

2.2.1 Understanding of Requested Services

Demonstrate a clear and concise understanding of the scope of services being requested in the RFP.

The Oregon Department of Transportation (ODOT) assists local agencies with developing and constructing projects funded through the Statewide Transportation Improvement Program (STIP). Many of these projects receive federal funding. Federal funds come with a number of specific requirements, from methods used to procure consulting, on through permitting, design, and construction.

Local agencies throughout the state have varying degrees of experience with meeting ODOT's project requirements and the requirements of federally funded projects. With this request for proposals (RFP), ODOT seeks to contract with a pool of 7 to 10 consultants who will assist local agencies with STIP projects, from planning through construction phases.

Parametrix currently holds two ODOT local agency contracts and has assembled a full-service team to continue meeting the needs of ODOT and local agencies.

Table 1, beginning below and continuing on the following page, outlines our understanding of the

phases, tasks, and deliverables for a typical project assigned through ODOT's local agency contract. The legend below the table indicates responsibilities for tasks or deliverables. This information is not intended to be all-inclusive, but to show our overall understanding of project types and services.

Nearly 70% of Parametrix revenue in 2008 was generated by public projects. This emphasis on delivering public projects means that we understand the required processes and can help local agencies avoid potential pitfalls.

Table 1: Understanding of typical project phases, deliverables, and factors that influence project success. Project responsibilities are indicated using footnotes.

Project Phases / Tasks and Deliverables	Opportunities to Succeed	Examples of Success
Phase I: Program Development (Planning)		
<ul style="list-style-type: none"> • Prepare Prospectus Part 1 & 2 for "Typical Section" (L, O, or C). • Prepare Prospectus Part 3 for environmental classification (L, O, or C). • Reimbursement of federal funds (F). 	<ul style="list-style-type: none"> • Propose alternatives that lower cost but meet project need. • Reality-check construction cost to budget. • Evaluate Prospectus Part 3 for time and cost saving approaches. 	<ul style="list-style-type: none"> • During scoping of the Canaan Road safety project for Columbia County, a quick construction cost estimate identified cost risks easily mitigated by an alternative that still met the project need.
Phase II: Project Development – NEPA / Permitting / Final Design		
<ul style="list-style-type: none"> • Approve Prospectus Part 3 as Class I, II, or III (F). • Prepare NEPA and design documents (L or C). • Prepare (L or C) and approve (O and F) design deviations. • Prepare PS&E Submittal Checklist (L, O, or C). 	<ul style="list-style-type: none"> • Communicate early with agencies to identify "triggers" and acceptable design modifications to simplify environmental compliance. • Use a practical design approach, identifying safe and acceptable design deviations to minimize impacts and lower costs. 	<ul style="list-style-type: none"> • During the Port Westward Industrial area access project in Clatskanie, identification and avoidance of environmental resources allowed critical maintenance in Phase 1A on an accelerated design schedule. It was then possible to shift safety and capacity improvements requiring a longer schedule for environmental compliance to Phase 1B.

L = Local public agency O = ODOT C = Outsourced to consultant F = Federal Highway Administration (FHWA)

Project Phases /

Tasks and Deliverables

Opportunities to Succeed

Examples of Success

Phase III: Right of Way		
<ul style="list-style-type: none"> • Prepare (O or C) and approve (F) R/W and relocation plan, and R/W Project Funding estimate or True-Cost Estimate. • Approve R/W Certification (O or F). 	<ul style="list-style-type: none"> • Prepare R/W Certification per the <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act</i>. • To speed up R/W process, consider using local funds. NEPA approval is required to use federal funds for R/W. 	<ul style="list-style-type: none"> • Staged construction on a bridge replacement project for Columbia County maintained traffic during construction and eliminated permanent acquisitions by using temporary easements which are quicker and easier to obtain.
Phase IV: Utility and Railroad		
<ul style="list-style-type: none"> • Approve Utility Certification based on the ODOT <i>Highway/Utility Guide</i>, the CFRs included in the FHWA's Utility Relocation and Accommodation on Federal-Aid Highway Projects (O). • Submit a Rail Crossing Order to ODOT's Rail Division and State Railroad Liaison (L and C). 	<ul style="list-style-type: none"> • Early coordination and a site visit with the utility company will help; refine the project approach, identify potential issues, and keep the construction on schedule. • Early coordination with the railroad and ODOT will mitigate delays on projects within 500 feet of a railroad. 	<ul style="list-style-type: none"> • On a project to reconstruct the P&W rail crossing on Hermo Road and provide access to the Port Westward Industrial site, we met with ODOT Rail more than three times to help identify their access concerns, to guide the R/W acquisition process, and to finalize the Crossing Order.
Phase V: Advertising Bid and Award		
<ul style="list-style-type: none"> • OPL provides a high level review for fatal flaws and legal sufficiency and transmits to OPO for Ad, Bid, and Award (O). • Incorporate requirements of Operational Notice PD-02 through the project life cycle (L, O and C). • Final approval to advertise, release construction funding, addenda, award or reject bids (O and F). 	<ul style="list-style-type: none"> • Coordinate with ODOT LAL to develop a realistic region technical and OPL review and submittal schedule, and request available Ad date. • Minimize potential schedule delay by providing all required project data to the LAL for: Risk Assessment, Civil Rights for disadvantaged business goals, estimate into Trns*port Database System, and Draft PS&E Submittal Checklist. 	<ul style="list-style-type: none"> • On two recent ARRA projects for paying (City of St Helens and Columbia County), we submitted the bid packages ahead of schedule and received only minor comments from Region 1 and the OPL. • The City of St Helens ARRA project has provided a mentoring opportunity to familiarize them with the documentation requirements on Federal Aid projects.
Phase VI: Construction Engineering and Administration (CE/CA)		
<ul style="list-style-type: none"> • Prepare (L and C) and approve (O and F) required federal documentation relating to NEPA, R/W, American-made products, Davis Bacon, Civil Rights, and Title VI. • Prepare monthly and final documentation (for progress payments, field quantity records, materials certifications, etc.) (L and C). • Provide construction inspection and quality assurance. (L or C) Provide oversight. (O) 	<ul style="list-style-type: none"> • Satisfy federal requirements: perform CA per the ODOT <i>Construction Manual, Inspectors Manual, Non-Field Tested Materials Guide, and Standard Specifications, Plans, and Bid Documents</i>. • Understand documentation process and deliverables required for Federal-Aid projects. Non-compliant or improperly documented work may not be eligible for FHWA compensation. 	<ul style="list-style-type: none"> • Understanding acceptance thresholds helps save time and budget. Randy Reeve (previous Oregon Dept. of Fish & Wildlife) identified a construction technique to build an access road in waters of the state which minimized impacts and accelerated construction. • Assigning local, experienced, certified inspectors minimizes cost and risk. Cooper Zietz has experienced staff located throughout Oregon.

L = Local public agency

O = ODOT

C = Outsourced to consultant

F = FHWA

LAL = Local Agency Liaison

OPL = Office of Project Letting

OPO = ODOT Procurement Office

2.2.2 Proposer’s Project Management

2.2.2A Management and Organizational Structure

Describe your firm’s management and organizational structure, and how that structure aids the delivery of project services – including chain of command.

Figure 1 shows the Parametrix internal organization and how it relates to the way we deliver projects. As the primary contact with our clients, the project manager is at the center of this structure. Members of the

project team are responsible and accountable to the project manager for the life of the project; the project manager is accountable to the client. All of our local and corporate resources focus on supporting the project manager in delivering projects efficiently and effectively.

As shown in Figure 1, our office principal checks in with our clients to ensure that the project is proceeding smoothly. He will work with the operations manager, the division manager, and the project manager to address any project challenges. Because of our internal checks and balances, this step is rarely necessary.

Describe branch or satellite offices located within the state and the types of services these locations are capable to perform.

Table 2 on the following page shows Parametrix office locations and services provided at each location.

Parametrix office locations in Portland and Corvallis provide convenient access to projects in Regions 1 and 2. Examples of long-term local agency clients in Regions 1 and 2 include Columbia and Clackamas Counties.

