

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: Murray, Smith & Associates, Inc. ;

a/an OR Corporation; DBA Name (if different than legal name): n/a

Corporation Professional Corporation Ltd. Liability Company Partnership
 Limited Partnership Ltd. Liability Partnership Sole Proprietorship Other _____

Mailing Address 121 SW Salmon, Suite 900
 Portland, OR 97204

Type name of primary Contact for this Proposal Troy L. Bowers, P.E.

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Telephone 503.225.9010 Fax 503.225.9022

Type name of person(s) authorized to sign Contract/Price Agreement: Troy L. Bowers, P.E.

“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
William H. Hollings III, P.E.	13265	Oregon
Kevin M. Thelin, P.E.	19313	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
Bret Elithorp, PLS	63148	Oregon
Troy Tetsuka, PLS	2841	Oregon

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

- I. 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)

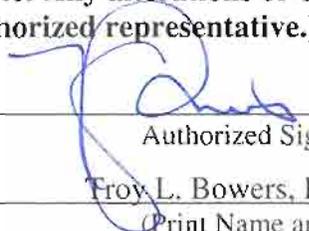
- Proposer understands and has provided to all Associates (which includes subcontractors) the COI Guidelines and COI Disclosure Form. Proposer and, to the best of the undersigned's information, knowledge and belief, Proposer's Associates (as defined in the COI Guidelines) are in conformance with the 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 11, 2012

Troy L. Bowers, P.E., Senior Vice President

(Print Name and Title)

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Key Staff Resumes and References for PE-Design Services and CA/CEI Services, and Subcontractor Solicitation and Utilization Report are attached separately



FULL-SERVICE A&E PRICE AGREEMENTS
FOR ODOT AND LOCAL AGENCY
TRANSPORTATION PROJECTS

RFP # 25134

I-5 at 99W



“We continue to receive compliments about the downtown project. The project improved Waldport’s image and, in fact, has made a couple nearby communities envious.”

Larry Lewis, City Planner, City of Waldport

2.2.1 PROPOSER'S PROJECT MANAGEMENT FOR PE-DESIGN SERVICES

A. Management and Organizational Structure, Selection and Management of Subconsultants and Staff Organization for PE-Design Services

Management and Organizational Structure

All principals are practicing engineers and are extensively involved in project management and day-to-day engineering work. As a matter of policy, a principal is involved in every assignment, regardless of size.

MSA is a private corporation owned by the principals and associates of the firm, all of whom must also be full-time employees. The firm is managed by its six principals and 21 associates, each responsible for certain aspects of the business operation. We are internally organized into client teams to ensure maximum responsiveness, value, continuity, familiarity and service to our clients. We achieve a high-quality work product through involvement of these experienced principals and associates in all of the firm's projects. Our internal teams are organized to support the project manager (either a principal or associate for all of our assignments) who has ultimate responsibility for the successful and timely completion of the assignment. All staff and subconsultant team members report to the project manager. This single point of contact allows for inter-related issues to be managed proactively and effectively, and allows for clear communication and decision making with our ODOT and/or local agency project

manager and the Project Design Team. We achieve success through delegation of discrete tasks and disciplines to individuals whose work products then flow back to the project manager for quality and continuity review. The project manager is the day-to-day top of the chain of command and maintains the cohesiveness and direction of the diverse elements associated with each assignment, as well as keeping the individual components on schedule to meet or beat key project delivery dates and milestones.

Selection of Subconsultants

We have very carefully selected our team subconsultants to be composed of the highest level of professionals available in their respective fields of expertise, and also to provide an adequate reach across ODOT's five regions. The project manager selects subconsultants based on the specific needs of the project, subconsultant strengths, past familiarity with the project and/or local area and agency staff, their office location and/or coverage area. We have worked hard to build a team inclusive of OMWESB subconsultants who add excellent value to the overall project and who supplement and complement our in-house capabilities. Our goal is to provide meaningful participation and mentoring opportunities for each of these firms.

We will maximize the utilization of DBE firms to meet or exceed the Agency's DBE participation goals and aspirational targets for each project assignment.

Management of Subconsultants

Statewide Coverage:

Our excellent communication skills allow efficient management of subconsultants statewide and maximize the benefits ODOT seeks in developing and utilizing local MWESB businesses for their key expertise.

Our project managers are responsible for coordinating and integrating each of our subconsultants' activities and work products into the overall project deliverables and schedule. We maintain contact with subconsultants through telephone and email, as well as through meetings in the field or office to confirm they are following the scope and timelines defined in the written contracts we execute with each of them. Frequency of contact is dictated by the complexities of each specific project. We maintain at least weekly, if not daily, contact with each subconsultant when actively involved in any given phase of a project. Our project managers review all of our subconsultants' work products for consistency with project goals, direction, and professional quality, and provides immediate feedback

to address discrepancies and questions or comments prior to forwarding to Agency for review and comment.

Organizational Chart

We have specifically structured a team of firms and individuals who have worked together productively on many prior assignments. Most of our team members have been working together on ODOT projects since 2002. Our organization chart shows MSA key staff and subconsultant team members and their role/discipline for PE-Design Services. We have also identified OMWESB-certified subconsultant firms to demonstrate our ability to meet the aspirational targets and participation goals assigned to work order contracts (WOCs).



B. Meeting Delivery Schedules without Sacrificing Quality

Fast-Track Schedule Management

At MSA, much of our normal workload is accomplished on expedited “fast-track” schedules. We tirelessly live by our “can-do” attitude and are often hired because our clients trust that we are **the firm** that can truly fulfill a promise to get their project done on time. We use several methods to effectively expedite project delivery without sacrificing quality:

- **Set aggressive completion dates for our interim deliverables** to create “float”, allowing for potential delaying factors outside of our control to occur without derailing the project. We take project schedule and project delivery commitments very seriously. Our project teams routinely do what it takes to get the job done. In over ten years as a prime consultant with ODOT, we have yet to miss a key milestone delivery date.
- **Use project management and design staff who know how to work effectively and efficiently with ODOT, local agencies and the permitting agencies** and are “known quantities” to them. We know complex projects are challenging enough without the distraction of contrary personalities. Our entire lead team is comprised of senior level individuals who enjoy solid reputations and many years of local experience.
- **Engage multiple engineering sub-teams working concurrently** to produce work volumes necessary to meet deadlines. We have delivered many ODOT and local agency fast-track projects through this approach.
- **Work extended hours** to expand basic production capacity. When weekend work is required, our project principals and managers are there, working side-by-side with the rest of the project team to make sure prompt input is available on high-level decisions and that no sacrifice is made on work quality.
- **Utilize MS Project scheduling software to stay on track.** We develop project schedules using MS Project as an integral tool for practically every one of the hundreds of projects. Our project managers update the schedule throughout the life of the project to meet the milestones and submittal dates. The schedule is provided to task managers for planning work efforts including allowances for timely quality assurance reviews.

Staffing Flexibility and Adjustments

We continuously manage staff and workload so as to maintain high flexibility. We achieve an optimal balance between workload and staff resource capacity by tracking, monitoring and managing firm resources through a detailed backlog and project scheduling system. Our backlog system tracks contracted work assignments and provides allowances for potential anticipated work. The firm’s backlog is then spread over time, resulting in an estimated monthly utilization projected into the future at least 12 months. Our staffing levels are guided by these analyses and the commitments we have made to our agency partners.

With a total firm staff of 85, operating from six offices throughout the Pacific Northwest, we routinely draw on firm-wide resources to meet a given project’s schedule demands. We manage the firm for sustainable long-term growth, and as such, we are constantly considering new staff additions. Our resource management system enables us to make timely adjustments through either staffing additions or inter-office work sharing so that all work delivery promises are kept.

Historically, we have been able to enhance flexibility through the use of subconsultants, and we have been successful on many past ODOT projects through our strong interdisciplinary firm partnerships. This versatility provides tremendous acceleration ability and horsepower to successfully carry out ODOT assignments under this contract.

When the American Recovery and Reinvestment Act (ARRA) funding began in 2009, with the mandate to very quickly prepare construction contract documents and get projects physically built, ODOT and many other public agencies relied on MSA to help achieve this important goal.

In addition to engaging our team partners, we immediately hired four additional staff to supplement our existing core team to meet stringent deadlines. In this way, we delivered on all of our work promises, as can be confirmed by our references.



Key QA/QC Elements

- Understanding the Project
- Assigning the Right Project Team
- Active Senior Level Involvement
- Peer to Peer Collaboration
- Review by Oregon Licensed PEs
- Communication/Documentation
- Checklists

"Throughout the course of the project I frequently heard comments from ODOT technical reviewers, Tech Services staff, and Area Managers that included statements to the effect of: 'These guys are the most thorough I've seen', 'Can I get that spreadsheet in electronic format - I'd like to use it on my next project', 'This is the best work I've seen'...At least once on each of my other projects I found myself thinking how much more smoothly the project would be going if MSA were on board... [They] demonstrated a great attention to detail, were forward thinking, and truly fit the role of 'augmenting ODOT staff' (i.e. they operated seamlessly with the ODOT reviewers)."

Tom Braibish, P.E., ODOT Region 1
GeoHydro Manager



C. Quality Control Procedures and Policies

Understanding the Project

Every project starts out with an internal project kick-off meeting making certain all team members, including subconsultants, understand the various **performance requirements and key issues** the project must address to achieve **value**. Each project is reviewed with respect to the most recent similar project that the firm has completed, as well as other known recent projects by the client or others in the region, so that important industry advancements and other creative ideas are incorporated into our designs.

Active Senior Level Involvement

As noted above, all of our project managers are vested owners in the firm and all are extensively involved in project management and day-to-day engineering work. Their individual, our team's, and our firm's collective success are predicated on the quality of our work. This active senior level involvement in all projects through the course of the work maintains this required work quality. Day-to-day check-ins between staff engineers, design engineers and the project manager keep the project moving in the right direction and pace to meet the project schedule milestones. We gain **value** through **peer-to-peer collaboration** as all work products are reviewed by at least one **Oregon licensed professional engineer** of equal or greater job classification than the team member who performed the work prior to final review by the project. No work products are delivered prior to these reviews.

