide on-call services encompassing a wide range of project types and geographic areas. An area in which TYLI really excels is our exceptionally talented staff, trained in a variety of project delivery options. We are particularly skilled in managing tight deadlines, budget constraints, and diverse site conditions, provide the project results needed by ODOT and Local Agencies to get projects completed successfully and quickly. TYLI is a leader in scheduling for both construction and design. Fully integrated schedules are the norm for our project delivery and a key to a successful delivery of our projects within the State. These schedules access the same skills as demonstrated on the successful scheduling effort for OR 43: Willamette River Bridge (Oregon City) bridge construction.

*“The (OR43) project is complex both in the nature of the work and in the inter-relationships of the parties needed to accomplish it. TYLI has provided **skilled and experienced** scheduling personnel...have been **cooperative** in working with all of the parties involved...has made a **significant contribution** to what is going to be a **successful project**.”*

-Wayne Statler, PE, ODOT, OR 43: Willamette River Bridge PM

### B. Key Staff Experience/Capabilities

Key Team Members' Selected Experience	
Key Staff	Relevant Experience
<p><b>Marty Andersen, PE, Contract Manager.</b> During Marty's 28 years at ODOT, he spent five years in the ODOT Construction Offices in Regions 2 &amp; 3 and seven years as a Local Agency Liaison in Regions 1 &amp; 2, where he helped develop the ODOT Construction Manual.</p>	<ul style="list-style-type: none"> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Foss Road Slide Repair, Tillamook County, OR</li> <li>• SW Leahy Road Improvements, Washington County, OR</li> <li>• ODOT Region 2 Culvert Replacements, OR</li> <li>• S. Side Bypass Klamath Falls Survey &amp; Construction Inspection</li> <li>• Bridge Creek Rd Bridge, Wheeler County, OR</li> </ul>
<p><b>Dan Pavela, PE, PM/WOM.</b> With 30+ years of engineering and construction management experience, Dan has a solid track record managing complex projects. He manages a statewide On-Call contract with ODOT for Construction Scheduling. An expert QA/QC Manager, he is performing that role on current projects including Sellwood Bridge, Portland-Milwaukie LRT Bridge, &amp; Willamette River Bridge.</p>	<ul style="list-style-type: none"> <li>• OR 43: Willamette River Bridge Const Scheduling, ODOT R1</li> <li>• OR 26: Glencoe Road Overpass Const Scheduling, ODOT R1</li> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• Depot Street Bridge, Jackson County, OR</li> <li>• Gordon Rd Overpass RR Bridge Replcmt, North Plains, OR</li> </ul>



<p><b>Justin Acacio, PE, Quality Manager &amp; Constr. Specialist</b>, brings 10 years' experience, including serving as PM/Asst. PM on multiple ODOT projects. He is Construction PM on Multnomah County's Sellwood Bridge and Lead Scheduler for ODOT's OR43: Willamette River Bridge. For this effort, TYLI provided a thorough review of the CC's CPM schedule, and an assessment for meeting critical path. Justin and Dan Pavela participated in real-time sessions with ODOT and CC to develop a modified schedule that led to the CC meeting critical "Bridge Open to Traffic" milestone.</p>	<ul style="list-style-type: none"> <li>• OR 43: Willamette River Bridge Const Scheduling, ODOT R1</li> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene OR</li> <li>• Viaduct Extension, ODOT R2 and City of Springfield, OR</li> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• OR 42: Beaver Creek-Mid Fork Coquille River, ODOT R3</li> <li>• I-5: North Umpqua River (Winchester) Bridges, ODOT R3</li> <li>• I-5 Camas Swale, Saginaw Rd., ODOT R2, Lane County, OR</li> <li>• Redmond Reroute Ph1, Unit 2 Sign/Signal Bridges, ODOT R4</li> <li>• Rail Retrofit / Ochoco Hwy, ODOT R4, Crook County, OR</li> <li>• Depot Street Bridge, Jackson County, OR</li> <li>• Pirates Cove Sidewalk Support Structure, ODOT R2</li> <li>• UPRR Field Verification &amp; CM for TriMet PMLRT East Segment</li> </ul>
<p><b>Tom Siniscal, Sr. Inspector</b> has over 30 years inspection and documentation management experience for bridge and highway projects. He has performed comprehensive field engineering and inspection of roadway grading, paving, drainage facilities, curb/gutter, sidewalk, pile driving, drilled shafts, and bridge substructures and superstructures. He is proficient with construction project control procedures including cost and scheduling, change orders, and progress pay estimates and documentation.</p>	<ul style="list-style-type: none"> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• Yaquina Bay Bridge Painting, ODOT R2, Newport, OR</li> <li>• Mail Creek Fish Passage Bridge, Seaside, OR</li> <li>• Jackass Creek Fish Passage Bridge, Grande Ronde, OR</li> <li>• Hwy26: Lindsley Crk-Lower Nehalem, ODOT R2, Clatsop Cnt</li> <li>• Denver Ave., OC over Victory Blvd., ODOT R1, Portland, OR</li> <li>• Manzana Wind Farm Bridges, Rosamond, CA</li> <li>• M.L.K. Overcrossing of I-5, ODOT R1, Portland, OR</li> </ul>
<p><b>Vincent Shevham, QCCS</b> has 21 years of experience as a contractor, construction inspector, project manager, and construction program manager for roadways and bridges. Vince's work history includes 9 years as a construction engineering specialist for ODOT, where he was responsible for construction management, inspection, and QV/QC documentation and reporting on federally funded projects.</p>	<ul style="list-style-type: none"> <li>• Scappoose-Vernonia Rd Milepost 8.0, Columbia Cnty, OR</li> <li>• Canaan Road Guardrail, Columbia Cnty, OR</li> <li>• Main Street Rehabilitation, Richland, OR</li> <li>• Resort Street Rehabilitation, Baker City, OR</li> </ul>
<p><b>Alan Heimann, PE</b>, has extensive background in construction of transportation infrastructure and heavy industrial facilities including highway, roads, bridge, and port facilities. His experience includes serving as the construction quality control manager for 13 bridge DB projects for ODOT and as the PM for two 400-foot-long, six lane cast-in-place concrete bridges across I-205 in Portland.</p>	<ul style="list-style-type: none"> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• Portland-Milwaukie LRTransit Bridge, TriMet, Portland, OR</li> <li>• I-5/Clarks Branch to Tunnel Mill Race DB, Cottage Grove, OR</li> <li>• I-205/Sandy Blvd &amp; Glisan St Overpasses, Portland, OR</li> </ul>
<p><b>Larry Carson, Inspector</b>. Larry was responsible for all ODOT construction in Jackson and Josephine Counties and the design for many of these projects ranging from new highway construction, large freeway overlays, new bridge construction, traffic signals and illumination.</p>	<ul style="list-style-type: none"> <li>• 4 MG Reservoir Retrofit, Eagle Point, OR</li> <li>• Hwy62 Transmission Water Main/Pump Station, Eagle Point</li> <li>• U.S. Cellular Community Sports Park, Medford Parks &amp; Rec</li> <li>• Commons - Downtown Medford and Lithia Headquarters, Lithia Real Estate and Urban Renewal Agency of Medford</li> <li>• Atlantic Avenue, Urban Renewal Agency of Jackson County</li> <li>• Pacific Avenue, Urban Renewal Agency of Jackson County</li> </ul>
<p><b>Jay Greene, Construction Inspector</b> draws upon his background in CAD design for transportation structures, including reinforced concrete, pre-stressed concrete and steel highway structures, sign supports, and retaining walls to bolster his expertise in construction inspection. Jay has worked on several complex infrastructure projects in Oregon and is currently engaged in a very sensitive earthwork inspection project for the Union Pacific Railroad in their Brooklyn Yard.</p>	<ul style="list-style-type: none"> <li>• OR 38: Elk Ck to Hardscrabble, ODOT R3, Douglas Cty, OR</li> <li>• I-5: Elkhead Rd to OR126: Knowles Ck DB, ODOT R2/R3</li> <li>• Sellwood Bridge, Multnomah County, OR</li> <li>• I-5: Willamette River Bridge CM/GC, ODOT R2, Eugene, OR</li> <li>• UPRR Field Verification &amp; CM for TriMet PMLRT East Segment</li> </ul>