Examples of our history of successful work in Region 3 include

Figure 1: How our organizational structure aids the delivery of project services

Corporate Structure

CEO

OFFICE PRINCIPAL

- Check in with client to ensure we are meeting expectations

OPERATIONS MANAGER

- Manage project delivery process in the office
- Mentor and train project managers to ensure project success
- Oversee workload projection system to ensure staff availability

DIVISION MANAGER

- Manage project delivery process in a specific division
- Provide senior technical expertise to project managers
- Serve as formal QC reviewer for deliverables

Local Agency / ODOT

PROJECT DELIVERY TEAM

PROJECT MANAGER

- Serve as primary point of contact for clients
- Manage and coordinate all project resources, including subconsultants
- Usually reports to the division manager
- For larger projects, the project manager is often the division manager or operations manager

PROJECT STAFF MEMBERS

- Selected from divisions as needed
- Work together for the life of a project
- Directly accountable to project manager
- Project managers give input on career assessments for members of their project team, whether there is a structural reporting relationship or not

Supporting Resources

LOCAL RESOURCES

Project Resource Center

- Track schedule and budget and keep project manager informed.
- Identify potential schedule risks before they impact the project.

Publications Management Group

- Provide expertise in print- and web-based publications
- Create written deliverables and public involvement tools

CORPORATE RESOURCES

Project Delivery / Quality Program

- Provide tools for quality project delivery (software, forms, processes)
- Review and adjust programs as needed

Client Assessment Program

- Interview clients to gain insight into client needs and requirements
- Provide feedback to improve quality

Technical Specialty Programs

- Stay current on trends and regulations
- Support sharing of technical resources across offices

Table 2: Office Locations and Services Provided

Office	Services Provided
Portland	<ul style="list-style-type: none"> Staffing: 80 staff members Services: Project management, alternative and concept design, preliminary design, hazardous materials assessments, environmental analysis and documentation, traffic engineering, bridge design, public involvement, permitting, PS&E, bidding assistance, construction engineering and oversight
Corvallis (satellite office)	<ul style="list-style-type: none"> Staffing: 8 staff members Services: Project management, environmental analysis and documentation, support of preliminary design, alternative and concept design, construction oversight
Bend (home office)	<ul style="list-style-type: none"> Staffing: 1 on-call senior planner Services: Project management, support of preliminary design
Boise	<ul style="list-style-type: none"> Staffing: 13 staff members Services: Project management, preliminary design, public involvement, PS&E, bidding assistance, traffic engineering, construction engineering

Note: Section 2.2.4B includes a map highlighting the office locations and services provided by our combined team.

the Downtown Brookings-US Hwy 101 Transportation Solutions Plan and a decade-long working relationship with the City of Grants Pass. Parametrix designed two intersections for the City of Medford. We also recently designed bridge replacements in Jackson County through the OTIA III program.

Our project work in Region 4 includes improvements to Reed Market Road and Empire Avenue in Bend. We also completed design of the Green Springs Drive Bridge in Klamath Falls. In addition, we now provide a staff member operating from a home office in Bend.

From our Boise office location, additional staff can service Region 5, in many cases without making overnight trips. For example, our Boise staff led a circulation and access plan for the Nyssa School District through an ODOT contract. Boise staff also completed the Idaho Avenue Improvement Plan for the City of Ontario. For this contract, we have also included Anderson Perry in La Grande in a leading role for Region 5 projects.

Describe how subcontractors will be selected, utilized, and managed to complete the projects.

We will select and utilize subcontractors based on a variety of factors:

- **Where is the project located?** For example, Anderson Perry's location and existing relationships with local agencies in the region may make them the ideal candidates to manage Region 5 projects, with Parametrix overseeing the overall contract and providing additional support from our Boise office.
- **Can one of our subcontractors deliver the project more cost effectively than another?** Sometimes this may relate to location – it may also relate to firm size and overhead costs. Smaller, less complex projects are ideal for these more specialized firms.

- **Does the project require services that one of our DBE-MWESB subcontractors could efficiently provide?**

If so, we will give priority to selecting these firms. Our team includes 6 DBE or MWESB firms. These are firms we trust and with whom we have worked successfully.

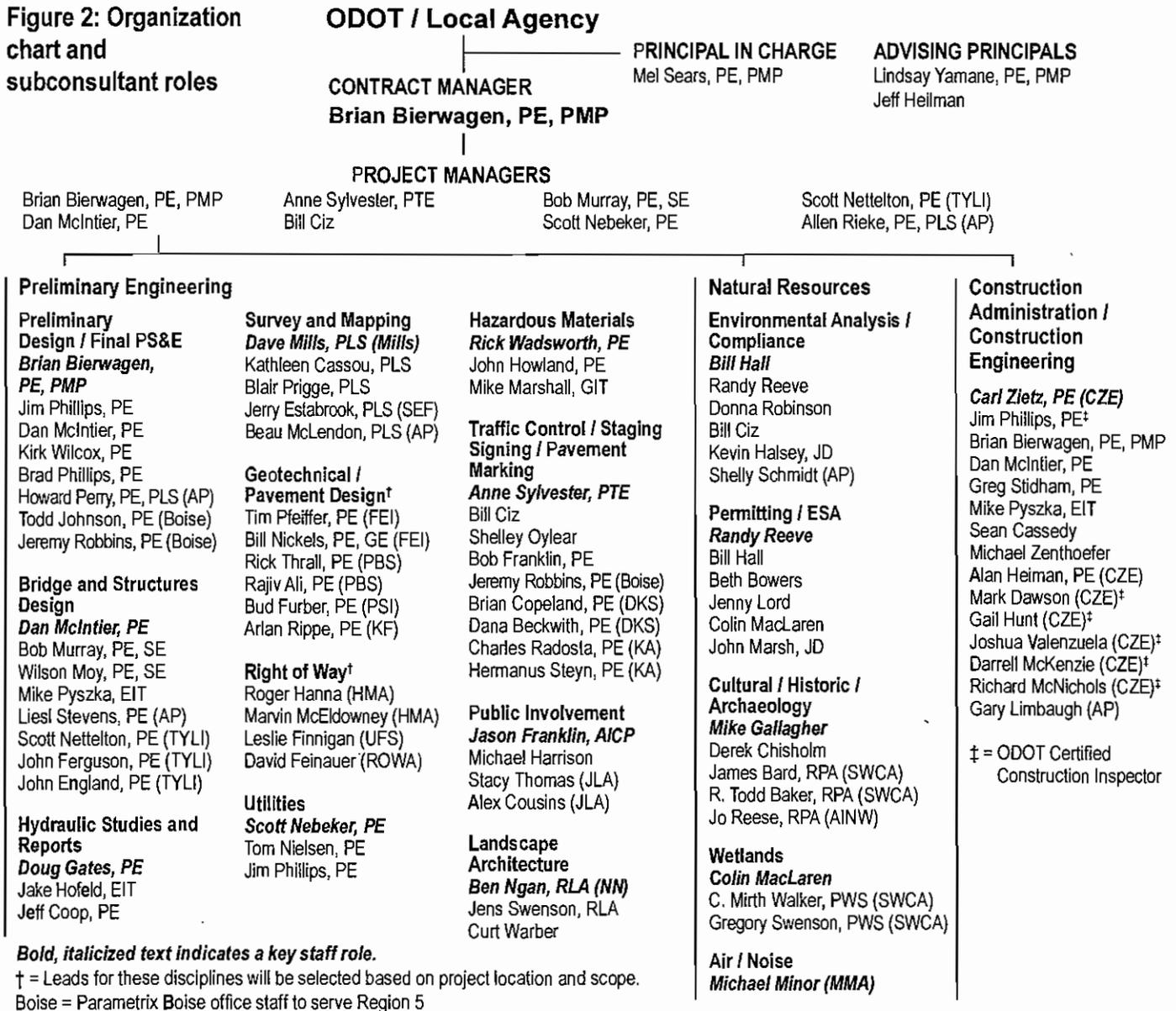
- **What is our history with a given subcontractant?** Most importantly, are ODOT and the local agency happy with their work?

