CLARK COUNTY STAFF REPORT

| DEPARTMENT: | Public Works/ Transportation Division / Signal Engineering | | | | |
|--|---|--|--|--|--|
| DATE: | November 22, 2016 | | | | |
| REQUESTED ACTION | N: Authorize and sign the contract for professional services with DKS Associates for the Signal Timing, Evaluation, Verification and Enhancement (STEVE) project in an amount not to exceed \$699,888. Authorize the County Manager to sign supplemental agreements extending the duration of the contract and the amount up to 10% of the original contract amount (RFP #706). X Consent Hearing County Manager | | | | |
| PUBLIC WORKS GOA | | | | | |
| | Provide safe and efficient transportation systems in Clark County Create and maintain a vibrant system of parks, trails, and green spaces | | | | |
| Continue responsible stewardship of public funds | | | | | |
| Promote family-wage job creation and economic development to support a thriving communit | | | | | |
| | Maintain a healthy, desirable quality of life | | | | |
| Increase partnerships and foster an engaged, informed community | | | | | |
| Cultivate a nimble, res | Cultivate a nimble, responsive work force | | | | |

BACKGROUND

Make Public Works a great place to work

Clark County Public Works is seeking professional services to expand the county's existing Transportation System Management and Operations (TSMO) system.

The Regional TSMO Plan was adopted by the Regional Transportation Council Board in June 2011 and identifies multiple county arterial corridors as TSMO corridors. These corridors include sections of NE Hwy 99, NE 78th Street, NE Padden Parkway, NE 99th Street, NE Hazel Dell Avenue, NE 134th Street and NE 139th Street. These corridors are among the busiest signalized corridors operated by Clark County Public Works.

Request for Proposal (RFP) #706 for Professional, Technical and Expert Services was issued by Clark County Public Works (CCPW) on March 16, 2016. CCPW staff reviewed each submittal and recommends entering into a contract with DKS Associates for services related to the STEVE project through March 31, 2019 in an amount not to exceed \$699,888.

The STEVE project expands the county's Intelligent Transportation System (ITS), adding new field devices to measure travel time and arrival on green at traffic signals. The consultant contract includes designing the plans for the installation of the field devices along with working with the county staff to create standards for measures of effectiveness of the traffic signal system. The end result is to allow county staff to have objective performance measure standards to evaluate travel on the county's arterial system.

PW16-139



Clark County has been awarded a \$920,000 federal grant from the Regional Transportation Council (RTC) for the Signal Timing, Evaluation, Verification, and Enhancement Project.

COUNCIL POLICY IMPLICATIONS

None.

ADMINISTRATIVE POLICY IMPLICATIONS

None.

COMMUNITY OUTREACH

The RFP process included notification to the public with the release of the request for proposals by the Purchasing Department through the county website. Firms were also notified individually and invited to participate in the process.

BUDGET IMPLICATIONS

| YES | NO | |
|-----|----|--|
| X | | Action falls within existing budget capacity. |
| | X | Action falls within existing budget capacity but requires a change of purpose within existing appropriation |
| | X | Additional budget capacity is necessary and will be requested at the next supplemental. If YES, please complete the budget impact statement. If YES, this action will be referred to the county council with a recommendation from the county manager. |

BUDGET DETAILS

| DODGET DETRIES | |
|--------------------------|------------------|
| Local Fund Dollar Amount | \$94,488 |
| Grant Fund Dollar Amount | \$605,400 |
| Account | County Road Fund |

DISTRIBUTION:

Board staff will post all staff reports to The Grid. http://www.clark.wa.gov/thegrid/

Carolyn Heniges, P.E.

Transportation Division Manager

Heath H. Henderson, P.E.

THE REAL CO.

Public Works Director/County Engineer

APPROVED://

CLARK COUNTY, WASHINGTON BOARD OF COUNTY COUNCILORS

DATE: NOV. 22, 2016

SR# SR 238-16

Attachments: Contracts (3)

Local Agency A&E Professional Services Negotiated Hourly Rate Consultant Agreement

Agreement Number: 733839

| Firm/Organization Legal Name (do not use dba's): DKS Associates | | | |
|--|---|--|--|
| Address 720 SW Washington Street, Suite 500 | Federal Aid Number CM-9906(046) | | |
| UBI Number 602 460 417 | Federal TIN or SSN Number 94-2583153 | | |
| Execution Date 11/01/2016 | Completion Date 3/31/2019 | | |
| 1099 Form Required Yes No | Federal Participation Yes No | | |
| Project Title Signal Timing, Evaluation, Verification & Enhancement Description of Work Prepare plans, specifications and estimates for the insteadisting intersections. Consultant shall develop evaluation methodology frame effectiveness and create standard reports from the Consultant shall develop evaluation methodology. | tallation of Contractor provided Bluetooth Devices at mework, and create cross-platform measures of | | |
| | | | |
| Yes ✓ No DBE Participation Yes ✓ No MBE Participation Yes ✓ No WBE Participation Yes ✓ No SBE Participation | Maximum Amount Payable: \$699,888. | | |

Index of Exhibits

| Exhibit A | Scope of Work |
|-----------|---|
| Exhibit B | DBE Participation |
| Exhibit C | Preparation and Delivery of Electronic Engineering and Other Data |
| Exhibit D | Prime Consultant Cost Computations |
| Exhibit E | Sub-consultant Cost Computations |
| Exhibit F | Title VI Assurances |
| Exhibit G | Certification Documents |
| Exhibit H | Liability Insurance Increase |
| Exhibit I | Alleged Consultant Design Error Procedures |
| Exhibit J | Consultant Claim Procedures Agreement Number: 733839 |

Local Agency A&E Professional Services Negotiated Hourly Rate Consultant Agreement Revised 4/10/2015

THIS AGREEMENT, made and entered into as shown in the "Execution Date" box on page one (1) of this AGREEMENT, between the Clark County hereinafter called the "AGENCY," and the "Firm / Organization Name" referenced on page one (1) of this AGREEMENT, hereinafter called the "CONSULTANT."

WHEREAS, the AGENCY desires to accomplish the work referenced in "Description of Work" on page one (1) of this AGREEMENT and hereafter called the "SERVICES;" and does not have sufficient staff to meet the required commitment and therefore deems it advisable and desirable to engage the assistance of a CONSULTANT to provide the necessary SERVICES; and

WHEREAS, the CONSULTANT represents that they comply with the Washington State Statutes relating to professional registration, if applicable, and has signified a willingness to furnish consulting services to the AGENCY.

NOW, THEREFORE, in consideration of the terms, conditions, covenants, and performance contained herein, or attached and incorporated and made a part hereof, the parties hereto agree as follows:

General Description of Work

The work under this AGREEMENT shall consist of the above-described SERVICES as herein defined, and necessary to accomplish the completed work for this project. The CONSULTANT shall furnish all services, labor, and related equipment and, if applicable, sub-consultants and subcontractors necessary to conduct and complete the SERVICES as designated elsewhere in this AGREEMENT.

II. General Scope of Work

The Scope of Work and projected level of effort required for these SERVICES is described in Exhibit "A" attached hereto and by this reference made a part of this AGREEMENT. The General Scope of Work was developed utilizing performance based contracting methodologies.

III. General Requirements

All aspects of coordination of the work of this AGREEMENT with outside agencies, groups, or individuals shall receive advance approval by the AGENCY. Necessary contacts and meetings with agencies, groups, and/or individuals shall be coordinated through the AGENCY. The CONSULTANT shall attend coordination, progress, and presentation meetings with the AGENCY and/or such State, Federal, Community, City, or County officials, groups or individuals as may be requested by the AGENCY. The AGENCY will provide the CONSULTANT sufficient notice prior to meetings requiring CONSULTANT participation. The minimum required hours or days' notice shall be agreed to between the AGENCY and the CONSULTANT and shown in Exhibit "A."

The CONSULTANT shall prepare a monthly progress report, in a form approved by the AGENCY, which will outline in written and graphical form the various phases and the order of performance of the SERVICES in sufficient detail so that the progress of the SERVICES can easily be evaluated.

The CONSULTANT, any sub-consultants, and the AGENCY shall comply with all Federal, State, and local laws, rules, codes, regulations, and all AGENCY policies and directives, applicable to the work to be performed under this AGREEMENT. This AGREEMENT shall be interpreted and construed in accordance with the laws of the State of Washington.

Participation for Disadvantaged Business Enterprises (DBE) or Small Business Enterprises (SBE), if required, per 49 CFR Part 26, shall be shown on the heading of this AGREEMENT. If DBE firms are utilized at the commencement of this AGREEMENT, the amounts authorized to each firm and their certification number will be shown on Exhibit "B" attached hereto and by this reference made part of this AGREEMENT. If the Prime CONSULTANT is a DBE certified firm they must comply with the Commercial Useful Function (CUF) regulation outlined in the AGENCY's "DBE Program Participation Plan" and perform a minimum of 30% of the total amount of this AGREEMENT. It is recommended, but not required, that non-DBE Prime CONSULTANTS perform a minimum of 30% of the total amount of this AGREEMENT.

The CONSULTANT, on a monthly basis, is required to submit DBE Participation of the amounts paid to all DBE firms invoiced for this AGREEMENT.

All Reports, PS&E materials, and other data furnished to the CONSULTANT by the AGENCY shall be returned. All electronic files, prepared by the CONSULTANT, must meet the requirements as outlined in Exhibit "C – Preparation and Delivery of Electronic Engineering and other Data."

All designs, drawings, specifications, documents, and other work products, including all electronic files, prepared by the CONSULTANT prior to completion or termination of this AGREEMENT are instruments of service for these SERVICES, and are the property of the AGENCY. Reuse by the AGENCY or by others, acting through or on behalf of the AGENCY of any such instruments of service, not occurring as a part of this SERVICE, shall be without liability or legal exposure to the CONSULTANT.

Any and all notices or requests required under this AGREEMENT shall be made in writing and sent to the other party by (i) certified mail, return receipt requested, or (ii) by email or facsimile, to the address set forth below:

If to AGENCY:

Name: Robert D. Klug, P.E.