Communication/Documentation

Documentation of our work is critical, and we do this through technical memoranda, meeting minutes, e-mail correspondence, telephone records, design calculation files, formal written letters and other documentation of our work. Our standard QA/QC program requires project managers to maintain a project "Comment-Response Log" listing all comments received, the date of receipt, from whom, the responsible team member to address the comment, the date the comment is addressed/resolved, and what the response/resolution is. In addition to review comments, our standard log also includes a comprehensive list of all action items noted in the minutes from team and sub-team meetings so they are not overlooked. To date, these documentation tools have helped us produce outstanding deliverables leading to successfully completed projects.

Checklists

We have developed a series of extensive standardized checklists to aid in the efficient production and review of plan sheets, technical memoranda and other deliverables. These checklists catalog, in bullet form, items a designer and a reviewer need to consider at different stages of the project. The reviews verify that proposed design solutions meet the objectives of the project, required design standards are met, and designs are practical and constructible.

D. Evaluating Construction Budgets

Methods of Evaluation

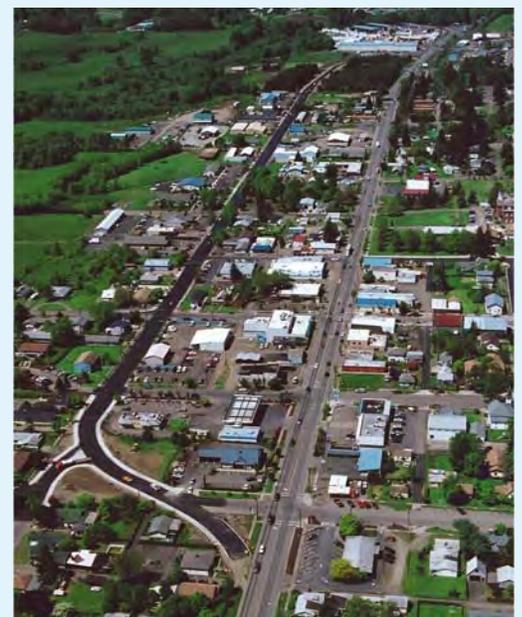
Our many public agency clients rely on our engineer's cost estimates to make major capital improvement budgeting decisions. We routinely develop probable project costs at early stages of projects with a planning level accuracy (+30% to -50%) in accordance with guidance set forth by the American Association of Cost Estimating Engineers. Our transportation project estimates are based on the bid tabulation database maintained by ODOT and on our firm's database of all of our past projects (over 1,300). For unique items, we utilize other recognized standard resources such as RSMMeans Cost Estimating guides and our project team communicates with materials and equipment suppliers to determine pricing. We also analyze the bidding climate, required construction schedule and construction market to factor into estimates.

Approach to Budget Insufficiencies

We are diligent about identifying potential cost concerns early on in the design process, at a stage when revisions may be made with the least overall impact to the project. An excellent example is one of the I-5 assignments our firm delivered for Region 1. This two-phase, three-section project has a long and complex budget and scheduling history. The original ODOT construction budgets were \$13 million for the I-5: Capitol Highway – Tualatin River portion (North Section); \$5.7 million for the I-5: Tualatin River to Wilsonville Road project (the Middle Section); and \$1.8 million for the Wilsonville Road to Willamette River Bridge portion (South Section). The North and South sections were adequately budgeted for, but when our team completed the DAP level of design for the Middle Section, the engineer's construction estimate came in at \$17.2 million. Prior to DAP, our team apprised the PDT during its second meeting (at about the 15% level of design and less than one month after the project's kick-off meeting) that the project costs for this section would be on the order of \$18 million. To develop and support these estimates, we performed an exhaustive roadside inventory to determine which freeway elements did not meet current standards and which appeared well-suited for design exceptions or concurrences. Through a series of technical memos (TMs) documenting the conditions with text, figures, as-builts and photos, we developed several alternatives, with cost estimates, to address all deficiencies and ultimately rated the severity of and practicality to remedy each deficiency and to provide value for each dollar programmed. We presented each TM to the PDT or appropriate sub-team to finalize recommendations. The recommended alternatives were necessarily a balance of sometimes competing interests: FHWA's mandate to ODOT to exercise prudent stewardship of the freeway system under its management; the State's mandate that ODOT provide safe and durable infrastructure for the traveling public; and ODOT's fiduciary responsibility to allocate scarce project dollars to the best ends.

Providing Value: The Philomath Couplet

While the Agency recognized budgeting challenges with this project from the get-go, MSA was able to confirm basic costs prior to DAP. MSA worked with the Project Development Team, the City and local citizens through open houses to consider various project options through a series of interactive worksheets providing cost impacts of each of more than fifteen options along the project corridor. The PDT ultimately adopted a "no work zone" (right side of the couplet shown below) so as to tailor the project to meet the available funding. This "no work zone" limited project activities to restriping from the two-way configuration to the new one-way configuration (including a bike lane) and signal installation. The project ultimately came in under budget and was successfully constructed. The "no work zone" is now the subject of a new City of Philomath and Philomath Downtown Association-funded project being designed by MSA. The City intends to collaborate with ODOT and apply its Urban Renewal District funds to a future highway preservation project to attain the greatest value for the community.



2.2.2 PROPOSER'S COST EFFECTIVENESS FOR PE-DESIGN

A. Specific Cost-Effective Practices

Matt Freitag, Project Manager
– Metro East, Region 1 wrote
in a 2009 e-mail regarding last
minute, fast-track-added ARRA
design and permitting work for
the I-5: Capitol Highway –
Willamette River project:

"I just wanted to say thanks to
you [Kevin Thelin] and your team
for the presentation given at last
week's meeting with NMFS
[National Marine Fishery
Service]. Your preparation and
attention to detail, along with the
quick follow-up with additional
requested information, ensured
that the liaison had the
information he needed to make
his decision to not require re-
initiation. I have no doubt that
your efforts saved many
engineering hours and helped to
keep the project on track for its
scheduled bid opening."



We work as efficiently as possible on all of our assignments to provide maximum value. As noted above, this begins with a clear understanding of the project scope, budget and schedule. This initial information is the roadmap to success and sets our team on the right course with the level of effort defined in advance. On complex projects, it may be difficult to predetermine all efforts and tasks which may be needed to address project needs. In such cases, we recommend development of contingency tasks to be activated by a separate notice to proceed and to allow for these potentially necessary efforts. Additionally, it is often to the client's advantage to only initially contract through the DAP level of design so that the project elements and constraints are better developed and defined allowing follow-on tasks and efforts to be more realistically estimated. Beyond this general contracting approach, we also keep costs in check in the following ways:

Productive Meetings - When personal meetings are beneficial, we very diligently prepare agendas, generally sent out via e-mail at least two days in advance of the meeting for consideration by all attendees, and we solicit input at that time for additional topics which may not have been included. We prepare clear, functional meeting materials to guide discussions and facilitate informed decision making. Meetings, particularly those with many attendees, are very expensive undertakings which we always try to make the most of to save project expenses and to keep schedules moving ahead.

Videoconferencing Technology - We have invested in videoconference technology to allow our multi-office firm (MSA has six offices in Oregon, Washington and Idaho) to minimize travel and face-to-face meetings where necessary. This highly efficient tool allows us to offer ODOT regional expertise and resources in an integrated way, letting our team easily ramp-up resources and horsepower during any particularly aggressive milestone pushes.

Assign Work to the Appropriate Level of Staff - To make sure that work efforts are completed efficiently with the right resources and without misdirected energies, work should be assigned to the appropriate level of staff. We

provide concrete examples and focused direction from our senior level staff to make the best use of our combined resources and to avoid having high-level engineers perform activities that can be best performed by lower-paid, junior staff.

Perform the Work as Expected - Through our work as a prime with ODOT since 2002, we know what is expected and how to deliver projects with minimal revisions and effort. As per a 2011 email, Tom Braibish shared the following regarding MSA's quality products: "Lately Scott Failmetzger has been conducting QA review of many of the recent plan sets coming through Region 1. Scott reviewed a recent project that I consulted out the WQ design via discipline specific contracting. Scott has copious amounts of comments noting errors in both format and how the information was conveyed. When I asked Scott how he thought to best get the issues resolved, his comment was "Send them MSA's plans: That will show them how to do it...""

Minimize Travel Expenses - Team members car pool to meetings in order to take advantage of travel time for meeting preparation and strategizing time as well as to help minimize resource consumption, congestion and pollution. Depending on the project, we plan half of our travel time to be donated to the project by driving out to a site prior to normal work hours or, conversely, returning from a site after normal hours. For long-term projects, we have established temporary project offices and have had staff live on-site to minimize travel expenses.

Minimize Lodging/Per Diem Expenses - When our staff needs to spend the night for a remote assignment, if there is more than one person of the same gender, they always share a motel room to keep costs as low as possible. Additionally, if specific fieldwork is involved in a remote location, our staff extend daily work hours for as many days as necessary to complete the effort in as few calendar days as possible.

B. Developing Service Estimates

Our team routinely develops estimates of services for our all of our clients. We have done so for at least 40 different contracts and amendments for design and/or construction engineering/construction administration services for ODOT over the past ten years and literally hundreds of fee estimates for our other public agency clients during the same period. Our initial conceptual estimate is based on a percentage of the anticipated construction costs in concurrence with ODOT and industry standard practice. This rough-cut number gets us in the ballpark of how much effort would be considered reasonable. Prior to proceeding with more detailed breakdown of cost (BOC) preparation, we concentrate on detailing and refining the scope of work to the extent possible. It is the scope of work that defines the project, what the deliverables are, and hence, what our client's expectations and our level of effort are.

While each project presents unique challenges and design elements, design efforts and construction management efforts should fall within certain overall percentage boundaries of the construction cost. (Note that environmental support efforts are becoming an increasing requirement for every project and an increasing percentage of all design efforts. Contentious/controversial projects can also require significant public involvement efforts to successfully gain at least informed consent if not necessarily unqualified support for a project.) If a particular project is more straightforward or more complicated, discussion with the client should lead to that conclusion and allow both parties to recognize where costs should be lower or, conversely, where costs could be anticipated to be higher due to complexity and level of effort. This mutual agreement and understanding of the project, its peculiarities and challenges, or lack thereof, allow for development of a reasonable amount of effort per task. Effort is then translated to a fee based on direct salary costs, audited overhead rates and negotiated percent profit.