TYLI has the ability, qualifications and experience to provide you with CA/CEI services for a wide range of project types. We bring you:

**Breadth:** a wealth of expertise in multi-modal, multi-disciplinary projects.

**Depth:** We have delivered transportation projects throughout the Pacific Northwest of ALL sizes—from the \$1.2B Port Mann Bridge (B.C.) to the \$73k SW Leahy Rd & W Stark sidewalk project in Washington County.

**Resources:** ODOT/LAs have the commitment of more than 2,300 TYLI staff worldwide, 700 in the U.S. and over [1,600 local TYLI team members](#) who can be called on to resource your projects anytime, anywhere.

**nimble. innovative. cost-effective.**

With TYLI you have immediate access to expert professionals, locally and across the nation, with depth and breadth, to perform:

- construction engineering
- construction scheduling
- construction inspection
- quality control
- construction contract administration
- deep foundation inspection
- mass concrete plan evaluation
- paint inspection

TYLI has immediate access to expert professionals from across the region and the nation for project delivery in Oregon. Additionally, we have provided expert staff to resource projects in other states and countries, which has provided our team with opportunities to hone their expertise in a variety of areas benefitting ODOT/LA projects.

As an example, in 2011 **WOM Justin Acacio** was brought on as the owner's representative to provide forensic scheduling for the largest single construction project Delaware DOT had ever awarded, the \$150M Indian River Inlet Bridge DB. Under management of the design builder, the project had fallen behind schedule. Due to Justin's diligence, a potential four month delay was mitigated and the project met the revised open to traffic date that had been committed to the public.

*"Bringing Justin on for schedule review and analysis is one of the best decisions I have made on this project."*

– Doug Robb, PE, DeIDOT, Indian River Inlet Bridge PM

TYLI has been providing expert transportation construction engineering since 1954. We provide local, national and worldwide clients with high quality service, expert deliverables and constructible solutions.

The TYLI team is proficient at complying with federal aid requirements, and we are very well-versed in working with ODOT to move projects through the construction process. We routinely lead project teams for ODOT and LAs, and through those relationships we stay abreast of the most up-to-date information on project delivery and execution. We have long-standing relationships with several subconsultant firms with whom we team on a regular basis, providing our clients with well-integrated project teams.

**Client-Focused Service:** TYLI is focused on the highest quality deliverables – both in consultant product and in client experience. We are dedicated to working collaboratively with our clients and developing an in-depth familiarity and thorough understanding of your needs, developing a detailed understanding of schedule and budget requirements for each project, then working diligently to exceed your expectations and goals. TYLI's strong performance and quality deliverables have been recognized by our clients and professional organizations with numerous recognition and awards.

TYLI brings you innovative, high value, cost-effective solutions; attention to detail; and nimble, responsive service. Our experience and drive to make our clients successful will benefit ODOT and Local Agencies. We are experienced, skilled, and ready to work on your projects.

[We ask that you select TYLI to serve as one of your consultants for this contract!](#)