Agency: Clark County Public Works

Address: PO Box 9810

City: Vancouver State: WA Zip: 98666

Email: rob.klug@clark.wa.gov

Phone: 360.397.6118 ext. 4356

Facsimile: 360.397.6051

If to CONSULTANT:

Name: Jim Peters

Agency: DKS Associates

Address: 720 SW Washington Street, Suite 500 City: Portland State: OR Zip: 97205

Email: jmp@dksassociates.com

Phone: 503.243.3500 Facsimile: 503.243.1934

IV. Time for Beginning and Completion

The CONSULTANT shall not begin any work under the terms of this AGREEMENT until authorized in writing by the AGENCY. All work under this AGREEMENT shall conform to the criteria agreed upon detailed in the AGREEMENT documents. These SERVICES must be completed by the date shown in the heading of this AGREEMENT titled "Completion Date."

The established completion time shall not be extended because of any delays attributable to the CONSULTANT, but may be extended by the AGENCY in the event of a delay attributable to the AGENCY, or because of unavoidable delays caused by an act of GOD, governmental actions, or other conditions beyond the control of the CONSULTANT. A prior supplemental AGREEMENT issued by the AGENCY is required to extend the established completion time.

V. Payment Provisions

The CONSULTANT shall be paid by the AGENCY for completed SERVICES rendered under this AGREEMENT as provided hereinafter. Such payment shall be full compensation for SERVICES performed or SERVICES rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete SERVICES. The CONSULTANT shall conform to all applicable portions of 48 CFR Part 31 (www.ecfr.gov).

A. Hourly Rates: Hourly rates are comprised of the following elements - Direct (Raw) Labor, Indirect Cost Rate, and Fixed Fee (Profit). The CONSULTANT shall be paid by the AGENCY for work done, based upon the negotiated hourly rates shown in Exhibits "D" and "E" attached hereto and by reference made part of this AGREEMENT. These negotiated hourly rates will be accepted based on a review of the CONSULTANT's direct labor rates and indirect cost rate computations and agreed upon fixed fee. The accepted negotiated rates shall be memorialized in a final written acknowledgement between the parties. Such final written acknowledgement shall be incorporated into, and become a part of, this AGREEMENT. The initially accepted negotiated rates shall be applicable from the approval date, as memorialized in a final written acknowledgement, to 180 days following the CONSULTANT's fiscal year end (FYE) date.

The direct (raw) labor rates and classifications, as shown on Exhibits "D" and "E" shall be subject to renegotiations for each subsequent twelve (12) month period (180 days following FYE date to 180 days following FYE date) upon written request of the CONSULTANT or the AGENCY. The written request must be made to the other party within ninety (90) days following the CONSULTANT's FYE date. If no such written request is made, the current direct (raw) labor rates and classifications as shown on Exhibits "D" and "E", will remain in effect for the twelve (12) month period.

Conversely, if a timely request is made in the manner set forth above, the parties will commence negotiations to determine the new direct (raw) labor rates and classifications that will be applicable for the twelve (12) month period. Any agreed to renegotiated rates shall be memorialized in a final written acknowledgement between the parties. Such final written acknowledgement shall be incorporated into, and become a part of, this AGREEMENT. If requested, the CONSULTANT shall provide current payroll register and classifications to aid in negotiations. If the parties cannot reach an agreement on the direct (raw) labor rates and classifications, the AGENCY shall perform an audit of the CONSULTANT's books and records to determine the CONSULTANT's actual costs. The audit findings will establish the direct (raw) labor rates and classifications that will be applicable for the twelve (12) month period.

The fixed fee as identified in Exhibits "D" and "E" shall represent a value to be applied throughout the life of the AGREEMENT.

The CONSULTANT shall submit annually to the AGENCY an updated indirect cost rate within 180 days of the close of its fiscal year. An approved updated indirect cost rate shall be included in the current fiscal year rates under this AGREEMENT, even if/when other components of the hourly rate are not renegotiated. These rates will be applicable for the twelve (12) month period. At the AGENCY's option, a provisional and/or conditional indirect cost rate may be negotiated. This provisional or conditional indirect rate shall remain in effect until the updated indirect cost rate is completed and approved. Indirect cost rate costs incurred during the provisional or conditional period will not be adjusted. The CONSULTANT may request an extension of the last approved indirect cost rate for the twelve (12) month period. These requests for provisional indirect cost rate and/or extension will be considered on a case-by-case basis, and if granted, will be memorialized in a final written acknowledgement.

The CONSULTANT shall maintain and have accessible support data for verification of the components of the hourly rates, i.e., direct (raw) labor, indirect cost rate, and fixed fee (profit) percentage. The CONSULTANT shall bill each employee's actual classification, and actual salary plus indirect cost rate plus fixed fee.

- B. Direct Non-Salary Costs: Direct Non-Salary Costs will be reimbursed at the actual cost to the CONSULTANT. These charges may include, but are not limited to, the following items: travel, printing, long distance telephone, supplies, computer charges and fees of sub-consultants. Air or train travel will be reimbursed only to lowest price available, unless otherwise approved by the AGENCY. The CONSULTANT shall comply with the rules and regulations regarding travel costs (excluding air, train, and rental car costs) in accordance with the WSDOT's Accounting Manual M 13-82, Chapter 10 Travel Rules and Procedures, and all revisions thereto. Air, train and rental card costs shall be reimbursed in accordance with 48 Code of Federal Regulations (CFR) Part 31.205-46 "Travel Costs." The billing for Direct Non-salary Costs shall include an itemized listing of the charges directly identifiable with these SERVICES. The CONSULTANT shall maintain the original supporting documents in their office. Copies of the original supporting documents shall be supplied to the STATE upon request. All above charges must be necessary for the SERVICES provided under this AGREEMENT.
- C. Maximum Amount Payable: The Maximum Amount Payable by the AGENCY to the CONSULTANT under this AGREEMENT shall not exceed the amount shown in the heading of this AGREEMENT on page one (1.) The Maximum Amount Payable does not include payment for extra work as stipulated in section XIII, "Extra Work." No minimum amount payable is guaranteed under this AGREEMENT.
- D. Monthly Progress Payments: Progress payments may be claimed on a monthly basis for all costs authorized in A and B above. The monthly billings shall be supported by detailed statements for hours expended at the rates established in Exhibit "D," including names and classifications of all employees, and billings for all direct nonsalary expenses. To provide a means of verifying the billed salary costs for the CONSULTANT's employees, the AGENCY may conduct employee interviews. These interviews may consist of recording the names, titles, salary rates, and present duties of those employees performing work on the SERVICES at the time of the interview.
- E. Final Payment: Final Payment of any balance due the CONSULTANT of the gross amount earned will be made promptly upon its verification by the AGENCY after the completion of the SERVICES under this AGREEMENT, contingent upon receipt of all PS&E, plans, maps, notes, reports, electronic data, and other related documents which are required to be furnished under this AGREEMENT. Acceptance of such Final Payment by the CONSULTANT shall constitute a release of all claims for payment, which the CONSULTANT may have against the AGENCY unless such claims are specifically reserved in writing and transmitted to the AGENCY by the CONSULTANT prior to its acceptance. Said Final Payment shall not, however, be a bar to any claims that the AGENCY may have against the CONSULTANT or to any remedies the AGENCY may pursue with respect to such claims.

The payment of any billing will not constitute agreement as to the appropriateness of any item and at the time of final audit all required adjustments will be made and reflected in a final payment. In the event that such final audit reveals an overpayment to the CONSULTANT, the CONSULTANT will refund such overpayment to the AGENCY within thirty (30) calendar days of notice of the overpayment. Such refund shall not constitute a waiver by the CONSULTANT for any claims relating to the validity of a finding by the AGENCY of overpayment. Per WSDOT's "Audit Guide for Consultants," Chapter 23 "Resolution Procedures," the CONSULTANT has twenty (20) working days after receipt of the final Post Audit to begin the appeal process to the AGENCY for audit findings.

F. Inspection of Cost Records: The CONSULTANT and their sub-consultants shall keep available for inspection by representatives of the AGENCY and the United States, for a period of six (6) years after receipt of final payment, the cost records and accounts pertaining to this AGREEMENT and all items related to or bearing upon these records with the following exception: if any litigation, claim or audit arising out of, in connection with, or related to this AGREEMENT is initiated before the expiration of the six (6) year period, the cost records and accounts shall be retained until such litigation, claim, or audit involving the records is completed.

An interim or post audit may be performed on this AGREEMENT. The audit, if any, will be performed by the State Auditor, WSDOT's Internal Audit Office and /or at the request of the AGENCY's Project Manager.

VI. Sub-Contracting

The AGENCY permits subcontracts for those items of SERVICES as shown in Exhibit "A" attached hereto and by this reference made part of this AGREEMENT.

The CONSULTANT shall not subcontract for the performance of any SERVICE under this AGREEMENT without prior written permission of the AGENCY. No permission for subcontracting shall create, between the AGENCY and sub-consultant, any contract or any other relationship.

Compensation for this sub-consultant SERVICES shall be based on the cost factors shown on Exhibit "E" attached hereto and by this reference made part of this AGREEMENT.

The SERVICES of the sub-consultant shall not exceed its maximum amount payable identified in each sub-consultant cost estimate unless a prior written approval has been issued by the AGENCY.

All reimbursable direct labor, indirect cost rate, direct non-salary costs and fixed fee costs for the sub-consultant shall be negotiated and substantiated in accordance with section V "Payment Provisions" herein and shall be memorialized in a final written acknowledgement between the parties.

All subcontracts shall contain all applicable provisions of this AGREEMENT, and the CONSULTANT shall require each sub-consultant or subcontractor, of any tier, to abide by the terms and conditions of this AGREEMENT. With respect to sub-consultant payment, the CONSULTANT shall comply with all applicable sections of the STATE's Prompt Payment laws as set forth in RCW 39.04.250 and RCW 39.76.011.

The CONSULTANT, sub-recipient, or sub-consultant shall not discriminate on the basis of race, color, national origin, or sex in the performance of this AGREEMENT. The CONSULTANT shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the CONSULTANT to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the recipient deems appropriate.

VII. Employment and Organizational Conflict of Interest

The CONSULTANT warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warrant, the AGENCY shall have the right to annul this AGREEMENT without liability or, in its discretion, to deduct from this AGREEMENT price or consideration or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

Any and all employees of the CONSULTANT or other persons while engaged in the performance of any work or services required of the CONSULTANT under this AGREEMENT, shall be considered employees of the CONSULTANT only and not of the AGENCY, and any and all claims that may arise under any Workmen's Compensation Act on behalf of said employees or other persons while so engaged, and any and all claims made by a third party as a consequence of any act or omission on the part of the CONSULTANT's employees or other persons while so engaged on any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility of the CONSULTANT.