We will manage the work of our subcontractors in the same way we manage our own work – with quality checks and balances as outlined in following sections. We understand that because we are the prime consultant, ODOT counts on us to oversee the work of everyone on our project teams, including subcontractors. An example of this approach is our work with another consultant on the Damascus-Boring Concept plan. Parametrix provided contract oversight while our subcontractant provided the project manager.

Include a list or organization chart showing all subconsultants and their proposed role/discipline.

Figure 2 shows the organization of our available staff by discipline, and proposed subconsultant roles.

Figure 2: Organization chart and subconsultant roles



Subconsultants and Roles

- Archaeological Investigations Northwest (AINW): Archaeology
- Anderson Perry (AP): Project management, design, survey
- Cooper Zietz (CZE): Construction management*
- Dave Mills Consulting (Mills): Survey*
- DKS Associates (DKS): Traffic
- Foundation Engineering, Inc. (FEI): Geotechnical
- Hanna McEldowney & Associates (HMA): Right of way
- Jeanne Lawson & Associates (JLA): Public Involvement*
- Kittelson & Associates (KA): Traffic
- Kleinfelder (KF): Geotechnical investigations
- Michael Minor & Associates (MMA): Air/noise*
- Nevue Ngan Associates (NN): Landscape architecture*
- Pavement Services, Inc. (PSI): Pavement design*
- PBS Environmental (PBS): Geotechnical investigations
- Right of Way Associates (ROWA): Right of way
- Stuntzner Engineering & Forestry (SEF): Project management, design, survey
- SWCA Environmental Consultants (SWCA): Archaeology, wetlands, env. analysis
- TY Lin (TYLI): Project management, bridge and structures, civil design
- Universal Field Services (UFS): Right of way

*DBE/MWESB Firms

2.2.2B Meeting Project Schedules

Describe your firm’s methods of coordinating and expediting all elements of projects to meet delivery schedules without sacrificing quality. Describe your firm’s approach to adjusting schedules when needed, or adjusting level of effort in order to meet a schedule while keeping a project within a stated budget.

First and foremost, schedule management is risk management. Figure 3 shows a schedule for a typical project, highlighting areas where breakdowns are likely to occur and indicating possible risk avoidance or mitigation strategies we apply to our projects. None of the mitigation strategies are intended to be

comprehensive; the intent is to show our understanding of ways in which projects can go sideways, and how to avoid issues before they arise.

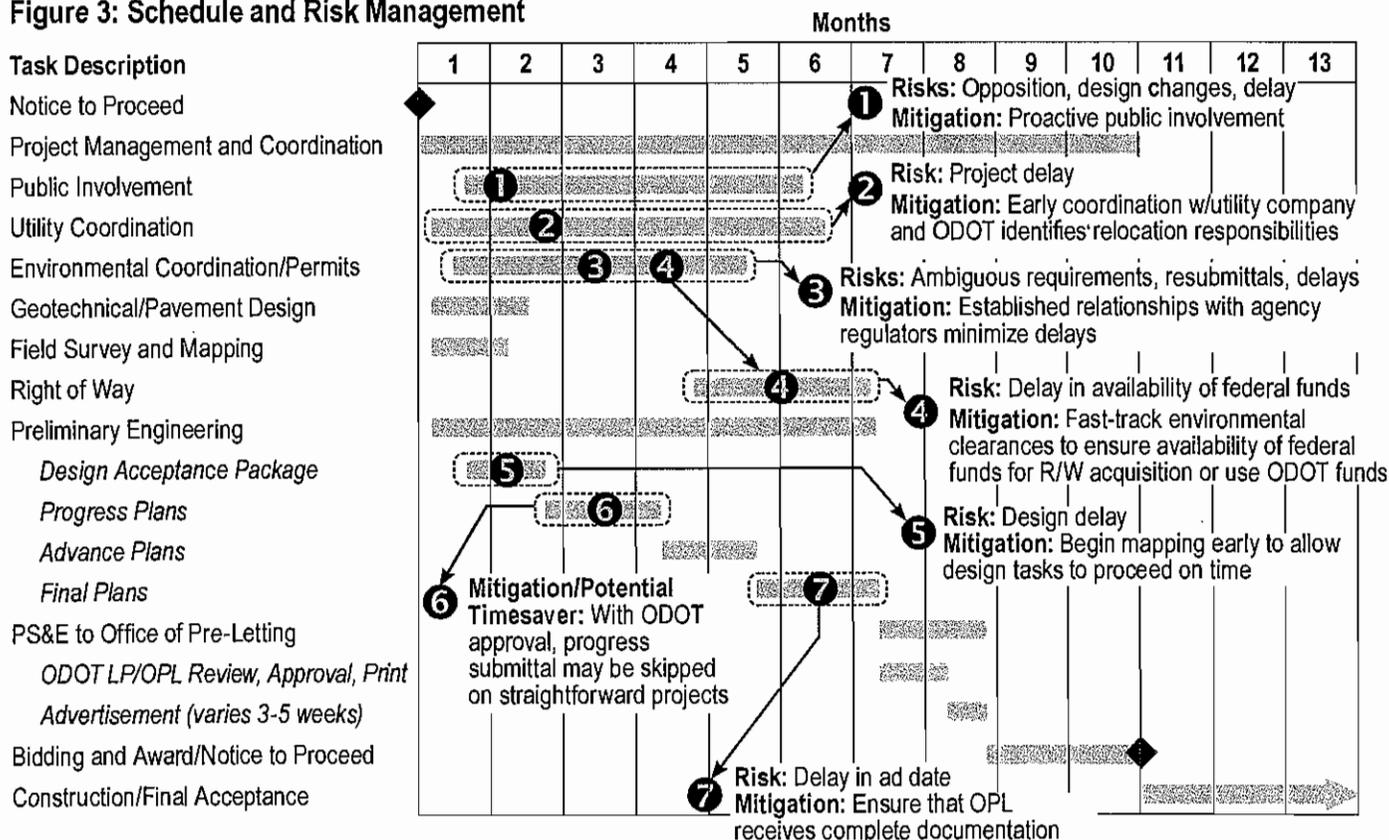
Particularly when projects are federally funded, meeting pre-determined schedules is critical. The Parametrix project manager, with input from the ODOT or local agency project manager, will incorporate the following methods to ensure quality, on-time delivery:

- **Ask questions.** What are the quality and schedule expectations for this project? How much time is required to complete expected work tasks and deliverables? What are the potential risk factors associated with this project? Can some of the tasks happen concurrently rather than sequentially to save time? How

many client reviewers will be involved? How much time do we need to budget in order to respond well to their comments?

- **Make a plan.** Identify mitigation strategies for the potential risk factors. Promote opportunities to shorten the schedule, such as compressing standard review times for design and environmental clearance or R/W certifications. Reserve staff time using our workload balancing software. Document the plan and add it to the project file, copying the ODOT or local agency project manager and all members of the project team.
- **Follow the plan.** Continuously update staff hours in the workload balancing software as project needs expand and contract.

Figure 3: Schedule and Risk Management



Check in frequently with the ODOT and local agency project manager to keep them apprised of progress.

- **Adjust the plan as needed to stay within budget.** Be ready for adjustments, because they are inevitable. Incorporate them into the project schedule to ensure that they do not put the project at risk. In the event of a major schedule adjustment, begin again with asking the questions: Is the budget flexible? Can we add more staff to the project? If the budget is inflexible, how can we shorten other aspects of the schedule to ensure that the project remains on track? (See the callout box below.)

Example: Meeting a Project Schedule in Spite of Significant Challenges

As part of a full service team, Parametrix led environmental permitting during the Elk Creek to Hardscrabble Bridge Bundle project (OTIA III Bridge Delivery Program). The team discovered archaeological issues at two bridge sites that could have added a full year to the schedule. Environmental manager Randy Reeve of Parametrix led the team in developing alternative approaches to avoid major impacts to the archaeological sites. By thinking outside the box and negotiating with tribes and the State Historical Preservation Office, Randy kept the project on schedule without sacrificing quality.

2.2.2C Quality Control Procedures and Policies

Provide a concise summary of your firm’s Quality Control procedures and policies.