Once agreement has been reached with the client's project manager on the scope and the associated deliverables (meetings, average duration, specific studies to be performed, environmental baseline reporting to be accomplished, permitting analysis, design package to be made, etc.), we develop the detailed BOC. We have developed "design sheet count" spreadsheets identifying the number of hours per staff level type anticipated to be spent on each drawing to be included in the plans package at each stage of submittal (DAP, Advance Plans, Final Review Plans, Final Plans). Our experience with similar projects allows us to estimate the correct number of hours to be allocated to our staff.

Once a draft fee estimate is submitted, we encourage discussion with the client's project manager to review any areas where the proposed level of effort appears to be too high or too low. The scope may need to be better defined to include work not initially foreseen to be part of the task or to clarify that the consultant will not provide certain services or deliverables. On all projects, project management related activities, including Project Design Team meetings and coordination with subconsultant team members, invoicing, progress reporting, and the like should not exceed 10% of the overall non-management efforts. We are able to develop accurate, fair and reasonable fee estimates because of our wide range of experience with similar assignments.

What Local Agency Leaders Say About MSA and Cost-Effectiveness

"Kevin and Gabe, I just wanted to take a moment and compliment MSA on the professional manner in which you have managed the ODOT review period and moved the project forward firmly and diplomatically as possible. Your close attention to administrative flow and proactively providing critical information ... to ODOT staff has literally saved months of review time and confusion."

Dan Brown, Public Works Director,
City Woodburn, OR

"I was very satisfied with their performance. They know what they are doing and are very accurate and timely. At any time our office staff could contact them for information and they would have it turned around in a matter of minutes. They are very thorough and professional."

Craig Sheldon, Public Works Director,
City of Sherwood, OR

2.2.3 PROJECT TEAM AND QUALIFICATION FOR PE-DESIGN SERVICES

A. Project Manager Experience with Similar Interdisciplinary Teams

All of our project managers have extensive experience with similar interdisciplinary teams from their many years of managing previous ODOT full-service projects.

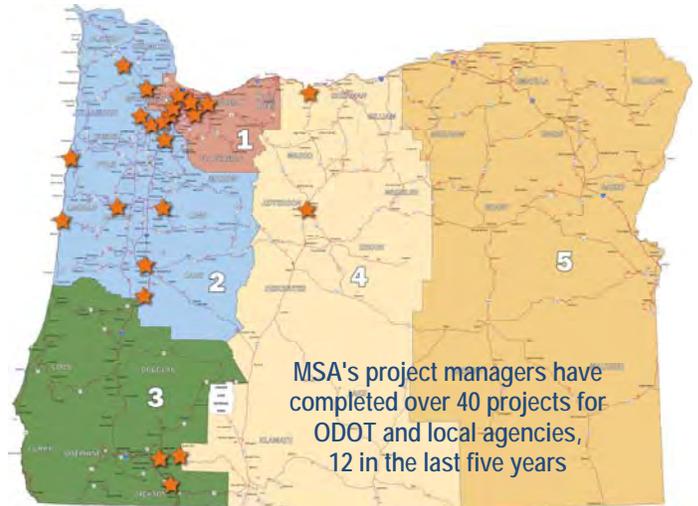
Kevin Thelin, P.E. – Kevin joined MSA in 1993 and became a firm principal in 2002. Since 1997, he has managed many of MSA's ODOT projects, including serving as either project principal or project manager on the three reference projects below. His attention to detail, hands-on management style, ability to communicate, personable style and familiarity with ODOT staff at all levels and disciplines, make him an ideal partner for the contemplated design services. Kevin's resume

outlines the projects he has directly managed, and the project reference forms detail the extent of interdisciplinary teamwork that he has led. He recently led the multidiscipline team composed of seven subconsultants for the design work on the fast-track, I-5 at I-205 Interchange Project. Kevin also leads the firm's subsurface utility engineering (SUE) and utility coordination group. He was instrumental in the firm's original SUE program development beginning with ODOT's OR99W modernization project in Newberg in 1997. He has managed ODOT assignments in Region 1, 2 and 4 and is currently working with Region 5 technical staff who are the design leads for a Region 1 project on US26.

Bill Hollings, P.E. – an MSA principal engineer, joined MSA in 2000 and was named a firm associate in 2005. In 2008, Bill was named office manager of MSA's Springfield, Oregon office and operates full-time from that location. Bill has 36 years of experience in the heavy civil and construction engineering field and has served in key project design and construction management roles for a large variety of road and highway improvement projects. He will also serve as a project manager under this contract. He is currently the project manager for the US101: Manzanita Ave - Neahkahnie Creek project. He assembled a team of seven subconsultant firms to address the complexities of this project ranging from right-of-way acquisition to improved fish passage, wetlands restoration and specialized geotechnical engineering for a new 15-foot diameter tunnel. His attached resume more fully describes his recent, successful ODOT project management experience in *four of ODOT's five regions*.

Gabe Crop, P.E. – joined MSA in 2002, became a firm associate in 2009, and has served as project manager on a variety of local agency downtown improvements projects and as assistant project manager on many Region 1 and 2 projects. He is currently the assistant project manager for the firm's US26: SE 111th to SE 122nd safety project on Powell Boulevard. This multi-discipline project is a very fast-track project with a high level of public and Agency interest. Gabe is directly coordinating the work of the team's five subconsultants to address surveying, specialty traffic studies, public involvement, right-of-way acquisition, and environmental site assessments. Gabe has developed excellent working relationships with many Agency preliminary design, traffic, pavement design, and construction office staff. His resume describes the depth of his experience.

Chris Link, P.E. – an MSA project manager, joined the firm in 2005 and was named a firm associate in 2010. He is currently serving as the project manager for the seven member multi-discipline team for the Region 1 local agency assignment (Clackamas County) of the Springwater Trail: Rugg Rd. to Dee St. (Boring) Sec. He is very successfully delivering this project, including navigating the permitting complexities associated with Joint Permit Application process to address unavoidable wetland impacts. Chris recently served on ODOT's Jobs and Transportation Act (JTA) Section 18 Stormwater Environmental Performance Standards Team to develop improved water quality and stormwater management guidance for ODOT and Local Agency projects. He has served as MSA's assistant project manager and/or project engineer on multiple ODOT assignments throughout Regions 1, 2, 3 and 4.



Responsiveness

You can count on MSA to be *responsive*.

- We assemble the right team members and approach for your project, large or small.
- We have responded to all Mini-Solicitations for both Statewide Full Service A&E Price Agreements (PAs) where we feel we are qualified and best suited to serve ODOT and the local agencies.
- We have proposed on numerous assignments which other firms have passed on.

As such, we are *a resource you can trust* to be there. Many of our most recent assignments have occurred because of our reputation and ability to deliver under extremely tight, fast-track deadlines.

Our team has the versatility to deliver comprehensive services for any anticipated project. This is evidenced by our recent tunnel, roundabout, urban highway, transit facility, bike and pedestrian corridor, and sidewalk improvement projects under our statewide contracts.

In addition to our work under these contracts, we also complete projects of high community interest and importance including downtown enhancement projects as recently completed or underway.

Our ability to be responsive comes from our strong team, depth of bench, and the high capacity of our project managers and staff.

"[MSA] staff are very responsive, and trouble shoot problems the moment they come up."

– Scott Lazenby, City Manager,
City of Sandy

B. Types of Services and Project Samples

MSA was established in 1980 to provide high-quality civil and environmental engineering to municipalities and public agencies. We have completed many multi-discipline, multi-agency, multi-phase public facilities planning and design assignments and are particularly well known for our ability to effectively and efficiently carry out challenging, complex public infrastructure projects.

As shown in the table below, we have the qualifications, **proven** experience and expertise to self-perform the majority of tasks typically associated with ODOT and local agency projects. We have completed over 20 projects through construction for ODOT including interstate freeway projects, highway improvement projects, local agency street improvement projects and bicycle/pedestrian improvement project. Another 12 ODOT assignments are currently in the design or contracting phase.

A key part of our ODOT work has been in the field of SUE and utility coordination, where we "set the bar" with the Federal Highway Administration's (FHWA) initial pilot program in the late 1990s. In addition to the utility coordination services required for projects where we serve as the prime consultant, we are currently performing specialized utility coordination services as part of ODOT-led PDTs on four different projects, including one of the largest projects in the state, the Newberg-Dundee Bypass.

We have also completed many local agency street improvement projects as part of the firm's extensive City Engineering work. These projects have included routine overlays of existing streets, intersection redesign and reconstruction, signalization improvements, complete street reconstruction, downtown streetscaping improvements, utilities undergrounding projects and other miscellaneous improvements.

The table below illustrates relevant projects where we self-performed a minimum of 51% of the contracted work and lists the specific tasks performed by MSA. In most instances, we also managed other project tasks including bridge, signals, environmental, hazardous materials, illumination and geotechnical work.

Following the table are three detailed project samples started in the last five years where we self-performed over 51% of the contracted work.