The CONSULTANT shall not engage, on a full- or part-time basis, or other basis, during the period of this AGREEMENT, any professional or technical personnel who are, or have been, at any time during the period of this AGREEMENT, in the employ of the United States Department of Transportation or the AGENCY, except regularly retired employees, without written consent of the public employer of such person if he/she will be working on this AGREEMENT for the CONSULTANT.

VIII. Nondiscrimination

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees, sub-consultants, subcontractors and successors in interest, agrees to comply with the following laws and regulations:

- Title VI of the Civil Rights Act of 1964
 (42 U.S.C. Chapter 21 Subchapter V § 2000d through 2000d-4a)
- Federal-aid Highway Act of 1973
 (23 U.S.C. Chapter 3 § 324)
- Rehabilitation Act of 1973
 (29 U.S.C. Chapter 16 Subchapter V § 794)
- Age Discrimination Act of 1975
 (42 U.S.C. Chapter 76 § 6101 et. seq.)

- Civil Rights Restoration Act of 1987 (Public Law 100-259)
- American with Disabilities Act of 1990 (42 U.S.C. Chapter 126 § 12101 et. seq.)
- 23 CFR Part 200
- 49 CFR Part 21
- 49 CFR Part 26
- RCW 49.60.180

In relation to Title VI of the Civil Rights Act of 1964, the CONSULTANT is bound by the provisions of Exhibit "F" attached hereto and by this reference made part of this AGREEMENT, and shall include the attached Exhibit "F" in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

IX. Termination of Agreement

The right is reserved by the AGENCY to terminate this AGREEMENT at any time with or without cause upon ten (10) days written notice to the CONSULTANT.

In the event this AGREEMENT is terminated by the AGENCY, other than for default on the part of the CONSULTANT, a final payment shall be made to the CONSULTANT for actual hours charged at the time of termination of this AGREEMENT, plus any direct non-salary costs incurred up to the time of termination of this AGREEMENT.

No payment shall be made for any SERVICES completed after ten (10) days following receipt by the CONSULTANT of the notice to terminate. If the accumulated payment made to the CONSULTANT prior to Notice of Termination exceeds the total amount that would be due when computed as set forth in paragraph two (2) of this section, then no final payment shall be due and the CONSULTANT shall immediately reimburse the AGENCY for any excess paid.

If the services of the CONSULTANT are terminated by the AGENCY for default on the part of the CONSULTANT, the above formula for payment shall not apply.

In the event of a termination for default, the amount to be paid to the CONSULTANT shall be determined by the AGENCY with consideration given to the actual costs incurred by the CONSULTANT in performing SERVICES to the date of termination, the amount of SERVICES originally required which was satisfactorily completed to date of termination, whether that SERVICE is in a form or a type which is usable to the AGENCY at the time of termination, the cost to the AGENCY of employing another firm to complete the SERVICES required and the time which may be required to do so, and other factors which affect the value to the AGENCY of the SERVICES performed at the time of termination. Under no circumstances shall payment made under this subsection exceed the amount, which would have been made using the formula set forth in paragraph two (2) of this section.

If it is determined for any reason that the CONSULTANT was not in default or that the CONSULTANT's failure to perform is without the CONSULTANT's or its employee's fault or negligence, the termination shall be deemed to be a termination for the convenience of the AGENCY. In such an event, the CONSULTANT would be reimbursed for actual costs in accordance with the termination for other than default clauses listed previously.

The CONSULTANT shall, within 15 days, notify the AGENCY in writing, in the event of the death of any member, partner, or officer of the CONSULTANT or the death or change of any of the CONSULTANT's supervisory and/or other key personnel assigned to the project or disaffiliation of any principally involved CONSULTANT employee. The CONSULTANT shall also notify the AGENCY, in writing, in the event of the sale or transfer of 50% or more of the beneficial ownership of the CONSULTANT within 15 days of such sale or transfer occurring. The CONSULTANT shall continue to be obligated to complete the SERVICES under the terms of this AGREEMENT unless the AGENCY chooses to terminate this AGREEMENT for convenience or chooses to renegotiate any term(s) of this AGREEMENT. If termination for convenience occurs, final payment will be made to the CONSULTANT as set forth in the second and third paragraphs of this section.

Payment for any part of the SERVICES by the AGENCY shall not constitute a waiver by the AGENCY of any remedies of any type it may have against the CONSULTANT for any breach of this AGREEMENT by the CONSULTANT, or for failure of the CONSULTANT to perform SERVICES required of it by the AGENCY. Forbearance of any rights under the AGREEMENT will not constitute waiver of entitlement to exercise those rights with respect to any future act or omission by the CONSULTANT.

X. Changes of Work

The CONSULTANT shall make such changes and revisions in the completed work of this AGREEMENT as necessary to correct errors appearing therein, without additional compensation thereof. Should the AGENCY find it desirable for its own purposes to have previously satisfactorily completed SERVICES or parts thereof changed or revised, the CONSULTANT shall make such revisions as directed by the AGENCY. This work shall be considered as Extra Work and will be paid for as herein provided under section XIII "Extra Work."

XI. Disputes

Any disputed issue not resolved pursuant to the terms of this AGREEMENT shall be submitted in writing within 10 days to the Director of Public Works or AGENCY Engineer, whose decision in the matter shall be final and binding on the parties of this AGREEMENT; provided however, that if an action is brought challenging the Director of Public Works or AGENCY Engineer's decision, that decision shall be subject to judicial review. If the parties to this AGREEMENT mutually agree, disputes concerning alleged design errors will be conducted under the procedures found in Exhibit "J". In the event that either party deem it necessary to institute legal action or proceeding to enforce any right or obligation under this AGREEMENT, this action shall be initiated in the Superior Court of the State of Washington, situated in the county in which the AGENCY is located. The parties hereto agree that all questions shall be resolved by application of Washington law and that the parties have the right of appeal from such decisions of the Superior Court in accordance with the laws of the State of Washington. The CONSULTANT hereby consents to the personal jurisdiction of the Superior Court of the State of Washington, situated in the county in which the AGENCY is located.

XII. Legal Relations

The CONSULTANT, any sub-consultants, and the AGENCY shall comply with all Federal, State, and local laws, rules, codes, regulations and all AGENCY policies and directives, applicable to the work to be performed under this AGREEMENT. This AGREEMENT shall be interpreted and construed in accordance with the laws of the State of Washington.

The CONSULTANT shall defend, indemnify, and hold the State of Washington (STATE) and the AGENCY and their officers and employees harmless from all claims, demands, or suits at law or equity arising in whole or in part from the negligence of, or the breach of any obligation under this AGREEMENT by, the CONSULTANT or the CONSULTANT's agents, employees, sub consultants, subcontractors or vendors, of any tier, or any other persons for whom the CONSULTANT may be legally liable; provided that nothing herein shall require a CONSULTANT

to defend or indemnify the STATE and the AGENCY and their officers and employees against and hold harmless the STATE and the AGENCY and their officers and employees from claims, demands or suits based solely upon the negligence of, or breach of any obligation under this AGREEMENT by the STATE and the AGENCY, their agents, officers, employees, sub-consultants, subcontractors or vendors, of any tier, or any other persons for whom the STATE and /or the AGENCY may be legally liable; and provided further that if the claims or suits are caused by or result from the concurrent negligence of (a) the CONSULTANT or the CONSULTANT's agents, employees, sub-consultants, subcontractors or vendors, of any tier, or any other persons for whom the CONSULTANT is legally liable, and (b) the STATE and/or AGENCY, their agents, officers, employees, sub-consultants, subcontractors and or vendors, of any tier, or any other persons for whom the STATE and/or AGENCY may be legally liable, the defense and indemnity obligation shall be valid and enforceable only to the extent of the CONSULTANT's negligence or the negligence of the CONSULTANT's agents, employees, sub-consultants, subcontractors or vendors, of any tier, or any other persons for whom the CONSULTANT may be legally liable. This provision shall be included in any AGREEMENT between CONSULTANT and any sub-consultant, subcontractor and vendor, of any tier.

The CONSULTANT shall also defend, indemnify, and hold the STATE and the AGENCY and their officers and employees harmless from all claims, demands, or suits at law or equity arising in whole or in part from the alleged patent or copyright infringement or other allegedly improper appropriation or use of trade secrets, patents, proprietary information, know-how, copyright rights or inventions by the CONSULTANT or the CONSULTANT's agents, employees, sub-consultants, subcontractors or vendors, of any tier, or any other persons for whom the CONSULTANT may be legally liable, in performance of the Work under this AGREEMENT or arising out of any use in connection with the AGREEMENT of methods, processes, designs, information or other items furnished or communicated to STATE and/or the AGENCY, their agents, officers and employees pursuant to the AGREEMENT; provided that this indemnity shall not apply to any alleged patent or copyright infringement or other allegedly improper appropriation or use of trade secrets, patents, proprietary information, know-how, copyright rights or inventions resulting from STATE and/or AGENCY's, their agents', officers' and employees' failure to comply with specific written instructions regarding use provided to STATE and/or AGENCY, their agents, officers and employees by the CONSULTANT, its agents, employees, sub-consultants, subcontractors or vendors, of any tier, or any other persons for whom the CONSULTANT may be legally liable.

The CONSULTANT's relation to the AGENCY shall be at all times as an independent contractor.

Notwithstanding any determination by the Executive Ethics Board or other tribunal, the AGENCY may, in its sole discretion, by written notice to the CONSULTANT terminate this AGREEMENT if it is found after due notice and examination by the AGENCY that there is a violation of the Ethics in Public Service Act, Chapter 42.52 RCW; or any similar statute involving the CONSULTANT in the procurement of, or performance under, this AGREEMENT.

The CONSULTANT specifically assumes potential liability for actions brought by the CONSULTANT's own employees or its agents against the STATE and/or the AGENCY and, solely for the purpose of this indemnification and defense, the CONSULTANT specifically waives any immunity under the state industrial insurance law, Title 51 RCW. This waiver has been mutually negotiated by the Parties.

Unless otherwise specified in this AGREEMENT, the AGENCY shall be responsible for administration of construction contracts, if any, on the project. Subject to the processing of a new sole source, or an acceptable supplemental AGREEMENT, the CONSULTANT shall provide On-Call assistance to the AGENCY during contract administration. By providing such assistance, the CONSULTANT shall assume no responsibility for: proper construction techniques, job site safety, or any construction contractor's failure to perform its work in accordance with the contract documents.

The CONSULTANT shall obtain and keep in force during the terms of this AGREEMENT, or as otherwise required, the following insurance with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW.