Each individual project follows a quality control plan, with documented check points and responsibilities. Figure 4, below, is a scan of a completed Parametrix quality checklist.

Our quality control procedures and policies are outlined in Figure 5 on the following page.

As Figure 5 shows, our quality control process begins and ends with client feedback. This feedback is crucial to refining our policies and project delivery procedures.

Our corporate quality plan gives staff the tools they need to deliver quality products: training, software, forms, and defined procedures.

Figure 4: Example of a completed Parametrix quality review checklist.

Parametrix Form 03-PD-134/Rev 04/04

Parametrix Quality Assurance Review Checklist

Document Title: PCA Level III Report and Appendices

Project Name: Bundle 302 Bridge D7773A Project Number: 274-4941-001

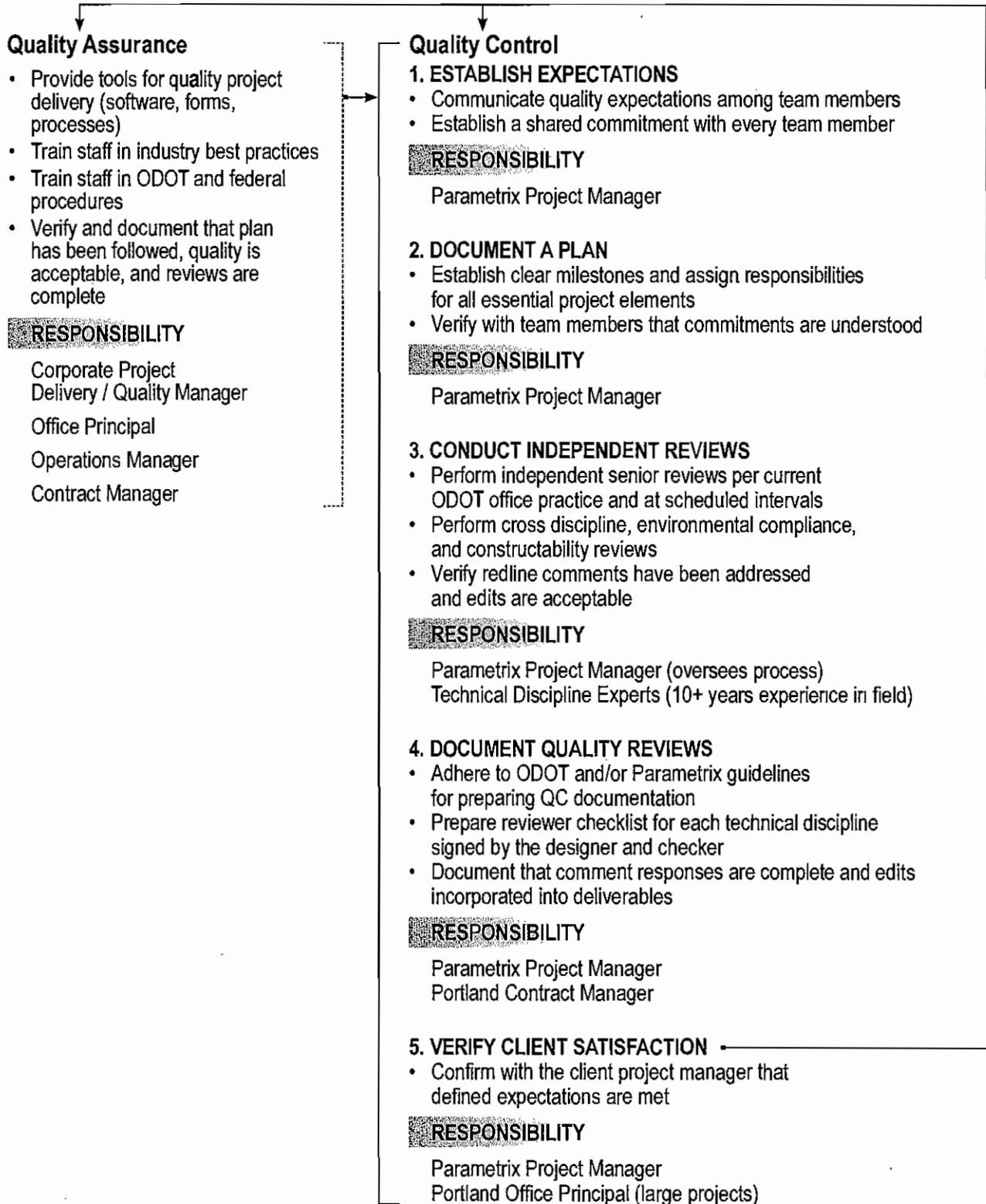
Project Manager: Brian Bierwagen Deliverable Coordinator: Jane McFarland

Comments: _____

Document Status: Preliminary Draft Revised Draft Final to Client/Agency

Quality Assurance Review Task	Assigned to:	Initials	Date
1. General Document Quality			
<input checked="" type="checkbox"/> Content: Addresses project/client objectives	Brian Bierwagen	BWB	10/29/06
<input checked="" type="checkbox"/> Readability: Organization, verbiage, paragraph introductory sentences (alerts reader to content of paragraph)	Brian Bierwagen	BWB	10/29/06
<input checked="" type="checkbox"/> Conclusions: Appropriate, supported, complete	Bill Hall	WHH	11/26/07
2. Verification of Data Transcription/Data Entry			
<input checked="" type="checkbox"/> Spot check of data entered into spreadsheets/databases	Bill Hall	WHH	1/11/07
	N/A		
<input checked="" type="checkbox"/> Tables	Bill Hall	WHH	11/26/07
<input checked="" type="checkbox"/> Figures/graphics	Bill Hall	WHH	11/26/07
<input checked="" type="checkbox"/> Edits proofed	Jane McFarland	JEM	2-24-07

Figure 5: Parametrix quality control procedures and policies.



2.2.3 General Qualifications

2.2.3A Qualifications and Proficiencies

Describe your firm's qualifications and proficiencies to complete the requested Services.

Parametrix is a full-service engineering, planning, and environmental science firm with more than 500 employee-owners based in Oregon and Washington (with additional staff located in other western states). The location and number of Parametrix staff provide both quick response times and local knowledge for local agency projects. Our broad range of services means we can cover the needs of the projects expected under this local agency contract.

In the last 8 years, we have completed more than 50 projects for ODOT, both large and small. Many of these projects were completed under the dozen-plus on-call contracts we have held with ODOT, encompassing more than 40 work orders. This level of experience with ODOT means that we can efficiently complete local agency projects within ODOT guidelines.

In addition to this ODOT experience, Parametrix has existing relationships with cities and counties throughout Oregon, from Brookings in the southwest corner to Pendleton and Ontario in the northeast. An example of our successful work with local agencies is our long-term relationship with Columbia County. Our proposed manager for this contract, Brian Bierwagen, has been completing projects for the County

for more than 8 years. Because they are happy with our work, the County recently hired Brian to complete his 12th work order. Previous work includes a wide variety of tasks such as public involvement, trail planning, environmental permitting, roadway and bridge design, and construction services.

We consistently receive high marks from our local agency clients. For example, Parametrix held numerous public meetings to collect public input and comments while preparing a bike and pedestrian feasibility study along Rhododendron Drive in Florence. We put extensive effort into listening to the public and developing an alternative that gained consensus. City of Florence staff commented that "Parametrix staff was very responsive to the local issues and concerns of the community."

Parametrix and our subconsultants together have completed a combined total of nearly 1,000 recent projects for ODOT and local agencies.

As shown in our organization chart earlier in this proposal, we have assembled a full-service team with the qualifications and proficiencies to meet all of the project requirements shown in Exhibit A of the RFP. While Parametrix provides the majority of these services in-house, we have supplemented our team with 19 additional firms. All of these firms provide valuable services. Some of these firms are key to our strategy for providing responsive project delivery throughout the state, given varying workloads.