Services Directly Performed By MSA

Overall Project Management	Roadway Design	Intersection/Interchange Improvements	Bike/Pedestrian Improvements	Downtown Streetscaping Improvements	Storm Drainage Design	Water Quality/Stormwater Management	Fish Passage Enhancements	Traffic Control and Staging	Signing and Striping	Erosion Control	Utility Coordination and SUE	Utility Undergrounding	Integrated Road and Utility Designs	Access Management	Interagency Coordination	Permitting	Constructability/Estimating/Scheduling/Specifications	Construction Engineering Services	Public Involvement Support
US26: SE 111th to SE 176th, ODOT (S,P) Current	■	■	■	■	■	■		■	■	■	■			■	■		■	■	■
US26: Mt Hood Hwy @ MP 49.20 - MP 57.45, Storm Drainage, Water Quality and Erosion Control, ODOT (S,P,O) Current	■	■	■	■	■	■		■	■	■	■			■	■		■	■	
OR18: Newberg - Dundee Bypass Phase 1, Utility Coord., ODOT (U) Current	■	■	■	■	■	■		■	■	■	■						■	■	
Downtown Streetscape Phase 2 Improvements, City of Sherwood (TE) Current	■	■	■	■	■	■		■	■	■	■	■	■				■	■	■
Downtown Streetscape Improvements Project, City of Philomath (TE,O) Current	■	■	■	■	■	■		■	■	■	■				■		■	TBD	■
Springwater Trail: Rugg Rd. - Dee St., ODOT/Clackamas County (TE) Current	■	■	■	■	■	■		■	■	■	■				■	■	■	TBD	
I-5 at Woodburn Interchange, SUE and Utility Coord., ODOT(M,U) Current	■	■	■	■	■	■		■	■	■	■						■	■	
I-5 at I-205 Interchange, ODOT(M, O) Completed	■	■	■	■	■	■		■	■	■	■				■	■	■	■	
I-5: Willamette River - Martin Creek, ODOT(P) Completed	■	■	■	■	■	■		■	■	■	■				■	■	■	■	
US26: Military Cr. - Salmonberry - Wolf Cr., ODOT(S,P) Completed	■	■	■	■	■	■		■	■	■	■				■	■	■	■	
5th Street Improvements, City of Woodburn (M,O) Completed	■	■	■	■	■	■		■	■	■	■		■		■	■	■	■	■
US97 at Iris Lane, ODOT(S) Completed	■	■	■	■	■	■		■	■	■	■						■	■	
US101: SE 16th - SE 36th St., SUE, ODOT(M,U) Completed	■	■	■	■	■	■		■	■	■	■						■		
Downtown Utility Undergrounding & Streetscaping, City of Sandy (TE,O) Completed	■	■	■	■	■	■		■	■	■	■	■	■		■	■	■	■	
OR140: N. Fork Little Butte Creek - Green Springs Hwy., ODOT (S,P) Completed	■	■	■	■	■	■		■	■	■	■			■	■	■	■	■	
I-5: Capitol Highway - Willamette River Bridge, ODOT(M,P) Completed	■	■	■	■	■	■		■	■	■	■				■	■	■	■	■
US101: Alsea Bay Bridge - William Keady Wayside (Waldport), ODOT/OBEC (P, TE,O) Completed	■	■	■	■	■	■		■	■	■	■	■	■	■	■		■	■	■
US20: Philomath Couplet, ODOT (M,B,O) Completed	■	■	■	■	■	■		■	■	■	■			■	■	■	■	■	■
I-5 @ Bellline Interchange, SUE, Utility Coord. and Stormwater Management, ODOT(M,B) Completed	■	■	■	■	■	■		■	■	■	■						■	■	
2005 Region 1 - ATMS Ramp Meters (Phase 7) & I-205 - Glisan (SB) and Park Place (NB) Ramp Meters, ODOT(O) Completed	■	■	■	■	■	■		■	■	■	■				■	■	■	■	
OR47: Azalea St. - 2nd St. (Yamhill), ODOT (M,TE) Completed	■	■	■	■	■	■		■	■	■	■		■	■	■	■	■	■	■
Brutscher St. - Everest St. & Everest St. - Main St. (Newberg) Secs., ODOT(M) Completed	■	■	■	■	■	■		■	■	■	■						■	■	
US20: Wheeler St. - Market St. (Lebanon), ODOT(O) Completed	■	■	■	■	■	■		■	■	■	■			■	■	■	■	■	

Location: Boring, OR
Year Started: 2011
Total Contract Amount: \$448,413
MSA's Key Self-Performed Tasks:

- Overall PM
- Trail design
- Intersection geometric and safety improvements
- Drainage design
- Stormwater management
- Signing and striping
- Traffic control
- Erosion control
- Utility coordination
- Permitting coordination
- Multiple agency coordination

Percentage of Non-Contingency Contracted Work Self-Performed: 66%



Project Description, Objectives and Tasks

This project for Clackamas County, delivered through ODOT's local agency (LA) program, will widen, pave and improve 2.2 miles of the Springwater Trail in

Boring, Oregon with a 10-foot to 12-foot wide paved pathway and 2-foot to 4-foot wide gravel shoulders. This project will complete the full 21.5 mile trail from Boring to downtown Portland and will provide the link necessary to form a network of connecting trails. This project includes multi-agency and organization coordination including City of Portland, Clackamas County, Clackamas County Parks, ODOT and PGE. The MSA team's (six subconsultants) scope of design services includes trail design, environmental studies and permitting, bridge retrofit, trail/road/access crossings, drainage improvements, stormwater management, utility coordination, and landscape design. We carefully developed several alternatives optimizing the trail

width to meet standards, while minimizing major impacts to wetlands and avoiding impacts to Badger Creek. Our design includes cost effective safety improvements where the trail crosses SE Haley Road, including trail realignment, signing, striping, and new curb to "tee up" the existing skewed intersection geometry. MSA managed the specific environmental work to meet federal and CE Closeout requirements including ESA compliance documentation, Noxious Weed/Botanical Clearance Report, No Effect Memo, Joint Permit Application for work in wetlands, Archaeological & Historic PA Memo, and Level I and II Environmental Site Assessments. Construction is scheduled for the summer of 2013.

US26: SE 111th – SE 176th, Oregon Department of Transportation

Location: Portland, OR
Year Started: 2012
Total Contract Amount: \$725,105 (thru Final DAP)
MSA's Key Self-Performed Tasks:

- Overall PM
- Roadway, sidewalk and intersection design
- Bike and pedestrian safety improvements
- Public involvement support
- Signing and striping
- Traffic control
- Erosion control
- Utility coordination
- Access management
- Multiple agency coordination

Percentage of Non-Contingency Contracted Work Self-Performed: 55%



Project Description, Objectives and Tasks

MSA and its team of five specialty subconsultants are currently developing safety improvement and pavement rehabilitation designs for the US 26: SE 111th to SE 176th project for ODOT. This portion of the existing outer Powell corridor has several transportation-related deficiencies, including eight top 10% crash

sites in the state. The long-term vision for the corridor will require over \$50 million to complete, whereas ODOT currently has only \$5 million in funding. To manage immediate community needs, we are implementing ODOT's practical design philosophy by helping to prioritize cost effective safety improvements. This process includes extensive public outreach to solicit feedback on suggested improvements. Civil improvements will include asphalt leveling, pavement grind and inlay, durable profiled striping, shoulder widening to provide continuous bike and pedestrian facilities and new ADA ramps at signalized intersections. Traffic and Intelligent Transportation Systems (ITS) upgrades will include red light extension capability, red light running cameras, reflective backplates for signal heads, new pedestrian push buttons for existing signals, and illumination. New driver feedback (aka "Your Speed Is") signs and two new rectangular

rapid flashing beacons will also be installed. This high profile, fast-track project will dramatically improve the corridor and address several elements previously recommended in the Outer Powell Corridor Plan.



Downtown Streetscape Improvements, City of Philomath

Location: Philomath, OR

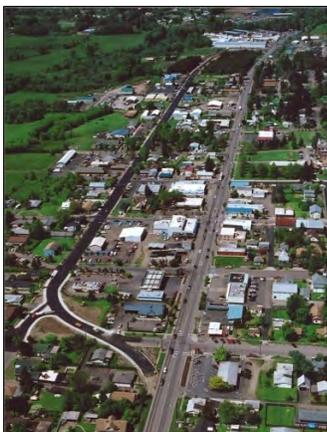
Year Started: 2011

Total Contract Amount: \$388,238

MSA's Key Self-Performed Tasks:

- Overall PM
- Roadway, sidewalk and curb design
- Intersection design
- Downtown streetscaping
- Pedestrian and bicycle improvements
- Drainage design
- Stormwater management
- Signing and striping
- Traffic control
- Erosion control
- Utility coordination
- Multiple agency coordination

Percentage of Contracted Work Self-Performed: 68%



Project Description, Objectives and Tasks

MSA and its three subconsultant team members are currently designing streetscaping improvements for a seven block section of US20/OR34 in downtown Philomath between 7th and 14th Streets. Improvements will be on the recently reconfigured couplet portion of the highway for which we also completed designs in 2006 for ODOT and the City as part of the Philomath Couplet project. Streetscape improvements not completed with the previous project due to funding constraints are currently being designed by MSA as follow-on work directly for the City. Using the City's local Urban Renewal District (URD) funds, we are implementing the vision set forth in the Downtown Design Plan commissioned by the Philomath Downtown Association and as developed by our landscape architect

subconsultant. Streetscaping improvements will include wider decorative sidewalks, narrower streets, curb extensions, bike lanes, curbs and gutters, water quality facilities such as flow-through planters, street lighting, landscaping and many other amenities such as benches, trash receptacles, planters, bike racks, kiosks, and banners. As a significant **value** to the City, we are implementing innovative and cost effective strategies including reusing and updating previously developed survey mapping, coordinating with already established City and ODOT contacts, and using previously collected data for project designs. Our work also includes coordinating and synchronizing the City's streetscaping plans with ODOT's future pavement maintenance plans into a single combined project.