Insurance Coverage

- A. Worker's compensation and employer's liability insurance as required by the STATE.
- B. Commercial general liability insurance written under ISO Form CG 00 01 12 04 or its equivalent with minimum limits of one million dollars (\$1,000,000.00) per occurrence and two million dollars (\$2,000,000.00) in the aggregate for each policy period.
- C. Business auto liability insurance written under ISO Form CG 00 01 10 01 or equivalent providing coverage for any "Auto" (Symbol 1) used in an amount not less than a one million dollar (\$1,000,000.00) combined single limit for each occurrence.

Excepting the Worker's Compensation Insurance and any Professional Liability Insurance, the STATE and AGENCY, their officers, employees, and agents will be named on all policies of CONSULTANT and any subconsultant and/or subcontractor as an additional insured (the "AIs"), with no restrictions or limitations concerning products and completed operations coverage. This coverage shall be primary coverage and non-contributory and any coverage maintained by the AIs shall be excess over, and shall not contribute with, the additional insured coverage required hereunder. The CONSULTANT's and the sub-consultant's and/or subcontractor's insurer shall waive any and all rights of subrogation against the AIs. The CONSULTANT shall furnish the AGENCY with verification of insurance and endorsements required by this AGREEMENT. The AGENCY reserves the right to require complete, certified copies of all required insurance policies at any time.

All insurance shall be obtained from an insurance company authorized to do business in the State of Washington. The CONSULTANT shall submit a verification of insurance as outlined above within fourteen (14) days of the execution of this AGREEMENT to:

Name: Robert D. Klug, P.E.

Agency: Clark County Public Works

Address: PO Box 9810

City: Vancouver State: WA Zip: 98666

Email: rob.klug@clark.wa.gov Phone: 360.397.6118, ext. 4356

Facsimile: 360.397.6051

No cancellation of the foregoing policies shall be effective without thirty (30) days prior notice to the AGENCY.

The CONSULTANT's professional liability to the AGENCY, including that which may arise in reference to section IX "Termination of Agreement" of this AGREEMENT, shall be limited to the accumulative amount of the authorized AGREEMENT or one million dollars (\$1,000,000.00), whichever is greater, unless the limit of liability is increased by the AGENCY pursuant to Exhibit H. In no case shall the CONSULTANT's professional liability to third parties be limited in any way.

The parties enter into this AGREEMENT for the sole benefit of the parties, and to the exclusion of any third party, and no third party beneficiary is intended or created by the execution of this AGREEMENT.

The AGENCY will pay no progress payments under section V "Payment Provisions" until the CONSULTANT has fully complied with this section. This remedy is not exclusive; and the AGENCY may take such other action as is available to it under other provisions of this AGREEMENT, or otherwise in law.

XIII. Extra Work

- A. The AGENCY may at any time, by written order, make changes within the general scope of this AGREEMENT in the SERVICES to be performed.
- B. If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the SERVICES under this AGREEMENT, whether or not changed by the order, or otherwise affects any other terms and conditions of this AGREEMENT, the AGENCY shall make an equitable adjustment in the: (1) maximum amount payable; (2) delivery or completion schedule, or both; and (3) other affected terms and shall modify this AGREEMENT accordingly.
- C. The CONSULTANT must submit any "request for equitable adjustment," hereafter referred to as "CLAIM," under this clause within thirty (30) days from the date of receipt of the written order. However, if the AGENCY decides that the facts justify it, the AGENCY may receive and act upon a CLAIM submitted before final payment of this AGREEMENT.
- D. Failure to agree to any adjustment shall be a dispute under the section XI "Disputes" clause. However, nothing in this clause shall excuse the CONSULTANT from proceeding with the AGREEMENT as changed.
- E. Notwithstanding the terms and conditions of paragraphs (A.) and (B.) above, the maximum amount payable for this AGREEMENT, shall not be increased or considered to be increased except by specific written supplement to this AGREEMENT.

XIV. Endorsement of Plans

If applicable, the CONSULTANT shall place their endorsement on all plans, estimates, or any other engineering data furnished by them.

XV. Federal Review

The Federal Highway Administration shall have the right to participate in the review or examination of the SERVICES in progress.

XVI. Certification of the Consultant and the Agency

Attached hereto as Exhibit "G-1(a and b)" are the Certifications of the CONSULTANT and the AGENCY, Exhibit "G-2" Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions, Exhibit "G-3" Certification Regarding the Restrictions of the Use of Federal Funds for Lobbying and Exhibit "G-4" Certificate of Current Cost or Pricing Data. Exhibit "G-3" is required only in AGREEMENT's over one hundred thousand dollars (\$100,000.00) and Exhibit "G-4" is required only in AGREEMENT's over five hundred thousand dollars (\$500,000.00.) These Exhibits must be executed by the CONSULTANT, and submitted with the master AGREEMENT, and returned to the AGENCY at the address listed in section III "General Requirements" prior to its performance of any SERVICES under this AGREEMENT.

XVII. Complete Agreement

This document and referenced attachments contain all covenants, stipulations, and provisions agreed upon by the parties. No agent, or representative of either party has authority to make, and the parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein. No changes, amendments, or modifications of the terms hereof shall be valid unless reduced to writing and signed by the parties as a supplement to this AGREEMENT.

XVIII. Execution and Acceptance

This AGREEMENT may be simultaneously executed in several counterparts, each of which shall be deemed to be an original having identical legal effect. The CONSULTANT does hereby ratify and adopt all statements, representations, warranties, covenants, and AGREEMENT's contained in the proposal, and the supporting material submitted by the CONSULTANT, and does hereby accept this AGREEMENT and agrees to all of the terms and conditions thereof.

XIX. Protection of Confidential Information

The CONSULTANT acknowledges that some of the material and information that may come into its possession or knowledge in connection with this AGREEMENT or its performance may consist of information that is exempt from disclosure to the public or other unauthorized persons under either chapter 42.56 RCW or other local, state or federal statutes ("State's Confidential Information"). The "State's Confidential Information" includes, but is not limited to, names, addresses, Social Security numbers, e-mail addresses, telephone numbers, financial profiles, credit card information, driver's license numbers, medical data, law enforcement records (or any other information identifiable to an individual), STATE and AGENCY source code or object code, STATE and AGENCY security data, non-public Specifications, STATE and AGENCY non-publicly available data, proprietary software, STATE and AGENCY security data, or information which may jeopardize any part of the project that relates to any of these types of information. The CONSULTANT agrees to hold the State's Confidential Information in strictest confidence and not to make use of the State's Confidential Information for any purpose other than the performance of this AGREEMENT, to release it only to authorized employees, sub-consultants or subcontractors requiring such information for the purposes of carrying out this AGREEMENT, and not to release, divulge, publish, transfer, sell, disclose, or otherwise make it known to any other party without the AGENCY's express written consent or as provided by law. The CONSULTANT agrees to release such information or material only to employees, sub-consultants or subcontractors who have signed a nondisclosure AGREEMENT, the terms of which have been previously approved by the AGENCY. The CONSULTANT agrees to implement physical, electronic, and managerial safeguards to prevent unauthorized access to the State's Confidential Information.

Immediately upon expiration or termination of this AGREEMENT, the CONSULTANT shall, at the AGENCY's option: (i) certify to the AGENCY that the CONSULTANT has destroyed all of the State's Confidential Information; or (ii) returned all of the State's Confidential Information to the AGENCY; or (iii) take whatever other steps the AGENCY requires of the CONSULTANT to protect the State's Confidential Information.

As required under Executive Order 00-03, the CONSULTANT shall maintain a log documenting the following: the State's Confidential Information received in the performance of this AGREEMENT; the purpose(s) for which the State's Confidential Information was received; who received, maintained and used the State's Confidential Information; and the final disposition of the State's Confidential Information. The CONSULTANT's records shall be subject to inspection, review, or audit upon reasonable notice from the AGENCY.

The AGENCY reserves the right to monitor, audit, or investigate the use of the State's Confidential Information collected, used, or acquired by the CONSULTANT through this AGREEMENT. The monitoring, auditing, or investigating may include, but is not limited to, salting databases.

Violation of this section by the CONSULTANT or its sub-consultants or subcontractors may result in termination of this AGREEMENT and demand for return of all State's Confidential Information, monetary damages, or penalties.

It is understood and acknowledged that the CONSULTANT may provide the AGENCY with information which is proprietary and/or confidential during the term of this AGREEMENT. The parties agree to maintain the confidentiality of such information during the term of this AGREEMENT and afterwards. All materials containing such proprietary and/or confidential information shall be clearly identified and marked as "Confidential" and shall be returned to the disclosing party at the conclusion of the SERVICES under this AGREEMENT.

The CONSULTANT shall provide the AGENCY with a list of all information and materials it considers confidential and/or proprietary in nature: (a) at the commencement of the term of this AGREEMENT; or (b) as soon as such confidential or proprietary material is developed. "Proprietary and/or confidential information" is not meant to include any information which, at the time of its disclosure: (i) is already known to the other party; (ii) is rightfully disclosed to one of the parties by a third party that is not acting as an agent or representative for the other party; (iii) is independently developed by or for the other party; (iv) is publicly known; or (v) is generally utilized by unaffiliated third parties engaged in the same business or businesses as the CONSULTANT.

The parties also acknowledge that the AGENCY is subject to Washington State and federal public disclosure laws. As such, the AGENCY shall maintain the confidentiality of all such information marked proprietary and/or confidential or otherwise exempt, unless such disclosure is required under applicable state or federal law. If a public disclosure request is made to view materials identified as "Proprietary and/or confidential information" or otherwise exempt information, the AGENCY will notify the CONSULTANT of the request and of the date that such records will be released to the requester unless the CONSULTANT obtains a court order from a court of competent jurisdiction enjoining that disclosure. If the CONSULTANT fails to obtain the court order enjoining disclosure, the AGENCY will release the requested information on the date specified.

The CONSULTANT agrees to notify the sub-consultant of any AGENCY communication regarding disclosure that may include a sub-consultant's proprietary and/or confidential information. The CONSULTANT notification to the sub-consultant will include the date that such records will be released by the AGENCY to the requester and state that unless the sub-consultant obtains a court order from a court of competent jurisdiction enjoining that disclosure the AGENCY will release the requested information. If the CONSULTANT and/or sub-consultant fail to obtain a court order or other judicial relief enjoining the AGENCY by the release date, the CONSULTANT shall waive and release and shall hold harmless and indemnify the AGENCY from all claims of actual or alleged damages, liabilities, or costs associated with the AGENCY's said disclosure of sub-consultants' information.