Following are brief descriptions of these key teaming partners:

- **Anderson Perry (AP)** provides 63 Oregon staff members and offers convenient and cost effective access for projects in Region 5 and the eastern part of Region 4. Per our agreement for this contract, AP may lead projects in Region 5, with Parametrix providing contract management and technical expertise. This arrangement is flexible based on project needs and local agency preferences.
- **Stuntzner Engineering & Forestry** provides 29 staff members, many of whom are located in southern Oregon. Stuntzner offers project management, civil design, and surveying for projects in Region 3 and southern parts of Region 4. Depending on project needs, Stuntzner could serve in a variety of roles from task lead on smaller projects to support on larger specialized projects.
- **TY Lin** supplements the Parametrix civil and bridge design team with 33 employees in Salem and Beaverton offices.
- **DKS Associates and Kittelson & Associates** provide additional depth in traffic engineering and transportation planning. DKS has 45 employees in Oregon; Kittelson provides 67 Oregon employees.

2.2.3B Project and Contract Service Experience

List projects and contract services performed within the last 3 years by type and location, most comparable to the requested Services.

Table 3 lists Parametrix's most recent, relevant experience by type and location.

Table 3: Projects completed in the last 3 years which are most similar to projects expected under the Local Agencies contract.

Projects Completed in the Last 3 Years / Project Location	Project Type / Tasks																	
	Project Management	Prospectus Preparation	Survey and Mapping	Geotechnical Investigations	Hydraulic Studies	Preliminary Design	Hazardous Materials	Env. Analysis/Documentation	Cultural/Historic/Archaeological	Public Involvement	Permitting	Right of Way	Final PS&E	Traffic Control/Signing	Utility Coordination	Landscape Architecture	Bidding Assistance	Construction Services
Apiary Road Resurfacing PS&E <i>City of St. Helens, OR</i>	✓			✓		✓							✓	✓	✓		✓	✓
Buckner Creek Bridge <i>Clackamas County, OR</i>	✓		✓	✓	✓	✓		✓	✓		✓		✓	✓	✓		✓	✓
Clackamas River-Springwater Road Bridge <i>Clackamas County, OR</i>	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Columbia Boulevard Resurfacing PS&E <i>Columbia County, OR</i>	✓			✓		✓							✓	✓	✓		✓	✓
Columbia County OT1A III Bridges <i>Columbia County, OR</i>	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Empire Avenue Extension* † <i>City of Bend, OR</i>						✓	✓	✓	✓	✓	✓			✓				
Fall Creek Culvert and Bridge <i>Tillamook, OR</i>	✓		✓		✓	✓		✓			✓		✓					✓
Hermo Road <i>Columbia County, OR</i>	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Marine Park Access‡ <i>Port of Cascade Locks, OR</i>	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓		
OT1A III Bundle 302 <i>Jackson County, OR</i>	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Port Westward Roadway Improvements, Ph1A and 1B, <i>Columbia County, OR</i>	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reed Market Road at 15th Street* † <i>City of Bend, OR</i>	✓					✓	✓	✓		✓				✓				
Region 2 Variable Message Signs* <i>Near Eugene, OR</i>	✓		✓	✓		✓					✓		✓	✓			✓	✓
Region 4 Variable Message Signs* <i>Near Klamath Falls, OR</i>	✓		✓	✓		✓					✓		✓	✓			✓	✓

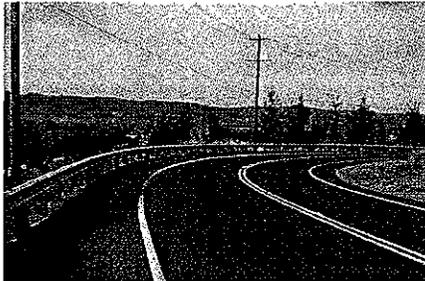
*Parametrix was a subconsultant on this project

† Projects put on hold prior to final PS&E due to funding

‡ Final design not yet complete

2.2.3C Three Most Recent Relevant Projects

For a total of three of the most recent projects or contracts listed, include a brief description of project type, size, location, duration and objectives; a chronological time line describing the tasks performed by the Proposer to fulfill the project objectives; and the actual project budget.



*Beaver Falls Road
Phase 1A Safety Improvements*

We avoided environmental impacts in Phase 1A in order to complete critical maintenance and safety improvements quickly and within budget.

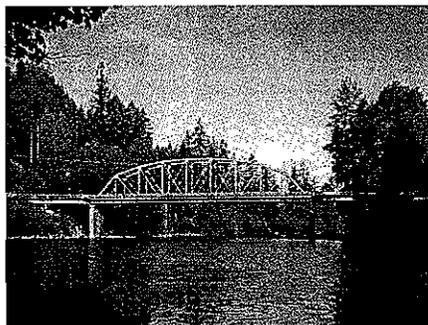
Project 1: Port Westward Road Improvement, Phase 1A and 1B
Client: Columbia County, OR

Type: Design and construction engineering / administration	Size: \$947K in consultant services; \$6.2M construction budget	Duration: 8-2002 to 9-2008
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Objectives: Use federal grants to design and build safety and capacity improvements to 7 miles of roadway to the Port Westward industrial site.

Highlights: Project elements included roadway widening and reconstruction, signal design, curb and sidewalk, guardrail, asphalt overlay, drainage improvements, and signing and striping. Design followed ODOT criteria and the 2002 ODOT Standard Specifications. We avoided environmental impacts in Phase 1A in order to complete critical maintenance and safety improvements quickly and within budget. Extensive widening and grading, which required environmental clearances, was completed in Stage 1B when the schedule was less critical. Parametrix also provided construction administration.

Chronological Timeline:



*Existing Clackamas River Bridge
The bridge's location, near historic properties and a county park, adds complexity to the project.*

Project 2: Clackamas River-Springwater Road Bridge
Client: Clackamas County, OR

Type: Alternatives analysis, bridge and roadway design	Size: \$1.3M in consultant services to date; \$11.8M construction budget	Duration: 11-2005 to 2014 (est.)
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Objectives: Replace the Springwater Road Bridge, which carries a major arterial over the Clackamas River; the north end connects with a state highway in the newly formed City of Damascus.

Highlights: Project elements include alternatives analysis, environmental services, public involvement, surveying, design, and final PS&E. The project is currently finishing 90% design. The project requires coordination with the City of Damascus, ODOT, Clackamas County, and a number of agencies. Adding complexity are the recent incorporation of the City of Damascus and the historic nature of the bridge and surrounding buildings.

Chronological Timeline:



Project 3: Columbia County OTIA III Bridges
Client: Columbia County

Type: Bridge / roadway design and construction engineering / administration	Size: \$1.1M in consultant services; \$3.2M construction budget	Duration: 10-2005 to 12-2009
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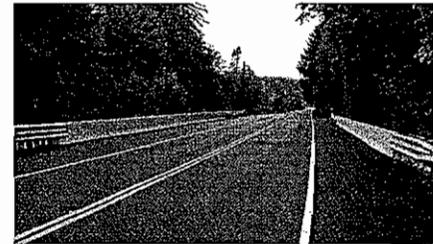
Objectives: Manage bridge and roadway design and provide construction services for replacing seven bridges. Replacement structures vary in length from 40 to 110 feet.

Highlights: Parametrix also provided environmental permitting (including Joint 404/DSL removal fill permits), wetland delineation, roadway realignment and right-of-way, staged construction, traffic control, surveying, geotechnical investigations, hydraulic analysis, and construction services. We designed construction scenarios to accommodate restrictive in-water work, since listed fish species access six of the seven bridge sites.

Chronological Timeline:



Construction photo of one of the replacement bridges



One of the completed replacement bridges

2.2.3D Budget and Schedule Compliance

For each of the three projects or contracts above, indicate whether the services were accomplished within Proposers' original estimated budget and schedule, or needed to be revised. Briefly explain the reason for any revisions.

Port Westward Road Improvement

Phase 1A provided time-sensitive upgrades within the tight schedule, even with additional work and budget added by the client.

During Phase 1B, the project was designed and then delayed while R/W acquisition was completed and funding was secured. A project

budget increase covered modifications in design to address property owner requests and facilitate a positive R/W acquisition.