C. Key Staff Resumes

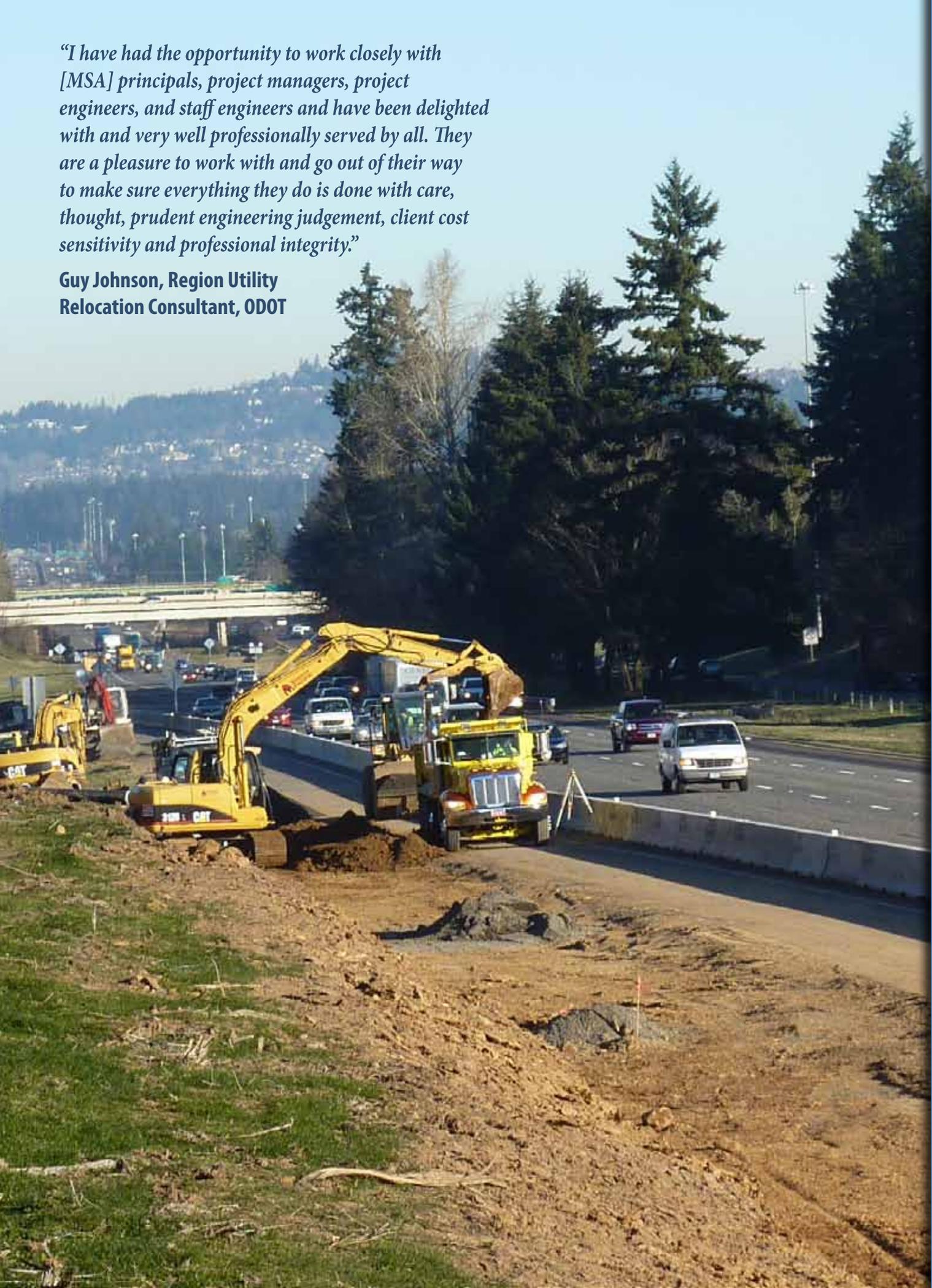
Resumes for our team's key staff including overall project managers and task leads for structural engineering, roadway design, survey, geotechnical, hydraulics, environmental, right-of-way, and public involvement are attached separately as per section 1.5. of the RFP..

2.2.5 REFERENCES FOR PE-DESIGN SERVICES

As illustrated above, we have excellent experience leading multi-discipline teams to complete State and LPA transportation projects from preliminary engineering through final bid-ready PS&E. Attached separately are references for the four most recent, relevant projects (all with a total construction phase budget greater than \$500,000) that we have led and completed through final bid-ready PS&E in the last five years. Two of the four projects are federally-funded, and one (I-5 at I-205 Interchange) was funded with State JTA funds. These projects range in type and complexity from local agency sidewalk, streetscaping and roadway projects to large freeway operations, modernization and preservation projects and are typical of ODOT full-service and LPA projects described in this RFP as potential assignments.

“I have had the opportunity to work closely with [MSA] principals, project managers, project engineers, and staff engineers and have been delighted with and very well professionally served by all. They are a pleasure to work with and go out of their way to make sure everything they do is done with care, thought, prudent engineering judgement, client cost sensitivity and professional integrity.”

**Guy Johnson, Region Utility
Relocation Consultant, ODOT**





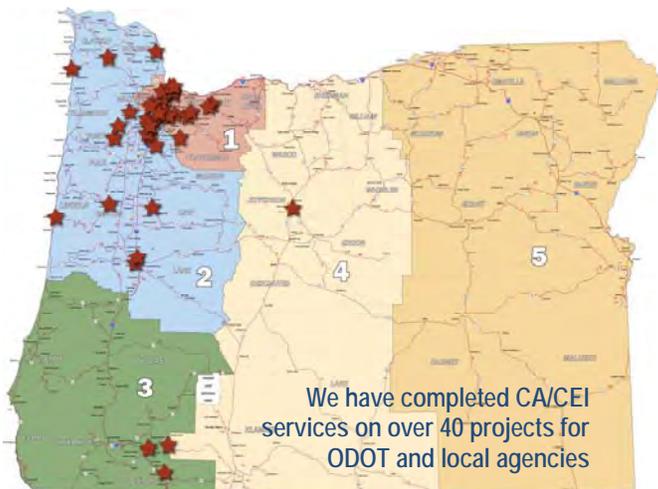
2.2.6 PROJECT MANAGEMENT FOR CA/CEI SERVICES

RSVP

We have assembled a team of MSA and subconsultant staff structured to deliver full-service CA/CEI services to ODOT and local agencies. Our performance over the past decade working with ODOT and local agencies has been applauded by our clients as reflected in our performance reviews, references and selection for additional assignments. Our proposed team is dedicated to continuing our strong commitment to you and the local agencies by building upon this solid foundation. As one of the *top three providers* under the existing statewide contracts, we are invested in providing quality services and will continue to provide **responsive, statewide, value-rich, and proven** service for all projects and clients we are fortunate enough to be selected for.

You can count on us to be **responsive**. We do our utmost to assemble the right team members and approach for your project, large or small. We have responded to all assignments where we feel we are qualified and best suited. We have proposed on numerous assignments which other firms have passed on. As such, we are a resource you can trust to be there for you. Many of our most recent assignments have occurred because of our reputation and ability to deliver under extremely tight, fast-track deadlines. Our team has the versatility to deliver comprehensive services for any anticipated project. This is evidenced by our recent broadly disciplined transportation work including tunnel, roundabout, urban highway, transit facility, bike and pedestrian corridor, and sidewalk improvement projects under our statewide contracts. In addition to our work under these contracts, we also complete projects of high community interest and importance for local agencies including downtown enhancement projects, as recently completed or underway. Our ability to be responsive comes from our strong team, depth of resources, and extensive experience of project managers and staff.

We have maintained **statewide** reach and coverage through our *network* of MSA and subconsultant office locations. Our MSA offices in Portland, Springfield and Boise allow us reasonable and cost-effective access and service to most project locations. We also systematically utilize subconsultant office locations to support efficient work programming through leveraging local insights and talent, and minimizing travel-related expenses. Our statewide teaming relationships also enable us to satisfy project specific DBE/MWESB goals and targets. Over the past decade, we have completed or strongly supported transportation projects with CA/CEI throughout the state, including several current projects. These transportation projects take us from Madras to Klamath Falls, from Portland to Ashland, from US26 to Waldport, and beyond and between.



Our ultimate goal is to deliver **value-rich** projects for you, our clients. As a mid-sized firm, we offer the expertise of a large firm but at the price point of a small firm. We have been told countless times by our ODOT and local agency contacts that our greatest value to them is to keep them in the loop and proactively manage issues to minimize schedule and budget impacts. Through our City and District Engineering assignments, we are highly attuned to providing cost-effective solutions. We have maintained this approach to all of our ODOT and Local Agency work, which has resulted in thoughtful solutions to projects, the appropriate level of scope and effort and high quality work products and deliverables.

Over the past decade, we have **proven** ourselves to be reliable and trustworthy, whether completing work under our statewide ODOT full-service agreements or completing local agency projects. Our track record demonstrates our excellent performance. We continue to execute our current assignments with this same dedication. Our performance metrics, earned through our high quality work as reflected in our ratings, scores, client quotes and, most tellingly, in our follow-on assignments and current work load, confirm our ability to deliver to our clients' complete satisfaction. Through our hard work and dedication, we have earned your trust and confidence.

A. Management and Organizational Structure, and Selection and Management of Subconsultants

Management and Organizational Structure

Similar to our PE team, we are organized to provide **responsive, cost-effective** service for the *full spectrum* of services anticipated for CA/CEI. We have been integrated with ODOT with such services since the early 1990s and fully understand how ODOT administers contracts through our continued work for ODOT in the 2000s. Our team is currently recertifying for a number of qualifications, and we are further expanding our qualifications so we can be fully responsive to your CA/CEI needs for any given project. We were similarly prepared in the early 2000s when ODOT anticipated outsourcing CA/CEI services more broadly.

"MSA did an excellent job of CA [construction administration] on this challenging project. The CC [construction contractor] was committed to more work (other projects) than anticipated, leading to irregular supervision, much overtime, lack of appropriate notice and marginal cooperation. MSA responded with the highest professionalism and was instrumental in successful project completion."
 Tim Dodson, P.E., PLS,
 Agency Project Manager
 (regarding the Azalea Street – 2nd Street Yamhill project)

Our team is organized similar to that seen in a typical ODOT construction office (please see the org chart on page 4). Anticipating that we may have more than one construction assignment concurrently, we present a team that provides capacity and flexibility of staffing for any number of projects. The team includes two project managers, two quality managers and a number of Quality Control Compliance Specialist (QCCS) staff and inspectors. This team has direct, relevant experience with ODOT services including design, contract administration and inspection. Our *chain of command* also mirrors that of ODOT, reflecting inspector through project manager *authorities* as summarized in the table below. Our staff in the field are the daily eyes and ears to keep track of the project and to represent ODOT and our firm with the contractor. Our project managers have the authority to manage project interests with the contractor and to apprise ODOT of items as may be required, *recognizing that certain ODOT authorities cannot be delegated to a consultant* including: authorizing increases, overruns, change orders, contract time adjustments or progress and final payments. Our principal-in-charge is available to assist as may be required during absences or to help resolve particularly challenging interests.

Chain of Command (Similar to ODOT)		
Role (ODOT Reference)	Authorities	Responsibilities
Project Manager (Section 00150.01, Construction Manual Chapter 9)	Authorized representative, appoint personnel to administer contract, recommend approval of change orders and time adjustments, suspend work, withhold payment, remove contractor personnel, correct deficiencies at contractor's expense and initiate termination.	Develop and supervise an efficient and effective organization, assure CA is per ODOT policies and procedures, assure work and materials conform to ODOT policies and practices, assure contract requirements are fulfilled and work is inspected and documented, and delegate as needed.
Coordinators/Quality Managers	PM representative, orally reject defective materials, orally suspend work and exercise delegated authority. Cannot accept work or	Coordinate project work elements and manage inspectors. Ensure elements of contract administration are addressed: schedule review, submittal management not covered by QCCS, pay application review,

	materials, alter or waive contract provisions.	extra/changed work management, contract time review, adherence to safety and labor compliance management. Manage disputes and disagreements as they arise to minimize claims. Confirm project documentation is complete.
QCCS	PM representative for matters related to materials. Reject defective materials.	Assure materials meet contract requirements, visually assure material testing conformance, assure contractor performs work per quality requirements, communicate and coordinate materials-related questions and concerns, record information about the project and promptly address materials deficiencies.
Inspectors (Section 00150.02, Construction Manual Chapter 9, Inspector's Manual)	PM representative to inspect the work. Orally reject defective materials, orally suspend work and exercise delegated authority. Cannot accept work or materials, alter or waive contract provisions.	Assure compliance with contract requirements, verify no contractor violations, measure completed work, document activities, communicate with contractor and others and inform PM as needed.
Design/Survey/ Administration (Construction Manual Chapter 20)	PM representative as may be delegated.	As-constructed plans, establish control, provide cross-section finish grade elevations (grade sheets), provide horizontal and vertical alignment data, provide project layout information, verify quantities electronically, file survey records if required, install markers or benchmarks as needed and perform office duties as requested.