XX. Records Maintenance

During the progress of the Work and SERVICES provided hereunder and for a period of not less than six (6) years from the date of final payment to the CONSULTANT, the CONSULTANT shall keep, retain and maintain all "documents" pertaining to the SERVICES provided pursuant to this AGREEMENT. Copies of all "documents" pertaining to the SERVICES provided hereunder shall be made available for review at the CONSULTANT's place of business during normal working hours. If any litigation, claim or audit is commenced, the CONSULTANT shall cooperate with AGENCY and assist in the production of all such documents. "Documents" shall be retained until all litigation, claims or audit findings have been resolved even though such litigation, claim or audit continues past the six (6) year retention period.

For purposes of this AGREEMENT, "documents" means every writing or record of every type and description, including electronically stored information ("ESI"), that is in the possession, control, or custody of the CONSULTANT, including, without limitation, any and all correspondences, contracts, AGREEMENTs, appraisals, plans, designs, data, surveys, maps, spreadsheets, memoranda, stenographic or handwritten notes, reports, records, telegrams, schedules, diaries, notebooks, logbooks, invoices, accounting records, work sheets, charts, notes, drafts, scribblings, recordings, visual displays, photographs, minutes of meetings, tabulations, computations, summaries, inventories, and writings regarding conferences, conversations or telephone conversations, and any and all other taped, recorded, written, printed or typed matters of any kind or description; every copy of the foregoing whether or not the original is in the possession, custody, or control of the CONSULTANT, and every copy of any of the foregoing, whether or not such copy is a copy identical to an original, or whether or not such copy contains any commentary or notation whatsoever that does not appear on the original.

For purposes of this AGREEMENT, "ESI" means any and all computer data or electronic recorded media of any kind, including "Native Files", that are stored in any medium from which it can be retrieved and examined, either directly or after translation into a reasonably useable form. ESI may include information and/or documentation stored in various software programs such as: Email, Outlook, Word, Excel, Access, Publisher, PowerPoint, Adobe Acrobat, SQL databases, or any other software or electronic communication programs or databases that the CONSULTANT may use in the performance of its operations. ESI may be located on network servers, backup tapes, smart phones, thumb drives, CDs, DVDs, floppy disks, work computers, cell phones, laptops or any other electronic device that CONSULTANT uses in the performance of its Work or SERVICES hereunder, including any personal devices used by the CONSULTANT or any sub-consultant at home.

"Native files" are a subset of ESI and refer to the electronic format of the application in which such ESI is normally created, viewed, and /or modified.

The CONSULTANT shall include this section XX "Records Maintenance" in every subcontract it enters into in relation to this AGREEMENT and bind the sub-consultant to its terms, unless expressly agreed to otherwise in writing by the AGENCY prior to the execution of such subcontract.

In witness whereof, the parties hereto have executed this AGREEMENT as of the day and year shown in the "Execution Date" box on page one (1) of this AGREEMENT.

| In m | 11/04/2 | 016 |
|---------------------------------------|---------|--|
| Signature DKS Associates | Date | Action of the state of the stat |
| 1. | | |
| Signature Mark McCaulay Sayur Managar | Date | 11/22/16 |

Any modification, change, or reformation of this AGREEMENT shall require approval as to form by the Office of the Attorney General.

APPROVED AS TO FORM ONLY:

Anthony F. Golik
Prosecuting Attorney

Christopher Horne

By:

Chief Civil Deputy Prosecution Attorney

Exhibit A Scope of Work

Project No. 352122

See Attached

Exhibit A

Clark County Signal Timing Evaluation, Verification, and Enhancement (STEVE) Project

The purpose of this project is to expand the County's existing Transportation System Management and Operations (TSMO) system. The project includes preparing ITS plan documentation, preparing design drawings for Bluetooth data collectors, designing and implementing new signal timings, developing Measures of Effectiveness (MOE's) from the TSMO data systems, creating a framework for before and after studies using the MOE's, and conducting before and after analysis. The project builds on the Regional TSMO Plan that was adopted by the RTC Board in June 2011 and implements improvements at 60 intersections that are owned and operated by a combination of Clark County and Washington State Department of Transportation signalized intersections within unincorporated Clark County. The following sections present the detailed scope of services

Task 1 – Project Management and Coordination

Task 1.1 – Project Management and Coordination

Under this task the Consultant will provide leadership, direction, and control of the Consultants production efforts.

Consultant shall:

- Coordinate with Clark County project manager as the main point of contact for management of this project scope
- Facilitate a bi-weekly call with the Clark County project manager to review project status, risks, upcoming deliverables, and other project related business.
- Prepare and submit monthly project status updates
- Coordinate with County for scheduling meetings and project related information
- Schedule, coordinate and supervise the work of consultant staff
- Develop and maintain a project file for all documentation related to this scope of services
- Document all communication in the project file
- Prepare a comprehensive project schedule incorporating all tasks in this scope, including project meetings, and review milestones. Consultant shall update the schedule throughout the duration of the project to reflect any changes

Task 1.1 Assumptions:

- · Project duration of 14 months
- For budgeting purposes, bi-weekly calls are expected to last 30 minutes, and be attended by the DKS Project Manager.

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• For budgeting purposes, the DKS deputy project manager will attend 50% of the bi-weekly calls.

Task 1.1 Deliverables:

Consultant shall submit:

- Electronic (.pdf) monthly progress reports and billing invoices including breakdown of expenses to be submitted by the 15th of each month.
- Project schedule (electronic copy, Microsoft Project or PDF format)

Task 1.2 – Project Meetings

Project team meetings will be spread out throughout the project to cover the initial start of the project, and at key times during the project for review and discussion of the work and deliverables.

Consultant shall:

- Prepare for, attend, participate, and provide agenda and minutes for project kickoff meeting with County staff.
- Prepare for, attend, participate, and provide agenda and minutes for up to six project management coordination meetings with County staff.
- Prepare for, attend, participate, and provide agenda and minutes for up to one Regional Workshop with Agency stakeholders. The workshop will be used to identify MOE's that will be meaningful to the region and gather input on the MOE analysis and visualization.

Task 1.2 Assumptions:

- Meetings will be held at Clark County offices.
- Project kickoff meeting will include up to four consultant staff (two DKS, UW, PSU) present for a total of 2 hours, plus travel time
- Project coordination meetings will include up to four consultant staff (two DKS, UW, PSU)
 present for a total of 2 hours, plus travel time. For budgeting purposes, it is assumed that UW
 representative will be present at up to 3 coordination meetings.
- Remote conferencing will be used to the extent possible
- Regional workshop stakeholders may include Clark County, WSDOT, ODOT, City of Portland, Washington County, Clackamas County, SW Washington RTC, and City of Vancouver. Workshop will include up to four consultant staff (two DKS, UW, PSU) present for a total of 4 hours, plus travel time

Task 1.2 Deliverables:

Consultant shall submit:

- Meeting agenda for project kickoff meeting (electronic copy, Microsoft Word or PDF format)
- Meeting minutes for project kickoff meeting (electronic copy, Microsoft Word or PDF format)
- Meeting agenda for six team meetings (electronic copy, Microsoft Word or PDF format)
- Meeting minutes for six team meetings (electronic copy, Microsoft Word or PDF format)

- Meeting agenda for two Regional Workshops (electronic copy, Microsoft Word or PDF format)
- Meeting minutes for two Regional Workshops (electronic copy, Microsoft Word or PDF format)

Task 1.3 - Quality Control Plan (QCP) and Quality Control Checklist (QCC)

Consultant shall develop a Project specific Quality Control Plan (QCP) including Quality Control Checklists (QCCs). Consultant's QC reviewers shall review the deliverables using QCCs as identified within the QCP.

Task 1.3 Deliverables:

Consultant shall submit:

- Draft Project Quality Control Plan, QCCs and comment log (electronic copy, Microsoft Word or PDF format).
- Revised QCP and QCC based on Agency comments (electronic copy, Microsoft Word or PDF format.

Task 2 – ITS Plan Documentation

The Consultant shall review the project elements and prepare an Intelligent Transportation System (ITS) plan, consistent with the process outlined in the Washington State Local Agency Guidelines, Chapter 41.3.

Task 2.1 Draft and Final Concept of Operations

Consultant shall develop a Concept of Operations that describes the proposed County TSMO system for arterial performance.

Consultant shall:

- Conduct an interview with County staff to gather input on the current systems and operations.
 Based on the information gathered, document the current County arterial operations and systems.
- Develop a brief Concept of Operations that defines the projects purpose, need, and objectives in order to expand the County's existing Transportation System Management and Operations (TSMO) system. The Concept of operations will:
 - Define the purpose and objectives of the system.
 - Describe the system boundaries and project scope.
 - o Identify the stakeholders associated with the system.
 - Document stakeholder roles and responsibilities.
 - Describe the existing system.
 - o Document the system operational needs.
 - Describe the functions Agency wants the system to perform.
 - o Describe how the reports will be used.
 - Identify needs for short and long-term use of the system (including equipment, systems interfaces, system uses, reports)

Task 2.1 Assumptions:

· The Concept of Operations will guide the selection of performance measure and

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performance measures framework. It will articulate the project objectives and become the tool that Clark County can use to verify and validate whether the project met the needs.

- Up to four operational scenarios will be developed
- · Up to four systems will be evaluated
- Concept of Operations document will be up to 25 pages
- The System Validation Plan will be fulfilled as part of Task 12 Before and After Study Reports

Task 2.1 Deliverables:

Consultant shall submit:

 Draft and Final Concept of Operations document (Electronic copy, Microsoft Word or PDF format).

Task 2.2 Draft and Final System Requirements

Consultant shall develop specific Functional Requirements for expansion of the TSMO system.

Consultant shall:

- Develop the high level functional requirements for the system and define how the system will be used. The requirements must consider the following questions at a minimum:
 - What the system is required to do
 - How well it is required to do it, and under what conditions.
- Rate the requirements (Mandatory or Desirable). Consultant shall provide the initial rating and the Agency will review and edit as necessary.

Task 2.2 Assumptions:

- The requirements will be based on the goals, stakeholder needs and expectations, constraints, and operation and maintenance requirements documented in the Task 2.1 Concept of Operations
- The System Requirements document will be up to two pages

Task 2.2 Deliverables:

Consultant shall submit:

 Draft and Final System Requirements report (Electronic copy, Microsoft Word or PDF format).

Task 2.3 Draft and Final Verification Plan

Consultant shall prepare a system verification plan that the agency will use to verify that the system being built meets the system requirements.