Clackamas River-Springwater Road Bridge

The County initially planned to construct the new bridge on a new alignment, allowing traffic to use the bridge during construction. Due to unavailable funding, additional right of way needed for this plan, and cultural resources, the project was scaled back to replace the existing bridge in its current location. This change of plan, **intended to reduce construction costs** to within available funding, required additional consultant services to cover traffic staging with a detour structure, extended retaining wall design, and inclusion of waterlines for future utility expansion.

The project schedule was also impacted because the alternatives analysis period was extended to obtain stakeholder buy-in, and again to assess project direction based on the results of the alternatives analysis.

Columbia County OTIA III Bridges

Material and fuel cost forecasts during design indicated that bidding during the scheduled year would result in an increased project cost. Construction was delayed by one season to wait for a more favorable bidding environment. This delay, **while saving on the construction budget**, added to the consultant services budget.

2.2.4 Proposer's Capabilities

2.2.4A Staffing Levels and Capacity

An explanation describing Proposer's staffing levels and capacity for the types of projects that may be assigned via WOCs.

As stated earlier, Parametrix has 500 employees in Oregon and Washington. Including our subconsultants, our team provides a total capacity of nearly 600 employees in Oregon alone (when including offices along the state border in Vancouver, WA and Boise, ID). Table 4 indicates the number of staff available by service type.

Describe how the Proposer can accommodate varying levels of work assigned under the Price Agreement, including any limitations.

Consulting firms often experience peaks and valleys in work. Parametrix employs the follow-

Table 4: Staff Available by Service Type

Project Services / Types	Parametrix Staffing Levels*	Supported by Subconsultant
Project Management	64	Anderson Perry, Stuntzner, TY Lin
Preliminary Design / Final PS&E	73	Anderson Perry, Stuntzner Engineering & Forestry, TY Lin
Bridge and Structures Design	9	Anderson Perry, TY Lin
Hydraulic Studies	45	Anderson Perry, Stuntzner, TY Lin
Prospectus Preparation	10†	Anderson Perry, SWCA Environmental Consultants, TY Lin
Survey and Mapping	34	Dave Mills Consulting, Anderson Perry, Stuntzner Engineering & Forestry
Geotechnical Investigations	NA	Foundation Engineering, Inc., Kleinfelder, PBS Environmental, Pavement Services
Hazardous Materials	34	Kleinfelder, PBS Environmental
Env. Analysis/Documentation	62	Anderson Perry, SWCA Environmental Consultants, Stuntzner
Cultural/Historic/Archaeological	5	AINW, SWCA Environmental Consultants
Public Involvement	34	Jeanne Lawson & Associates
Permitting	42	SWCA Environmental Consultants
Right of Way	NA	Hanna McEldowney & Associates, Right of Way Associates, Universal Field Services
Traffic	19	DKS Associates, Kittelson & Associates
Landscape Architecture	5	Nevue Ngan Associates
Bidding Assistance	22	Anderson Perry, Cooper Zietz, TY Lin
Construction Services	44	Anderson Perry, Cooper Zietz, TY Lin

* Parametrix staff in Oregon, Washington, and Boise offices, unless otherwise noted.

† Potentially many more staff, but Parametrix does not specifically track this experience category.

ing strategies to manage these variations and maintain quality service during busy times:

- **Maintain a staff of on-call employees.** In addition to our regular full-time employees, Parametrix hires staff to provide services as needed. These employees are incorporated into our offices and culture alongside our full-time employees so they are up to speed on processes and procedures. They range in experience level from new graduates to semi-retired experts with decades of experience.
- **Call on our subconsultants.** When one firm is experiencing a peak in work, another may be experiencing a valley. We consciously develop and maintain relationships with potential and current subconsultants so that we can share work as needed. As noted elsewhere in our proposal, this is a primary reason our team contains multiple firms with overlapping expertise.
- **Share work with other Parametrix offices.** Parametrix office principals meet regularly, in part to discuss workload balancing across offices. Many of our most successful projects have involved sharing work across office and state lines. Our work for the Port of Vancouver, Washington is a good example. Construction inspectors from our Puget Sound offices shared work with our local inspectors, resulting in a successful, cost-effective project that met our client's schedule.

2.2.4B Accommodating Projects Across Oregon

An explanation describing how the Proposer can accommodate working on projects that may be located in various parts of Oregon.

As shown in Figure 6, the Parametrix team has already accommodated many projects in all corners of the state. Project dots in Figure 6 were mapped based on **nearly 1,000 project data points**. These 1,000 projects were completed by Parametrix and our subconsultants for local agencies and ODOT.

A few methods of accommodating projects in remote areas include:

- Adjust schedules on projects to combine meetings and field tasks when possible.
- Use NetMeeting, video conferencing, conference calls, and other technologies to reduce the frequency of face-to-face meetings.
- Develop checklists of all project data needed to minimize the number of sites visits required.

Describe Proposer's branch or satellite offices located within the state and the types of services these locations are capable to perform.

One way in which we will ensure responsive, cost-competitive coverage of the state is through our team's geographic spread of office locations, also shown in Figure 6.

Parametrix and our subconsultants have offices in each of ODOT's five regions. Services provided by these

offices are briefly outlined below by project phase. We also discuss the specific way in which we plan to cover projects on a region-by-region basis.

Region 1

Phases: All phases, preliminary engineering through construction.

Offices: Parametrix, majority of subconsultants.

Project coverage: In most cases, Parametrix will lead projects with support from subconsultants with beneficial project or specific technical experience.

Region 2

Phases: All phases, preliminary engineering through construction.

Offices: Parametrix, DKS Associates, Foundation Engineering, PBS Environmental, SWCA Environmental Consultants, Stuntzner Engineering & Forestry, TY Lin, and Universal Field Services.

Project coverage: In most cases, Parametrix will lead projects with support from subconsultants.

Region 3

Phases: Preliminary engineering and environmental. Construction management supported from Portland.

Offices: PBS Environmental and Stuntzner Engineering & Forestry.

Project coverage: Parametrix will work with Stuntzner Engineering & Forestry and TY Lin to identify the project manager and technical leads that are most beneficial to the project.

Region 4

Phases: Preliminary engineering and environmental. Construction management supported from La Grande and Portland.

Offices: Parametrix, Kittelson Associates, Kleinfelder, PBS Environmental, and Right of Way Associates.

Project coverage: Parametrix will work with Anderson Perry (east), Stuntzner Engineering & Forestry (south), and TY Lin to determine the best project manager and technical team.