As referenced above, our team achieves **statewide** coverage through our *network* of MSA and subconsultant office locations. We have MSA offices in Portland, Springfield and Boise which allows us reasonable and cost-effective access and service to most project locations. We also systematically utilize subconsultant office locations to support *efficient work programming* through *leveraging local insights and talent* and by minimizing travel-related expenses. Over the past decade, we have completed or strongly supported transportation projects throughout the state, including several current projects.

Selection of Subconsultants

We have included a number of subconsultants (*subcontractors*) on our team to help round out our team's construction management expertise. We have added expertise in a number of disciplines that are typically required on a variety of project types, including bridge inspectors and surveyors and additional QCCS and inspection staff for additional capacity. We have selected both DBE and non-DBE firms for these specialties in order to provide the **value-rich** qualifications and geographic location to best serve each project while simultaneously achieving the utilization goals identified by ODOT for any given assignment and the overall contract. We will *systematically honor these commitments*. Our project manager will select subconsultants based on the specific needs of the project, subconsultant strengths, and their office location and/or coverage area.

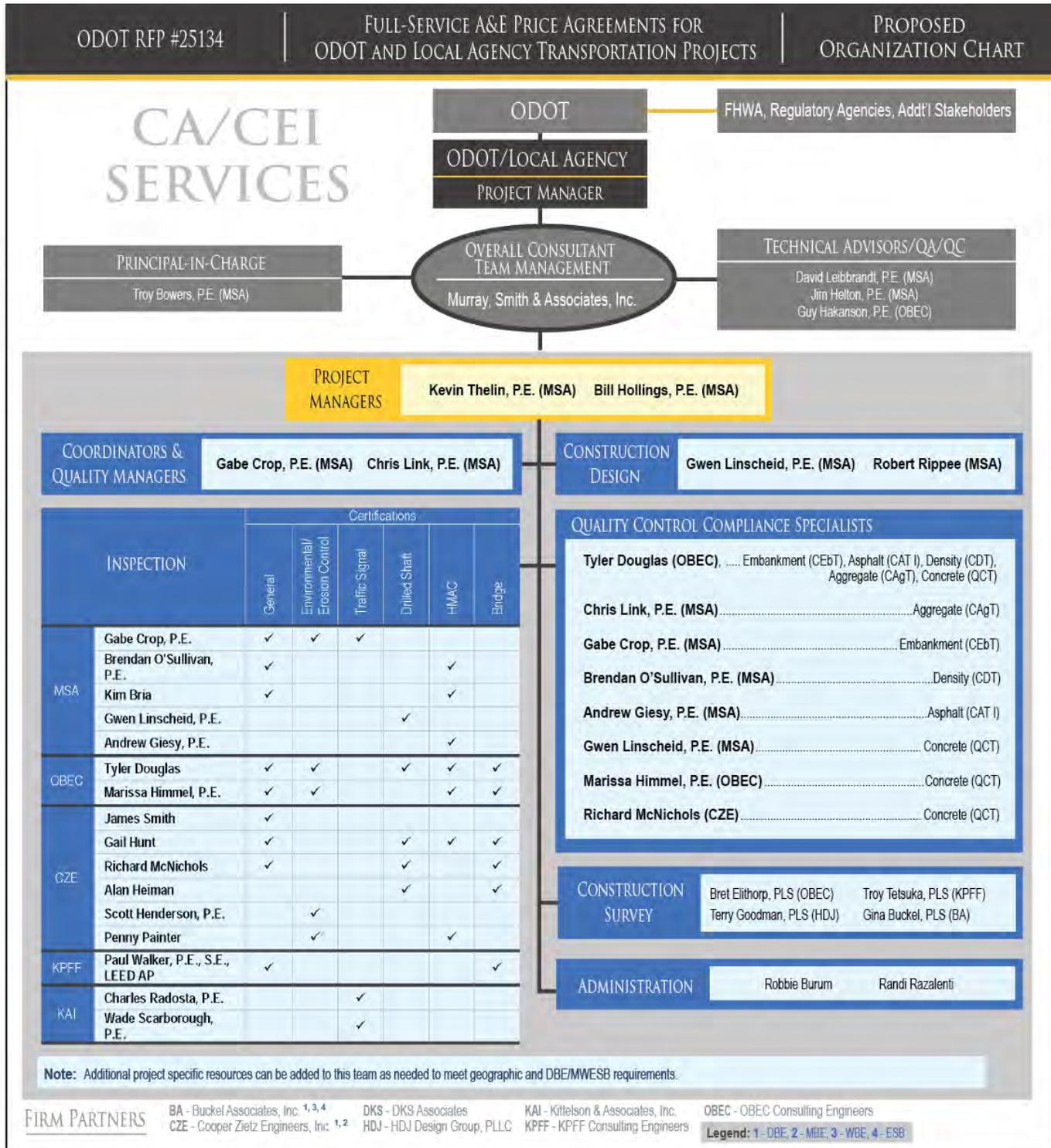
Management of Subconsultants

Our project managers directly manage our project subconsultants. They conduct internal reviews to confirm the project is following the scope and schedule. We maintain contact with subconsultants through telephone and e-mail communications, as well as through personal contacts and meetings in the field or office. The frequency is dictated by the requirements and complexities of each specific project, and we maintain at least weekly, if not daily, contact with each subconsultant when they are actively involved at any given stage of a project. We routinely and successfully utilize subconsultants for several tasks including submittal review and inspections of discipline specific work elements. We execute a written contract with all subconsultants that incorporates the agreement between the Agency and MSA. We review all subconsultant work for consistency with project goals,

direction, and professional quality and provide immediate feedback to address discrepancies and questions/comments.

Organizational Chart

The following organization chart shows MSA key staff as well as subconsultant team members and their role/discipline for CA/CEI Services. We have also identified subconsultant firms that are certified by the State of Oregon as DBE firms (identified by numbers at the bottom of the chart) in order to demonstrate our ability to meet the goals as assigned to each work order contract (WOC).



B. Meeting Schedules without Sacrificing Quality

We are organized to provide ample, qualified staffing to manage multiple projects and meet their schedules without sacrificing the quality of our services or the quality of the project. For CA/CEI services, the important thing is to not delay the contractor's progress on the project. We have **proven** to be very effective at staying ahead of the contractor and at anticipating project needs.

Schedule Management

We take project schedule management very seriously. While the contractor ultimately owns and controls their schedule, we work collaboratively and proactively with them to forecast what the upcoming needs and priorities will be. As adjustments are made to the contractor's schedule throughout the project, we intentionally maintain flexibility to execute inspection, testing and other oversight needs within the confines of the contract and in support of commitments made to project stakeholders.

For more complex construction contracts requiring a Type "B" or "C" contractor schedule, we perform more rigorous and regimented schedule reviews. This includes managing a project control (baseline) schedule which is initially developed by the Contractor. When the contractor provides updated monthly schedules, we compare the update with the control schedule to assess overall progress. Performing this monthly evaluation allows our CA/CEI team to identify and focus on critical path tasks that need immediate attention to meet overall schedule. In addition to this monthly review, we also perform weekly progress reviews as part of weekly project meetings and document key action items in e-mail or other written format to stay on top of more immediate schedule needs.

Staffing Adjustments

In the event that we need to adjust our staffing to be **responsive** to contractor construction schedule demands (including extended work hours, night work and weekend work). We have a number of approaches and tools at our disposal. We are accustomed to working beyond an eight hour-a-day/five day work week, and we have additional MSA and subconsultant staffing available to augment any team in order to complete shift work as may be needed. For each inspection certification, we have two or more qualified inspectors to accommodate varied discipline needs and schedules.

Our experience with similar projects allows us to estimate the number of hours to be allocated to our staff. We continually strive to achieve an optimal balance between workload and staff resource capacity. We track, monitor and manage firm resources through a detailed backlog and project scheduling system, which is used to schedule our staff and manage our projects. The backlog system tracks contracted backlog and provides allowances for potential anticipated work.