Consultant shall:

Prepare a matrix that the County will use to determine if the system meets the requirements.

Task 2.3 Deliverables:

• Draft and Final System Verification Plan (Electronic copy, Microsoft Word, Excel or PDF format).

Task 3 – Bluetooth Design (PS&E)

Task 3.1 Site Visit/Review Record Drawings

Consultant shall review field conditions at 56 intersections listed in Table 1 and verify record drawing information in the field.

Task 3.2 50% Design Plans and Estimates

Consultant shall provide 50%, Design Plans and Engineers Estimates to install BlueMAC Bluetooth sensors at 56 intersections including necessary temporary traffic control plans during construction.

The 50% plans shall have intersections identified along with the locations of the Bluetooth devices, and proposed routes for the wiring.

Task 3.2.1 50% Bluetooth Design Plans

Consultant shall:

- Provide 50% Plans to install BlueMAC Bluetooth sensors at (56) intersections listed in Table 1.
- Propose to the County four locations that will include more than one Bluetooth device and aimed antennas at these locations to allow investigation of specific Measures of Effectiveness as identified in Task 8
- Review the existing infrastructure and determine the specific number of Bluetooth devices and antennas to be included at each intersection.

Task 3.2.2 50% Temporary Traffic Control Plans

Consultant shall:

 Provide 50 % Plans for temporary traffic control and construction staging to construct the Bluetooth sensors at nearby County and WSDOT intersections.

Task 3.2.3 50% Engineers Estimate

Consultant shall:

Provide 50% Engineers Estimate for Bluetooth and temporary traffic control plans. Estimate will
use standard WSDOT bid items.

Task 3.2 Deliverables:

Consultant shall submit:

 50% PS&E package (11x17 electronic PDF's of the AutoCAD drawings including cover sheet and engineer's estimate)

Task 3.3 99% Design Plans, Specifications, and Estimates

Consultant will incorporate County comments on the 50% Design Plans and Engineers Estimates and update the plans to the 99% level. Project special provisions will be provided to produce a 99% Plans, Specifications, and Estimate (PS&E) package.

The 99% plans shall show the nearly completed plans, with details worked out, along with any alternate routing of cables to keep equipment fully within the existing public right of way. The 99% plans shall include draft specifications and an estimate of costs for construction.

Task 3.3.1 99% Bluetooth Design Plans

Consultant shall:

- Provide 99% Plans to install BlueMAC Bluetooth sensors at (56) intersections as 11x17 electronic
 PDF's of the AutoCAD drawings
- Comment responses to County comments on the 50% Plans

Task 3.3.2 99% Temporary Traffic Control Plans

Consultant shall:

- Provide 99% Plans for temporary traffic control and construction staging to construct the Bluetooth sensors at nearby County and WSDOT intersections as 11x17 electronic PDF's of the AutoCAD drawings
- Comment responses to County comments on the 50% Plans

Task 3.3.3 99% Engineers Estimate

Consultant shall:

- Provide 99% Engineers Estimate for Bluetooth and temporary traffic control plans. Estimate will
 use standard WSDOT bid items.
- Comment responses to County comments on the 50% Estimate

Task 3.3.4 99% Specifications

Consultant shall:

• Provide 99% project special provisions for Bluetooth and temporary traffic control plans (Division 8 and 9).

Task 3.3 Deliverables:

Consultant shall submit:

 99% PS&E package (11x17 electronic PDF's of the AutoCAD drawings including cover sheet, special provisions and engineer's estimate)

Task 3.4 Final Plans and Estimates

Consultant will incorporate County comments on the 99% Design Plans, Specifications, and Engineers Estimates and update the PS&E package to the 100% level. The complete PS&E package shall include cover sheet, details, traffic control plans, along with the technical specifications (Division 8 and 9) to be inserted in a County provided boilerplate specification package The final PS&E package shall be delivered as a stamped original 11x17 plan set including cover sheet, special provisions and engineer's estimate.

The plan sheet set shall include at least the following plans (25 total sheets):

- o Cover Sheet (1 sheet)
- o Index (1 sheet)
- Notes and legend (1 sheet)
- Typical details (estimated at 2 sheets)
- o Intersection Layout plans (estimated at 2 sheets)
 - These plans show overall map of limits of project, and sheet numbers of each specific intersection with work
- Detailed installation plans (maximum of 4 intersections per plan sheet, estimated at 14 sheets)
- County intersection traffic control plan sheets (estimated at 2 sheets)
- WSDOT intersection traffic control plans (estimated at 2 sheets)

Task 3.4.1 Final Bluetooth Design Plans

Consultant shall:

- Provide Final signed Plans to install BlueMAC Bluetooth sensors at (56) intersections as 11x17 electronic PDF's of the AutoCAD drawings
- Comment responses to County comments on the 99% Plans

Task 3.4.2 Final Temporary Traffic Control Plans

Consultant shall:

- Provide Final Signed Plans for temporary traffic control and construction staging to construct the Bluetooth sensors at nearby County and WSDOT intersections as 11x17 electronic PDF's of the AutoCAD drawings
- Comment responses to County comments on the 99% Plans

Task 3.4.3 Final Engineers Estimate

Consultant shall:

- Provide Final Engineers Estimate for Bluetooth and temporary traffic control plans. Estimate will
 use standard WSDOT bid items.
- Comment responses to County comments on the 99% Estimate

Task 3.4.4 Final Specifications

Consultant shall:

- Provide Final signed project special provisions for Bluetooth and temporary traffic control plans.
- Comment responses to County comments on the 99% Specifications

Task 3.4 Deliverables:

Consultant shall submit:

 Final stamped PS&E package (original 11x17 plan set including cover sheet, special provisions and engineer's estimate)

Task 3 Assumptions:

- The County will provide the basemaps that were used for various signal projects in the
 corridors to include Bluetooth sensor installation. The AutoCAD basemap will include
 as- designed curblines, sidewalk, traffic signal equipment, conduit and junction boxes
 along with public right of way.
- The County will provide project management assistance to certify right of way, process Public Interest Finding (PIF) paperwork for proprietary items, County purchased products, along with grant procurement and processing.
- · County will provide consultant access into traffic signal cabinets
- The Bluetooth devices shall be installed on existing traffic signal poles and luminaires, through existing conduit and junction boxes to existing traffic signal cabinets. Each intersection to receive Bluetooth devices has existing Ethernet communications, typically via fiber optic interconnect, or via Ethernet radios or VDSL Ethernet over copper communications.
- A minimum of one Bluetooth device will be installed at each intersection
- The site specific traffic control plans for each WSDOT intersection shall meet WSDOT design standards.
- For budgeting purposes, we've assumed four unique traffic control plans will be required to supplement the standard WSDOT and County work zone traffic control plans.
- The design for the Bluetooth system will be constructed along with the County installation of the Linux CPU's that will run the Arrival on Green data. This equipment will be installed, and allowed to run, gathering "before" data that will be used in the remainder of this Contract.
- The County will manage the construction contract to have a Contractor install the Bluetooth sensors.
- The County will assemble the PS&E package parts that the Consultant provides, along with creating the rest of the bid package.
- The County will advertise the project bid, and provide the construction management of the project.
- WSDOT will review and approve any traffic control plans for work that affects the WSDOT right of way
- Clark County will review, provide comments, and approve Bluetooth and traffic control plans at the 50% and 99% stages.

- County will provide boilerplate special provisions
- This scope assumes all new or existing construction elements are within the existing
 public rights of way, or easements, and no right of way determination is included within
 this scope of services
- The 50% Design Plans and Estimate will be used for permitting.

Task 4 - Synchro Model

Consultant shall create an existing a.m. and p.m. peak Synchro model that includes all 60 project intersections shown in Table 1. This County model development will include gathering turn movement data, saturation flow rates, and inputting of the traffic data. Consultant shall conduct the following activities:

- Field verify intersection lane geometry, driveways and bus stop locations that could impact traffic operations, and posted speeds.
- Coordinate with County on entering existing signal timing parameters from the ATMS.now export.
- Import turn movement counts collected in Task 5 using UTDF data format with 15-minute intervals.
- Review SimTraffic model and balance the Link Origin-Destination volume assignments to reflect field conditions.

Task 4 Assumptions:

- County will input signal timing data into Synchro model for every project intersection.
- County will provide phase diagrams for every project intersection.
- Synchro models will be created in Synchro version 9.0.
- County will provide intersection node numbers.

Task 4 Deliverables:

Consultant shall submit:

- A.m. and p.m. peak Synchro version 9.0 models that includes all project intersections geometry, traffic count data, and saturation flow rates.
- UDTF files for importing traffic volumes and a written description on how to use it.

Task 5 - Traffic Count Data

Consultant shall collect data to calibrate the a.m. and p.m. peak Synchro models and develop new traffic signal timings. Consultant shall conduct the following activities:

- Collect a.m. and p.m. peak auto and heavy vehicle turn movement counts at the intersections shown in Table 1.
- Calculate saturation flow rates at intersections and approaches shown in Table 2.
- Review turn movement counts and balance/smooth counts to take into account driveways and minor side streets.
- Develop a memorandum describing the methods used to smooth the count data.

Task 5 Assumptions:

- The a.m. peak shall be 6:30 8:30 a.m.
- The p.m. peak shall be 4:30 6:30 p.m.
- The traffic counts shall be collected on a Tuesday, Wednesday, or Thursday after September 15, 2016, during weeks that do not contain a Federal holiday.
- Turn movement counts shall be collected in 5-minute bins and summarized in 15-minute and 1-hour intervals.
- County will provide traffic count data from available permanent count stations (Wavetronix Count Stations) and loops detectors at signals to aid in traffic smoothing and determine start and end times for coordinated timings patterns.
- County will provide pedestrian pushbutton activations at all intersections

Task 5 Deliverables:

Consultant shall submit:

- Electronic copy of traffic count data in .pdf and spreadsheet format.
- Electronic videos of intersection turn movement counts.
- Memorandum summarizing the method used to balance and smooth traffic counts (electronic copy, Microsoft Word or PDF format).

Task 6 – Coordinated Signal Timings

Consultant shall recommend optimizations for the a.m. and p.m. signal timing plans, and assist County staff with implementation and field fine-tuning.