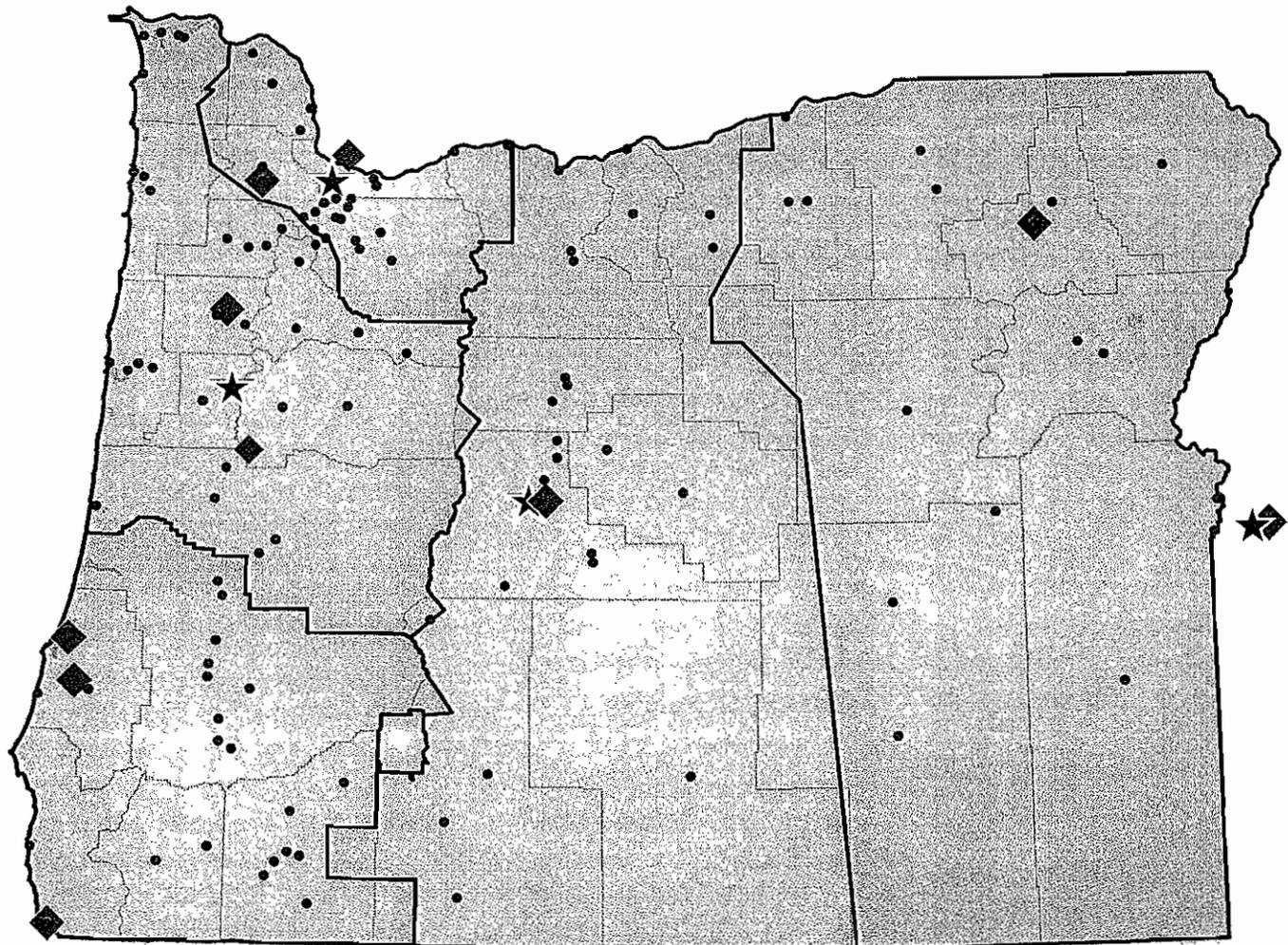
Region 5

Phases: All phases, preliminary engineering through construction.

Offices: Anderson Perry, Parametrix, Kittelson Associates, Kleinfelder, and PBS Environmental from Boise offices.

Project coverage: Anderson Perry will take a lead role on projects with support from Parametrix's Portland and Boise offices and other subconsultants, when appropriate.

Figure 6: Office and project locations of the Parametrix team.



★ Parametrix offices
As noted earlier, the Parametrix Bend location is a home office with one staff member.

◆ Subconsultant offices
In many cases, one diamond represents several subconsultant offices located in the same city.

● Local agency or ODOT project
Projects are mapped based on the nearest city, or are centered in the county if the project extended beyond a single city location. In many cases, a single dot on the map represents many projects.

2.2.5 Project Team and Qualifications

2.2.5A Extent of Principal Involvement

Describe extent of principal involvement.

Mel Sears, PE, PMP. Mel is our principal in charge for this contract. He is the Portland office principal and brings recent, relevant experience with ODOT and with state transportation policy. He brings to the team an extensive insight into policy and funding issues. As principal in charge, Mel will work with contract manager Brian Bierwagen to frame, charter, and organize projects as needed. He is also available to define roles and responsibilities and monitor quality. He will also check in with ODOT periodically (and with local agency project managers as needed) to make sure we are meeting ODOT's expectations for schedule, budget, and quality of work. Of the three principals listed here, Mel is the individual who partners with Portland managers on a daily basis.

Lindsay Yamane, PE, PMP.

Lindsay will serve as an advising principal for this contract. He is the Parametrix transportation program manager, now based in our Portland office. His most recent project experience includes managing a mega-program for WSDOT, where he tracked the work of multiple consultants and met the demands of an ever-adjusting project schedule. As a program manager, Lindsay's responsibilities include staying current on new regulatory guidelines. This makes him a valuable resource for federally funded projects which need to meet these evolving

requirements. Lindsay also provides quality review and is available to develop strategies for schedule and budget management.

Jeff Heilman. Jeff is a principal consultant based in our Portland office. He is currently managing the Parametrix portion of the work for the Columbia River Crossing project. Still, Jeff is available to develop strategies for streamlining project delivery – his greatest strength and passion. He is well known to ODOT for this service, and even given his busy schedule, he frequently lends this expertise to projects in the scoping phases.

2.2.5B Experience of Project Managers

Describe experience of Project Manager(s) with similar interdisciplinary teams.

Brian Bierwagen, PE, PMP. Brian will serve as the Parametrix contract manager for the Local Agencies Price Agreement, and as a project manager on selected work orders.

Brian has spent his entire career working on public agency transportation projects.

Brian is the transportation division manager in the Portland office. He has 26 years of transportation engineering experience and has managed multi-discipline project teams throughout preliminary engineering and construction.

An example of Brian's recent experience is his management of design and construction of roadway and infrastructure improvements for Columbia County. The 7-mile

project extends from Highway 30 in Clatskanie to the Port Westward industrial site, owned by the Port of St. Helens.

Brian's role included leading or assisting the County with project tasks ranging from leading the design, through bid document preparation, contractor selection, and construction oversight. An important part of the Port Westward project involved preparing the documentation required for this federally funded project.

Brian also recently managed design of three bridge replacements in southwest Oregon. In addition, he recently provided PS&E for two local agency projects funded through the American Relief and Recovery Act: the Apiary Road Resurfacing project and the Columbia Boulevard Resurfacing project.

Dan McIntier, PE. Dan has over 25 years of experience providing project management and structural design for various bridges, transportation facilities and other complex structures. Dan is also certified in Context Sensitive and Sustainable Solutions for project management.

Dan's recent project experience includes managing design of multi-million dollar bridge projects following ODOT's *Bridge Design and Detailing Manual*. He also recently managed repair of a number of bridges using an approach that resulted in a project bid well below ODOT's budget.

Dan's recent work as project manager and engineer of record on bridge projects for ODOT received all tens in the performance evaluations.

He has managed projects across the state of Oregon, from the Spencer Creek Bridge on the Oregon Coast, bridge repairs south of Baker City, to the South Medford Interchange in southern Oregon.

Anne Sylvester, PTE. Anne is a traffic engineer and planner with 36 years of experience as a traffic engineer and transportation planner. She has served as a senior-level consultant and project manager on a wide variety of multi-modal planning and engineering studies. Projects range from traffic and circulation analyses to transit service planning, traffic engineering design, and development of non-motorized improvement plans—to name a few categories.

Anne understands issues relating to compliance with a wide range of state and federal planning, transportation and environmental regulations. She has substantial experience in agency coordination and stakeholder involvement activities associated with ODOT and local agency projects.

"I very much appreciated Anne's guidance throughout the project.... Anne was quick to respond to any questions we had.... I would be very happy to work with Anne and Parametrix on future projects."

*Savannah Crawford
City of Shady Cove*

Anne has developed relationships with staff in local agencies across the state through her recent and ongoing work as contract man-

ager for the ODOT Transportation and Growth Management (TGM) contract.

Bill Ciz. Bill's 31 years of experience encompass transportation projects ranging from planning to project development to operations and construction.

Bill worked for ODOT for many years and thoroughly understands local, state, and federal policies, procedures, and standards for all types of transportation projects.

His experience on transportation construction projects includes pre-bid and pre-construction meetings, conflict resolution, contract reviews, and supervision of CADD designers and survey crews, and inspection crews.

Bill has also managed the NEPA process for transportation projects including the Newberg Dundee Bypass, Sunrise Corridor, and the Western Bypass Major Investment Study.

Bob Murray, PE, SE. Bob is the Parametrix bridge division manager. He has 38 years of professional experience on every aspect of structural and bridge-related projects.

Bob has managed the design and construction of over 60 local agency bridges in his career.