C. Quality Control Procedures and Policies

When it comes to CA/CEI quality control, we see two focuses to ensure **value**. One is the quality of our work and the importance of what we do in administering ODOT resources and federal funding during the construction phase. The second is managing each project to make sure the contractor is providing a quality product to ODOT and local agency owners in every sense of the word. To achieve positive results, we work within our chain of

Coordinating and Expediting Schedules

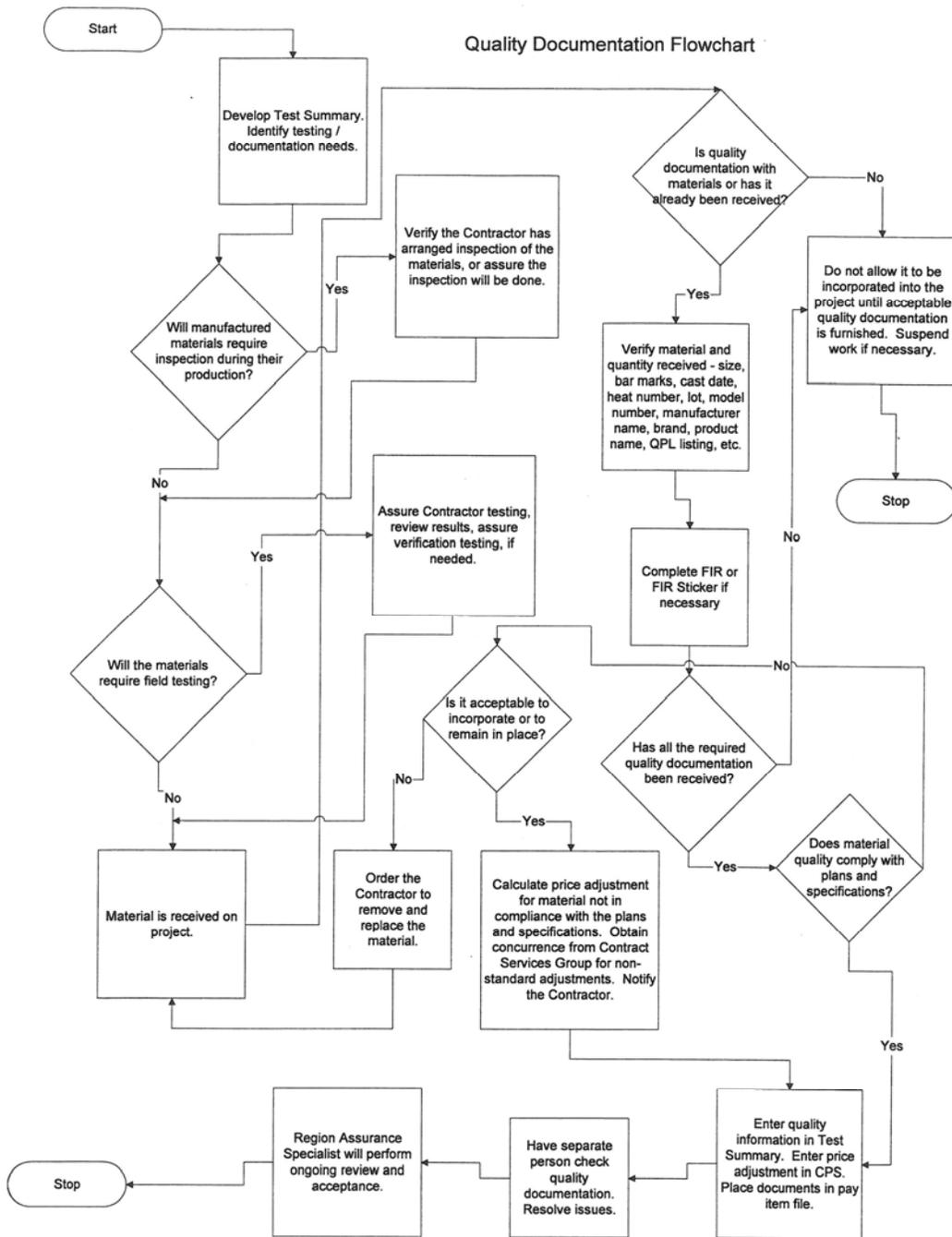
Key coordination and expediting methods for our success include:

- Resourcing staff to the appropriate level
- Managing the contractor's project work schedule
- Engaging at weekly construction meetings
- Completing timely submittal and RFI management



command, roles, authorities and responsibilities as identified in the table above, and employ the following processes, procedures and policies to address the most critical ODOT-specific quality control administration tasks:

- Review project contract documents early and regularly throughout construction to determine, confirm and understand project-specific quality requirements.
- Establish required documentation in field tested and non-field tested summary forms.
- Record quality documentation on test summary forms *as work progresses* in conformance with the ODOT Quality Documentation Flow Chart below.
- Confirm quality documentation meets contract requirements before Contractor payment.
- Contact the Region Assurance Specialist (RAS) early to schedule documentation reviews and conduct reviews throughout project to confirm quality requirements are met.
- Conduct final quality documentation reviews per Chapters 2B and 37 of the ODOT Construction Manual.



12-B Flowchart

Standards

Paramount to quality is the standards ODOT has established. Our staff at all levels continues to actively manage several construction projects utilizing the Oregon Standard Specifications for Construction through our ongoing ODOT and local public agency project work. Our field engineering personnel are also trained to use ODOT-specific inspection and documentation forms. Through our project coordinators and QCCS staff, we empower our field engineering staff to confirm construction, testing and project start-up procedures are conducted in accordance with specified standards and other project interests. Our field staff act in a manner that is “firm but fair” in our application of engineering judgment and our determination of engineering recommendations.

Documentation/Communication



We have a **proven** history of public works projects being integrated into ODOT highway contracts, as well as our history of serving in a variety of lead and supporting CA/CEI roles for our ODOT highway design work. Through this, we have effective hands-on, practical knowledge and familiarity with ODOT’s documentation requirements.

To administer quality control requirements, we regularly use ODOT’s established construction resources and publications including the Construction Manual, Manual of Field Test Procedures (MFTP), Non-Field Tested Materials Acceptance Guide (NFTMAG), QCCS Manual and others. We also use ODOT construction forms in all facets of construction administration including subcontracts, use of change orders, extra work orders and force accounts, labor compliance, submittal review, survey support, payments, dispute resolution, etc.

An imperative aspect of the QC process is proper communications related to the construction activities and documentation of the work throughout construction. Elements of this project documentation system are listed below:

- Phone records
- Files Memos
- Request for Information
- Meeting memos
- Meeting agendas
- Daily Observation Reports
- Email records
- Testing Logs
- Contract Submittal Logs
- Letters
- Project Photos
- Monthly progress reports

Our clear, concise and organized documentation allows decisions to be made quickly, and facilitates confirmation by the RAS and others that documentation meets contract requirements and provides for documented agreement on the future direction of the project.

Proactive Claim Management

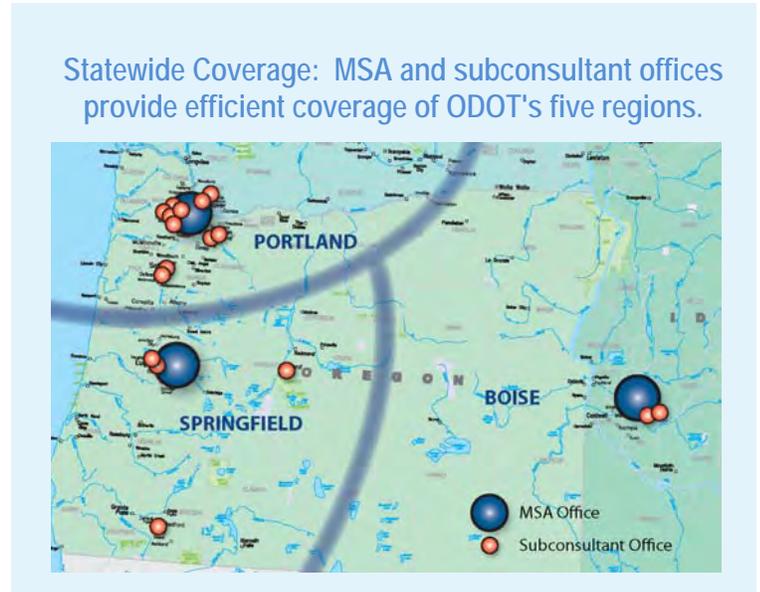
Many claims are the result of quality control issues that are not otherwise resolved in a timely manner. In order to maximize and preserve **value**, we will apply our knowledge in evaluating proposed plans, and if applicable, we will identify any design considerations which may cause potential contractor claims or change orders and provide recommendations to remedy these concerns. While we know claims or change orders cannot always be avoided, we make certain that documentation is provided and the situation is evaluated in a timely manner, and promptly work to mitigate impacts to the project schedule and budget. We believe the best claim management practice is claim avoidance.

2.2.7 COST-EFFECTIVENESS FOR CA/CEI SERVICES

A. Cost-Effective Tasks and Deliverables

The key to our cost-effective delivery of CA/CEI services is through our thoughtful approach to understanding a project's overall needs and then crafting a scope of services to provide **value**. We do this by tailoring a work program and making assignments to have work completed at the right level of responsibility with an adequate amount of senior oversight and experience depending on project complexity, similar to how ODOT manages construction. We have a standard template of services which typically needs to be completed for any given assignment. We work with ODOT and the local agencies to review what is needed, and why, and then determine if any of those services will be provided for by the agency. In this way, we act as the agency's buffer to provide services based on need and budget.

From there, we detail how much work is required at what level of staff and for what period of time. Our approach to this is further detailed in Developing Estimates for Services below.



For construction, expenses related to the proximity of the project site can be considerable if not managed effectively. We are purposeful in our management of these costs while providing the appropriate level of expertise by leveraging our team's **statewide** MSA and subconsultant team resources. The figure above illustrates locations of our MSA offices and subconsultant offices. Most of our CA/CEI services (in Region 1) are effectively managed from our central downtown Portland office. Our Region 2 assignments are managed from our Springfield office. For other more remote project locations such as in central and eastern Oregon, we leverage our Boise office. We also routinely assign local subconsultant resources to projects to the extent practical in order to keep overall costs down including travel, lodging and per diem.

We use several procedures to complete assigned work within established commitments of cost. Actual expenses and progress are compared to the budget bi-weekly. We submit a status report as part of the monthly invoice indicating if the team needs to adjust its work to perform on time and within budget. To manage the variable and time sensitive demands of CA/CEI services, we often recommend including contingency tasks in our contracts for tasks such as supplemental inspection, claim support, extra meetings, etc. Inclusion of these contingency tasks prior to starting construction becomes critical when unforeseen issues arise and need immediate attention. Any budget or schedule

adjustments required are discussed and authorized prior to proceeding with the work. These procedures allow early identification and correction of any apparent disparities so final work is completed within agreed budgets.

The following is a summary of the specific efforts we take to ensure tasks and deliverables are completed in a cost-effective manner:

Productive Meetings – We always prepare agendas and strategize discussion points prior to weekly or other construction meetings to streamline and enhance productivity.

Assign Work to the Appropriate Level of Staff – We constantly evaluate staffing needs based on technical and capacity demands to provide the best **value**.



Minimize Travel Expenses – We carpool and combine meeting trips with field visits whenever possible. For long-term projects away from our established offices, we seek local teaming opportunities including set-up of a temporary project office with team partners when necessary.

Minimize Lodging/Per Diem Expenses – We use local staff where possible and share rooms when needed for short-term travel needs. For construction services, our goal is to avoid lodging and per diem expenses by establishing a temporary residence with team partners as part of our standard operating costs.