Task 6.1 – Signal Timing Development and Optimization

Consultant shall conduct the following activities to develop optimized signal timings for each corridor:

- Document signal timing operational objectives of each corridor or group of intersections.
- Evaluate existing and recommended subsystem configurations (signal timing groups).
- Evaluate the existing timing plans and recommend modifications including splits, offsets, signal groupings, phase orders, and other advanced timing features.
- Consultant will review existing signal timing groups and cycle lengths and make recommendations where appropriate. The recommendations will be reviewed with County staff prior to implementing changes to the signal timing plans.
- Consultant will work with the County to implement, monitor, and fine tune timing changes.

Task 6.1 Assumptions:

 The County will provide information about the overall coordination strategies that are used at County signals for the Consultant to use as a basis of their recommendations

Task 6.1 Deliverables:

Consultant shall submit:

- Recommendations for signal timing groups, and time-of-day periods to implement the coordinated plans.
- Draft and Final working paper summarizing overall system recommendations based on the field observations of issues and the benefits of each type of recommendation (i.e. lead-lag operation) (electronic copy, Microsoft Word or PDF format).

Task 6.2 – Signal Timing Implementation and Fine-Tuning

Consultant shall assist County staff to implement the timing adjustments and field fine-tune the timings along all corridors. The field fine-tuning involves observing the primary corridors and traffic flow from the side streets to determine if vehicle platoons arrive at the appropriate time and if side street and minor movement phases receive an adequate amount of green time. It also includes reviewing the controller logs. Each corridor will be fine-tuned right after the new timings are implemented and again approximately three weeks later.

Consultant shall conduct the following activities:

- Summarize Synchro 9.0 output to Trafficware local software input, including splits, phase sequence, offsets, scheduler, and any special features necessary to operate the timing plan.
- Observe the signal performance in the field during the a.m. and p.m. peak periods as the new timings are implemented.
- Review split logs and arrival on green data.
- Identify and implement changes to offsets and splits, if necessary, that improve performance.
- Update Synchro 9.0 files with field changes.

Task 6.2 Assumptions:

- County staff will enter all new signal timing data into the ATMS.now system.
- Consultant shall have remote access (VPN) to the ATMS.now system.
- County will provide plans for any scheduled signal, intersection, or roadway modifications that may affect the scheduled signal timing implementation
- New timings will be installed along one corridor at a time.
- For budgeting purposes, it is assumed that two consultant staff will work with County to implement and fine tune the new timings on each corridor.

Task 6.2 Deliverables:

Consultant shall submit:

 Electronic signal timing files (Synchro 9.0 format) for a.m. peak and p.m. peak, including any changes made during field fine-tuning.

Task 7 - Review of Potential Historic Measures of Effectiveness Standards

Tasks 7 and 8 will identify the framework for visualizing four performance measures, and identify other performance measures that will be meaningful to assessing the County's arterial performance. The four performance measures include travel time, arrival on green, split monitor, and size of green band. The County will use the performance measures to evaluate their arterial operations, and verify the effectiveness of the traffic signal operations program.

Task 7 will identify external factors that impact the performance measures and define how those external factors influence the measures. Consultant shall review existing County data sources, analyze and document how external factors and analysis procedures affect MOEs, and prepare a working paper on the external factors that affect the MOEs on multiple county arterial corridors. The corridors include sections of NE Hwy 99, NE 78th St, NE Padden Parkway, NE 99th St, NE Hazel Dell Av, NE 134th St and NE 139th St.

Task 7.1 Gather and Process Existing County Data Samples

Consultant shall:

- Gather a minimum of one day worth of data at a sample of intersections using the following County data sources:
 - Purdue methodology arrival on green
 - Bluetooth based corridor travel time data
 - Traffic signal stop bar occupancy data
 - Wavetronix HD count station data
 - Traffic signal system loop count data
 - Traffic signal phase gap and max occurrences
 - Pedestrian phase services at signalized intersections
- Gather existing schema for the County systems.
- Gather existing County signal system reports.
- Review, assemble, and process the data collected from the County's systems.
- Document the corridor conditions in a corridor atlas describing the following:
 - Federal Functional Classification / County Classification of road.
 - o Percent of the road built to standard
 - Unsignalized accesses (driveways, private and public roads) per mile
 - Average, or closest spacing of intersections, signalized or unsignalized
 - Presence, or absence of access management on corridor
 - Vicinity of braided traffic patterns through freeway interchanges and nearby spaced arterial crossings
 - Peaking effects due to specific types of land uses, such as schools and shopping.
 - Seasonal affects due to traffic around shopping centers
 - o Pedestrian, bicycle and transit use across and along the corridors
 - Document the real-time triggers the County is already using
 - Detector configuration and layout.
 - Define corridor operating constraints
 - Document the corridor operations objectives
 - Document expected operational responses to identified problems

Task 7.2 Identify Potential MOEs and Critical Factors and Prepare an MOE Working Paper Using the data gathered in Task 7.1, Consultant shall identify the potential MOEs and external factors, and present in a draft and final memorandum. Consultant shall:

- Prepare a list of arterial and traffic signal MOE's
- Identify UDOT signal performance measures that could be gathered using County data.
- Prepare a list of critical factors that could impact the MOEs
- Prepare a draft and final memorandum presenting the MOE's and critical factors that are meaningful to the County, and that could have an impact with signal operations.

The list of potential critical factors could include:

- Traffic counts on the corridor
- Emergency vehicle preemption calls per hour
- Transit Signal Priority operations
- Railroad crossings
- · Pedestrian button activations
- Signal spacing

Consultant shall filter the list of MOEs and critical factors to a short list of the most meaningful to the County that can be analyzed with County data. Consultant shall:

- Narrow the list of critical factors based on criteria such as the availability of data, and the factors that could be addressed with County operations changes.
- Use the data collected from sensors at Clark County traffic signals to assess the baseline performance and effects of external factors.
- Use existing data to determine how to aggregate and normalize the data.
- Develop an approach that accounts for external factors.
- Prepare a draft and final working paper on the external factors that affect the MOE's.

Task 7 Assumptions:

- The MOEs developed in this scope are intended for historical data analysis and this scope does
 not include measures that could be used to evaluate the system in real-time.
- Data gathered in this task is all collected and stored by the County. No new field data collection is included in this Task 7 scope.
- The list of MOEs identified in this task will include a longer list than the MOEs that will be evaluated
- The County will review the Consultant's recommendations, and provide written feedback.
- MOE automation reports will be developed as part of a separate contract.
- For budgeting purposes, data will be readily available, and no new field data collection or coding will be required.

Task 7 Deliverables:

Consultant shall submit:

- Draft and final corridor atlas
- Draft and final summary of short list critical factors and MOE's for signal operations

 Draft and final working paper documenting the summary of external factors and MOE's (Electronic copy, Microsoft Word, Excel or PDF format).

Task 8 – Developing the Framework for MOEs

This task will document how to apply the MOEs to the County corridors, and how the MOEs can be used in a before and after analysis.

Task 8.1 Develop the MOE Framework

Consultant shall develop the framework for the four MOEs identified in Task 7 and demonstrate how to apply the MOEs for ongoing corridor performance monitoring and evaluation.

Consultant shall:

- Use the information from Task 7 and recommend the methods and MOE framework that should be used to evaluate corridors and subsets of corridors. The recommended methods should be broad based and not restrictive in nature.
- The four MOE's are expected to include:
 - o Arrival on Green
 - Percent of vehicles arriving on green
 - Platoon ratio
 - Real Time Time Space diagrams (from ATMS.now)
 - Seconds of green band for corridor or segments of corridor
 - Split monitor (from ATMS.now)
 - Bluetooth Travel Time
 - Travel time along corridor
- Review the traffic characteristics of the corridors, and propose splits in the corridors for the MOE analysis. Include an overlap in each corridor to show how the end of one segment of a corridor with the beginning of the next corridor's segment.
- Develop and document the framework that describes the analysis process, and guidance on how to apply the MOE's. The analysis process may include the following:
 - Recommend how the transportation corridor's MOE's should be segregated. For
 instance, it may be that on NE 78th St, the influence of the I-5 freeway ramps cause the
 segment of NE 78th St from Hazel Dell to Hwy 99 have different standards than the
 segment of NE 78th St, east of Hwy 99. For any locations where the standards change at
 an intersection, the Consultant shall recommend how that intersection is to be
 reviewed.
 - Recommend how the MOE's on transportation corridors should be evaluated with relation to recurring traffic peaking, and how to isolate unique events of traffic peaking that would present inconsistent MOE's.
 - Recommend how the MOE's should be statistically aggregated. The Consultant shall
 evaluate the statistical methods for data aggregation along with the concept of quality
 of service. For instance, is an average travel speed with a wide variation of travel times
 along the corridor better or worse than a lower average travel speed with a tighter

variation of travel times?

Task 8.2 Develop the MOE Graphics

Consultant shall develop mock-ups and prototypes for MOE graphics that visualize the data and can be used for future automated MOE reports. Consultant shall:

- Develop mock-ups of the four performance measures. Mock-ups will be sketch drawings of how the performance could be visualized.
- Using the mock-ups as a guide, use the real data and develop prototype MOE graphics that can be used for future automated reports.
- Develop draft, revised and final MOE graphics based on comments on the mock-ups.

Task 8 Assumptions:

- For budgeting purposes, this scope assumes that the long corridors will be broken out into sub-corridors in the MOE analysis. The following roadways shall be divided into the number of segments for analysis as detailed below.
 - o NE Padden Parkway / NE 78th St (from NE 94th Av to NE Hazel Dell Av)
 - 4 segments
 - o NE Hwy 99 (from NE 63rd St to NE 144th St
 - 4 segments
 - NE/NW 99th St (from NW 9th Av to NE 32nd Av)
 - 2 segments
 - o NE/NW 139th St from NW 2nd Av to NE 29th Av
 - 2 segments
 - NE /NW 134th St from NW 2nd Av to NE Salmon Creek Av via Tenney Rd)
 - 3 segments
- For budgeting purposes, eight MOE graphics (two for each MOE) are included in this scope of services.
- For budgeting purpose, four draft and final MOE graphics are included in this scope of services.

Task 8 Deliverables:

Consultant shall submit:

- Draft and final mockups of the potential MOEs and critical factors
- · Draft, revised, and final MOE graphics that can be used for future automated reports
- Draft and final working paper documenting the framework of MOE standards (Electronic copy, Microsoft Word, Excel or PDF format).

Task 9 – Evaluation of Arrival on Green by Detector Type and Location (RESERVED)

Task 10 - Executive Summary Framework

Under this task, Consultant will work with the County to develop the executive summary framework which will serve as the standard layout to be used for the before and after studies.