Some of his most recent experience includes providing senior oversight and quality management for local agencies in Oregon. For example, he worked on the Buckner Creek

Bridge for Clackamas County and the OTIA III Bridges for Columbia County. He also worked on the Mile Bridge on US 26 near Zigzag.

Scott Nebeker, PE. Scott is a professional engineer, licensed in both civil and environmental engineering. He has 23 years of experience providing consulting services to a wide variety of public agencies—the majority of his clients are cities and counties.

In addition to his experience with design and engineering services, Scott has been involved in virtually every aspect of project construction administration and management for over 20 years.

Scott's recent experience includes several ODOT projects, giving him an understanding of ODOT guidelines and procedures to apply to his work with local agencies. For example, Scott recently managed site civil engineering for ODOT's Solar Highways pilot project at the interchange of I-5 and I-205. While with another firm, Scott facilitated utility relocation associated with ODOT Main Street projects in Union, Adrian, and Richmond.

Scott Nettelton, PE (TY Lin). Scott's 19 years of experience includes 11 years with ODOT. He has professional experience in bridge engineering (nearly 500 precast concrete pavement system element designs), project management, structures materials inspection, roadway geometrics, specifications, and construction support.

Scott has served in a senior engineer or design manager role on seven design/build projects totaling over \$300M in constructed volume. He is knowledgeable about bridge

architecture and aesthetics, construction methods, design methods, and maintains a diverse project experience portfolio.

Allen Rieke, PE, PLS (Anderson Perry). Allen is a civil engineer with 35 years of experience.

Allen has managed design and construction on nearly 100 federal aid HBRR- and OTIA-funded bridge projects for ODOT Regions 4 and 5.

Responsibilities on bridge projects have included environmental coordination, design engineering and surveying, project management, quality control, and construction engineering and surveying.

A recent example of Allen's experience is his management of the Imnaha River Bridge in Wallowa County. This project had both federal and state oversight. Another example is his quality control management of the Silvies River Bridge project, which was funded through OTIA dollars distributed to Harney County.

Using the key staff resumes form...describe experience and qualifications of proposed project managers.

Resumes for the individuals named above as proposed project managers are provided as **Appendix A** to this proposal.

Also provide information requested in the form for other key members who are anticipated to perform services.

Resumes for key staff are included in **Appendix B**. Key staff are identified in bold as task leads on the organization chart on page 5.

2.2.6 Cost Effectiveness

2.2.6A Efforts to Ensure Cost-Effective Delivery

Describe the specific efforts your firm makes to ensure tasks and deliverables are completed in the most cost-effective manner.

Our actions to ensure cost-effectiveness focus on four primary activities:

1. We work with ODOT to identify the tasks and deliverables with clearly defined project objectives and expectations that the project team can commit to delivering.
2. During budget preparation, we use historical data and experience to identify potential costs associated with project location and opportunities to minimize these costs. In the past, areas where we

have saved money included renting vehicles rather than paying mileage, or renting an apartment instead of paying nightly lodging in areas with multiple or long-term projects.

3. Over the course of each project, we consistently compare expenditures with work progress and schedule to identify any required course corrections early in the duration of the project.
4. As appropriate, we identify activities which may cause a significant risk to cost-effective project delivery, and develop and monitor a strategy to address them.

Explain how your firm ensures all travel, lodging, and per diem expenses are as low as possible (including for long-term CEI/CA projects).

Through our many multi-location statewide contracts, we have developed cost effective means of performing work in multiple locations simultaneously, while containing travel costs:

- **When possible, don't travel at all.** It may be possible to eliminate travel by assigning work to qualified staff located in offices close to a project and using phone conferencing when possible. On the Reed Market Road

Corridor Study and the Empire Avenue reconstruction projects, Parametrix both selected a local subconsultant and used video conferencing to minimize the number of trips required to travel to Bend for meetings.

- **Avoid overnight stays.** If travel is needed, complete the trip within a single day; lodging costs are eliminated and per diem expenses are minimized.
- **Plan ahead, and ask for government rates.** Rates are usually better when trips are scheduled in advance. Also, we ask for government rates since we are working for our government clients. We also ask if other, better rates might be in effect.
- **Reduce the number of site visits through careful planning.** We have reduced the need for travel by using cameras and checklists to collect a comprehensive list of data required by all disciplines and double-checking data to avoid return site visits. For example, we successfully completed a project for the City of Pendleton with a minimum number of site visits because our team carefully documented site conditions using a video camera. For our Transportation and Growth Management contract with ODOT, which involved working with local agencies statewide, we developed a checklist of all data needed for each project so that staff did not have to return to gather additional data at a later time.

- **Carpool to minimize travel costs and provide built-in project meeting time.** Since project teams often travel together, trips provide productive, focused work time.
- **Provide our staff with the tools needed to be productive in the field.** GPS units and laptops are available to staff for checkout when visiting remote locations. Company laptops are pre-loaded with software which allows employees to work remotely with access to all of the same features available on their desktops.

2.2.6B Developing Estimates for Services

Describe the specific methods, tools, and processes your firm uses to develop the estimate for services. How does your firm ensure that estimates for services are fair and reasonable to both the government and your firm?

The Parametrix team has many years of experience in developing on-target project budgets for ODOT and local agencies. We will employ these same tools and approaches for this contract because they have proved successful in developing project budgets that are fair and reasonable, both for us and for ODOT.

Because we have negotiated more than 50 ODOT contracts over the last 8 years, we know how to work within ODOT systems and ensure that estimates meet the needs of both ODOT and Parametrix. We also understand that under this contract budget negotiations may take place with local agency staff in many cases.

- Based on experience from similar past projects, **estimate the required work hours needed to complete each task.** These work hours can then be assigned to the appropriate resource to estimate the cost. To determine the best staff person and minimize costs, we ask questions like, "Which internal resources provide the greatest value for the required work? Can another team member do this work more efficiently? Are there opportunities to adjust the schedule to avoid requiring more staff or more overtime?"
- Comparing costs based on different estimating approaches will help refine and confirm the estimate. **Estimating a typical cost per sheet or hours per sheet** based on historical data for each type of sheet or discipline can be used. These costs or hours are entered into an Excel spreadsheet that is later used as backup information to prepare ODOT's Breakdown of Costs budget sheet for each work order contract.
- A third approach is based on **a percentage of construction cost** for PE and CE. This estimate is a lump sum cost and is useful as a higher level "gut-check" of the total design or construction services fee.
- **Complete internal checks of the budget.** The project manager completes a first draft of the budget with input from the technical staff. It is then reviewed by a senior technical person with project related experience and then approved by the project manager's division manager.

2.2.7 References for Relevant Experience

Per instructions in the RFP and addenda, Parametrix has submitted reference requests to clients and (in most cases) has received confirmation that our clients will complete these references.

Provide references for the 2 most recent, relevant design-bid-build projects that were completed through final design (PS&E) in the last 4 years.

Parametrix was the engineer of record and responsible for project management for the following two most recent, relevant projects:

- Port Westward Roadway Improvement, Phase 1A and 1B for Columbia County
- OTIA III Bridge Bundle 302 for OBDP

We submitted reference requests to our clients for these projects. The client contact at OBDP informed us that he has been instructed by ODOT not to provide references to consultants. Because of this, please accept one of our alternate references in this category:

- Columbia Boulevard Resurfacing for the City of St. Helens

Provide references for the 2 most recent, relevant design-bid-build projects in the last 4 years, where your firm was responsible for CA/CEI.

Parametrix provided construction administration, construction engineering, and inspection for the following two most recent, relevant projects:

- Buckner Creek Bridge for Clackamas County
- OTIA III Bridges for Columbia County

To ensure a minimum of 4 Reference Questionnaires are received by Agency, Proposers may, at their discretion, submit a maximum of 4 additional references as alternates.

We have also requested the following alternate references, in order to ensure that a minimum of 4 reference questionnaires are returned to ODOT:

- Columbia Boulevard Resurfacing for the City of St. Helens (please use this reference as one of our primary PS&E references, as noted earlier)
- Youngs Creek Pedestrian Bridge for the Oregon Parks and Recreation Department
- Mirror Lake Habitat Restoration for the Lower Columbia Estuary Partnership