CA/CEI Staff Involvement During Design – We have found that CA/CEI staff involvement during the development of design is very beneficial when later administering the construction of the contract and prefer some involvement during design in order to provide the most **value** and to be most effective during construction.

Design Engineer Involvement In Construction Management – We believe it is important for the design engineer to take an active role in the construction phase of the project to help head-off and/or promptly address issues or unexpected conditions. We have found this to be particularly true of our involvement with ODOT Construction Office teams on projects where we served as design engineer. We've received feedback from ODOT Construction Management staff who have appreciated our inclusion to get them up to speed and provide review at critical times.

B. Developing Estimates for Services

Our team routinely develops estimates of services for our all of our clients. We have specifically done so for at least 40 different contracts and amendments for design and/or CA/CEI services for ODOT over the past ten years and literally hundreds of fee estimates for our other public agency clients during the same period.

In developing estimates for services, there are a few key strategies and approaches to getting to a well thought-out and tailored work program. We have proven our ability to be **responsive** to client needs and to providing value as we optimize our estimates for services.

In the process of detailing the level of effort and estimate of services, the project manager and principal-in-charge work together to scrutinize the schedule, the type of work, the location and the people to be assigned to refine estimates and to be responsive to client reviews and feedback. We have a **proven** record of achieving scopes and fees in a timely and collaborative manner and have received consistent, positive feedback from our clients in this regard.

Key strategies to developing fair and reasonable estimates of services include:

- Most importantly, effective communication with ODOT and the local agency project managers; we listen to understand (close client coordination up front and throughout).
- Utilize past project scopes and fees as examples to build upon; they typically have the needed task breakdown and can be used as a benchmark for determining an appropriate level of effort.
- Walk through the scope and fee, iteratively, with the agency project managers to gain mutual understanding of project needs and preferences.
- Recommend supplemental tasks or reduced effort based on our understanding of project specific needs.
- Define base services and also identify contingencies for potential/likely work items to be authorized as needed and approved (keeps from delaying progress and minimizes costs).
- We find a way to say "YES" so all parties are satisfied with the value of the services and with the project overall.



2.2.8 PROJECT TEAM AND QUALIFICATION FOR CA/CEI SERVICES

A. Project Manager Experience on Projects Similar in Nature and Complexity



MSA's project managers have a long and strong history of providing CA/CEI services for our clients. We provide CA/CEI services on projects large and small ranging from highway work and city streets to other public infrastructure including dams and major roadway realignments. We most typically administer and inspect the construction of what we design for our local agency clients. When we don't, we are almost always in a strong support role to our owner client. Since ODOT has an established and efficient construction management work force, we have typically served in a support role to them for our ODOT Statewide Full Service assignments.

Regardless of our level of involvement, we approach our role as a critical one which we firmly believe brings **value** to ODOT and our local agency clients.

Experience Background

Much of our CA/CEI experience has come from recent work with ODOT and local agencies through our on-call contracts. In 2002, MSA was selected by ODOT as one of ten firms to provide statewide full-service architectural and engineering (A&E) design and construction services for highway and freeway improvements performed in response to the Oregon State Legislature's Oregon Transportation Investment Act (OTIA). Our **proven** success throughout that contract term led to our repeat selection in 2007 as one of eight firms to provide such design and construction services. In late 2009, we were selected by ODOT to provide statewide On-Call A&E and Related Services for Local Agencies. In addition to our CA/CEI work directly for ODOT, we provide CA/CEI services for local agency projects administered through ODOT and for projects directly with local agencies. We have recently or are currently working on such projects with the cities of Woodburn, Sandy, Oregon City, Sherwood, King City, Columbia City, Sheridan and Mt. Angel.

ODOT CA/CEI Team Integration

We have been integrated with ODOT CA/CEI teams for over 20 years. For our first work with ODOT, we were imbedded with ODOT teams to oversee and inspect utility-related construction and relocations. This work started with the SE Jennifer Lane Project in Clackamas in 1990, continued in the mid 1990s on US26 projects at Sylvan, and on 99W in Newberg in the late 1990s. Over the past decade, our CA/CEI work for ODOT has included full service and project support roles for the multiple projects we designed for ODOT. Through these assignments, we have garnered a thorough understanding of the processes and documentation required to administer projects under ODOT contracts. In doing so, we ultimately learned why ODOT administers and inspects

Project Management Construction Experience and Services

- Program Management
- Construction Contract Administration
- Bidding and Award Services
- Quality Control Reviews
- Documentation Reviews
- Monthly Pay Requests
- Clarifications and Change Orders
- Project Status Reporting
- Claims and Protests
- Shop Drawing and Submittal Reviews
- On-Site Engineering Representation During Construction
- Special Inspections and Reporting
- Environmental Reporting and Permit Compliance Monitoring
- Testing, Start-up, Staff Training Assistance and Project Close-Out
- Record Drawings and As-Built Reporting
- Anniversary/Warranty Inspection



projects the way you do as a steward of the public and manager of federal funds. Each of our staff listed in our organizational chart have worked directly with ODOT Construction Office staff, developed excellent working relationships and could list a number of those staff as personal references.



Breadth of Work

We have a good variety of highway-related work for multi-lane, limited access and rural highways, and those that serve as Main Street. We have provided support [statewide](#) for all types of projects including facilities in Philomath, Waldport, Lebanon, and Yamhill, and on US26, US97, OR140, and up and down the I-5 corridor. We currently have pending CA/CEI local agency assignments for Clackamas, Multnomah and Washington counties.

Certifications

We are ready and able to support ODOT and local agency projects to any extent desired from full services to supporting minimally outsourced project tasks. We have maintained our qualifications and certifications and are currently updating and expanding these in anticipation of continuing these services for your projects. We currently have several staff that hold and have utilized multiple inspection certifications. We also have proven QCCS staff on our team with each of the five required technician certifications to perform QCCS duties and are working to expand these technician certifications. This ongoing push to increase our certifications came directly from our involvement in a joint ODOT/ACEC committee to develop a comprehensive consultant evaluation form for CA/CEI services. While participating in this committee, we learned that quality control and quality management were the most significant challenges on consultant-led CA/CEI contracts.

We have excellent references from ODOT and from local agencies which demonstrate our proven experience.

Staff

Our transportation team (led by Kevin Thelin and Bill Hollings) has provided construction management and inspection services for over 40 ODOT and local agency roadway projects. Several of these have been multimillion dollar assignments. Our range of construction services provided to ODOT runs from complete project administration/management and inspection responsibilities to engineer-of-record services.

Because of our long history of public works projects being integrated into ODOT highway contracts, as well as our history of serving in a variety of construction administration and engineering roles for our ODOT highway design work, we have hands-on, practical knowledge and familiarity with ODOT's requirements.

Our initial full construction management and inspection job for ODOT was the Azalea Street – 2nd Street (Highway 47) project in Yamhill. Troy Bowers, Kevin Thelin, Bill Hollings and Gabe Crop all actively served on that project and are presented as resources for this assignment. All four have continued to focus on ODOT design and construction work and have provided or are currently providing construction administration and engineering services on at least ten other ODOT highway projects since that time.

As evidenced by our client quotes (see resumes), Kevin Thelin and Bill Hollings have proven themselves as project managers on nearly all of our ODOT design and CA/CEI contracts over the last decade and fully understand ODOT's needs and how to best achieve [value](#) and project success. They have worked closely with ODOT project managers to develop scopes of work and to effectively and efficiently deliver projects that ODOT and communities are proud of. *Several of these projects have been recognized through both ODOT and professional association awards.* Summaries of Kevin's and Bill's experience are provided below. Additional information for them and our other key CA/CEI staff are provided in the attached resumes.

Kevin Thelin, P.E. joined MSA in 1993 in Portland and was named a firm principal in 2002. He has spent much of his career working on ODOT-related projects, starting with the complex, multi-phase, decade-long Westside Corridor Project on US26. He continues to serve as one of our lead contacts and project managers for our ODOT work. He has served in both the design and construction management aspects of many of these projects. Construction management services on these projects range from engineer-of-record type services to full oversight and administration. Kevin has effectively and efficiently worked with ODOT construction management staff to provide the **value** they seek at the best cost by consistently guiding our support staff to provide the details necessary to make well-founded decisions. His practical knowledge and focused way of getting to the essence of construction issues, while keeping the overall project objectives in mind, results in the right field adjustments in a very timely and cost-conscious way. Kevin is familiar with and understands the highly detailed and format-sensitive nature of the documentation necessary for ODOT projects, especially as it relates to federal project funding. In addition to managing construction on several ODOT projects, he also has served as construction project manager as Assistant District Engineer for West Slope Water District and Tualatin Valley Irrigation District for many projects demanding less formal, yet rigorous documentation. He has the experience and ability to manage the large amounts of information, documentation and correspondence required for complex projects.



We have an experienced team of staff, most of whom have continuously worked together since 2002

Bill Hollings, P.E. joined MSA in 2000 and is a principal engineer in our Springfield office. Bill has 36 years of experience in the heavy civil and construction engineering field and has served in key project management, design and construction management roles for a large variety of road and highway improvement projects. He began his career working for Conrail for five years as a maintenance engineer. This past experience proved invaluable for the railroad coordination necessary for the US20 Philomath Couplet project. He also served as the field project manager and quality control compliance specialist for the construction engineering phase of ODOT's Highway 47, Azalea Street-2nd Street project in Yamhill, Oregon. He has provided CA/CEI support services for all projects where he has served as design project manager for ODOT. Bill served as the on-site construction project manager for the McGuire Reservoir Expansion for McMinnville Water and Light that included the relocation of 2.5 miles of the Nestucca River Highway, Old Bald Mountain Road, and High Heaven Road. He has attended multiple ODOT quality control compliance specialist trainings. Bill will also serve as our lead contact for any railroad coordination.

B. Key Staff Resumes

Resumes for our team's key staff including project managers, quality control managers, quality control compliance specialists and key inspectors are included in this package.

2.2.10 REFERENCES FOR CA/CEI SERVICES

As illustrated above, MSA has excellent experience leading teams to complete CA/CEI services for state and local agency transportation projects. Attached are references for the four most recent, relevant CA/CEI transportation projects (all with a total construction phase budget greater than \$500,000) that we have led and completed in the last five years. Two of the four projects are federally funded. These projects range in type and complexity from local agency type sidewalk and streetscaping projects to larger freeway modernization projects and are typical of ODOT full-service and local agency projects described in the RFP.