Consultant shall:

- Develop a standard layout of an executive summary which includes at least the following:
 - · Project name, Corridor name
 - Map of limits
 - Key graphics from the report, showing before and after results. The graphics could be a combination of any of the MOE's
 - · Key findings from the report
 - Cost of work
 - · Benefits of work

The intent of the executive summary is that the framework will be adaptable to show the before and after effects for a wide array of road projects, from a new road segment, a modified road segment (core road to full road), corridor signal retiming and other types of projects.

Task 10 Assumptions:

- The County will work with the Consultant to review up to three draft layouts and select
 the specific layout framework, which will be the standard layout that will be used for all
 before and after studies.
- The executive summary shall provide condensed information on a double sided folio sheet (11-in X 17-in).
- The standard folio executive summary will be full color, with a standard layout.

Task 10 Deliverables:

Consultant shall submit:

- A minimum of three draft layouts for the Executive Summary for evaluation in Microsoft Word or Microsoft Power Point layout. The layouts shall be configured for color printing, but with the ability to be printed or photocopied in black and white, while still providing clear information.
- Final Executive Summary layout with County comments incorporated in Microsoft Word or Microsoft Power Point layout.

Task 11 - User's Manual

Consultant shall provide a standalone document describing each of the five measure of effectiveness (MOE), a description of ranges of MOEs based on the findings in Task 7, and printed examples of the MOE graphics with descriptions showing how to understand the graphics. The four MOEs include travel time, arrival on green, split monitor, and size of green band.

Consultant shall:

- Provide an annotated outline for the preliminary draft User's Manual
- Provide a User's Manual that includes at least the following information
 - Description of each MOE
 - Description of ranges of MOE's based on the findings in Task 6
 - Printed examples of the MOE graphics with descriptions showing how to understand the graphics

Assumptions:

- The User's Manual will be a standalone chapter which can be inserted in each before and after study developed as part of Task 12 to show the reader how to understand the information in the rest of the document
- County will review and provide comments on draft working papers as necessary to develop the definitions chapter and graphics
- · User's Manual will be written in a non-technical manner
- User's Manual will not exceed 20 pages, including graphics.

Task 11 Deliverables:

Consultant shall submit:

- Preliminary draft User's Manual in Microsoft Word format, and in an Adobe Acrobat PDF format suitable for the County to print in color
- Draft User's Manual with County comments incorporated on the Preliminary Draft in Microsoft Word format, and in an Adobe Acrobat PDF format suitable for the County to print in color
- Final User's Manual with County comments incorporated on the Draft in Microsoft Word format, and in an Adobe Acrobat PDF format suitable for the County to print in color

Task 12 - Before and After Study Reports

The Consultant shall review the MOE data from before the signal retiming, and the MOE data from after the signal retiming and provide a before and after study comparing the results.

Consultant shall:

Prepare sample before and after study reports for one corridor shown in Task 8. The
Consultant shall coordinate with the County on development of the reports that they can
create the before and after studies for the remaining three segments.

The study shall be configured to document the effects of the before and after study. The basic chapters of the before and after study and the content are to be at least as follows:

- Cover sheet
 - Dates, name of project, corridor, roadway limits etc.
- Executive Summary sheet
- Major Findings and Recommendations
- Definitions Chapter (see Task 10)
- Graphical representation, data and analysis from:
 - · Arrival on Green
 - Real Time Time Space Diagrams
 - Occupancy of stopbar detection
 - Bluetooth Travel Time
- Facilitate up to three coordination meetings with the Clark County project manager to discuss task deliverables

Task 12 Assumptions:

- A total of one before and after study reports will be created (one for each corridor shown in Task 8). It is assumed that County staff will complete the remaining before and after study reports.
- Consultants will work with County staff on the development of the first before and after study reports (corridor sections to be agreed upon mutually by consultant and County) so they can replicate the process.
- · Before and after study reports will be up to five pages per segment
- The Executive Summary template selected as part of Task 11 will used for each before and after study report
- If the Executive Summary template is created in Microsoft Power Point, then the Executive Summary format shall be Power Point
- For budgeting purposes, coordination meetings are expected to last 60 minutes plus travel, and be attended by the DKS Project Manager and one DKS staff person.

Task 12 Deliverables:

Consultant shall submit:

 One draft and final before and after study report in Microsoft Word and Adobe Acrobat PDF formats. The specific sections of the report will be divided into individual sub-section electronic files that the County agrees to. Each corridor shall be included in a separate set of files.

Task 13 – Modifications to Bluetooth Reporting

This task will create new travel time visualizations, and integrate the Clark County vision for gated travel time measurements. A process for sharing the data with PSU's Portal system and for adding new Bluetooth devices will be developed.

Task 13.1 New Visualizations for Bluetooth Data

Consultant shall:

Work with Portland State University's Portal's feed from the Clark County BlueMAC server to

- provide new visualizations of the Bluetooth traffic data.
- Include integration of the County Bluetooth data into the PSU Portal, along with system analysis
 as described in the task and graphical and statistical evaluations developed in the Portal
 Graphical User Interface to represent live Bluetooth data from the County system.

Task 13.1 Assumptions

- · Up to one new graphics will be provided
- County will provide comment and review of up three graphical options for displaying Bluetooth data
- Two meetings with PSU, the County and the Consultant to describe the work. Meetings will
 occur at Clark County and are assumed to be two hours each plus travel time.
- The Consultant will remunerate PSU for development of data visualizations and analysis of the Bluetooth data.
- The County will provide reports and output from transportation data systems for the Consultant to analyze.
- PSU will use existing XML feed established with DigiWest and County. Assume this is the travel time / XML feed, not the raw data feed.
- This task will use the established direct VPN between Clark County and PSU. No connection via the ITS network is assumed. Work on ITS Network will be done under the VAST-TSMO grant.
- Integration of the county BlueMAC travel time data into the PORTAL database will be accomplished under the VAST-TSMO grant
- Addition of new Bluetooth sensors to PORTAL will not be done under this project
- · Assume incorporation of Clark County BlueMAC travel time data will not be done this project

Task 13.1 Deliverables

 Agenda, attendance, and meeting summary notes for one meeting with PSU, the County and the Consultant to describe the work.

Task 13.2 Design and Implementation of Graphical and Statistical Evaluations

Task 13.2.1 Design of Graphical and statistical evaluations

Consultant shall:

 Design graphical and statistical evaluations developed in the Portal Graphical User Interface to represent live Bluetooth data from the County system.

Task 13.2.1 Assumptions

One meeting with PSU, the County and the Consultant to describe the work. Meeting will occur
at Clark County and are assumed to be two hours each plus travel time.

Task 13.2.2 Implementation of Graphical and statistical evaluations Consultant shall:

Implement graphical and statistical evaluations developed as part of task 13.2.1.

Task 13.3 New Method of Analysis

Consultant shall:

• Work with PSU to take the County's XML output from the BlueMAC server and create a plan for, but not implement, a new method of analyzing the corridor travel speeds and delays.

Plan will focus on methods for identifying turning movements and may be as below. Method to be discussed with Clark County and modifications will be made to analysis method to ensure implementation can be done within scope. There is a lot of risk/uncertainty in this task and task 13.4.

The typical corridor travel times using Bluetooth data require that vehicles begin at one end of the corridor and travel the entire distance on the corridor. The turning movements that occur between crossing arterials, freeway interchanges and other major intersections yields a low amount of data in the travel time analysis for a medium to long corridor.

This new form of analysis will take shorter segments of arterials, and track the vehicles on shorter segments of the corridor then stitch the individual data between segments.

For example, on NE 78th St, there are traffic signals which will have Bluetooth data collectors at the I-5 interchange, NE Hwy 99, NE 13th Av, NE 16th Av, and further east.

A traditional travel time corridor on NE 78th St may look at the traffic that starts at the intersection of NE Hwy 99 at NE 78th St and goes to the intersection of NE St. Johns Rd at NE 78th St. Any vehicles that enter or exit between those two points would not be included in the travel time analysis.

The modified analysis would aggregate the travel times on the corridor by taking the traffic that passed NE 78th St at I-5, NE Hwy 99, NE 13th Av and NE 16th Av, and binning the data as traffic that was on EB NE 78th St from NE Hwy 99 to NE 13th Av. Then it would bin a second group of traffic that passed NE 78th St at NE Hwy 99, NE 13th Av, NE 16th Av and NE 25th Av, and bin the second group as traveling on NE 78th St from NE 13th Av to NE 16th Av. Each successive road segment's traffic of Bluetooth travel time and delays would be based on the segment before and after to isolate the vehicles that did drive on that segment. The segments would then be aggregated into an overall corridor segment Bluetooth report of travel time and speed.

Similarly, this method will be used to generate travel times for left and right turning vehicles where the Bluetooth sensors can be connected through arterial intersections.

Task 13.3 Assumptions

Two meetings with PSU, the County and the Consultant to describe the work. Meetings will
occur at Clark County and are assumed to be two hours each plus travel time.

Task 13.3 Deliverables

- Agenda, attendance, and meeting summary notes for one meeting with PSU, the County and the Consultant to describe the work.
- New method of analyzing the corridor travel speeds and delays using Clark County Bluetooth data

Task 13.4 Portal Modified Travel Time Analysis

Consultant shall:

Work with PSU to provide the modified travel time analysis in the PSU Portal system.

Task 13.4 Assumptions

One meeting with PSU, the County and the Consultant to describe the work. Meeting will occur
at Clark County and are assumed to be two hours each plus travel time.

Task 13.4 Deliverables

 Agenda, attendance, and meeting summary notes for one meeting with PSU, the County and the Consultant to describe the work.

Task 13.5 Bluetooth Reporting Working Paper

Consultant shall:

Prepare a working paper summarizing the methodology and results of the above tasks.

Task 13.5 Deliverables:

Consultant shall submit:

 A working paper describing the work that is in this task (10 pages) (Electronic copy, Microsoft Word, Excel or PDF format).

Task 13.6 Additional Bluetooth Reporting Services (CONTINGENCY TASK)

Consultant shall:

Provide additional Bluetooth reporting and analysis services as needed..

Task 13.6 Deliverables:

Contingency task deliverables will be defined in more detail if the County authorizes the task. Consultant shall submit:

Additional Bluetooth reports

Not Applicable

Exhibit C Preparation and Delivery of Electronic Engineering and Other Data

In this Exhibit the agency, as applicable, is to provide a description of the format and standards the consultant is to use in preparing electronic files for transmission to the agency. The format and standards to be provided may include, but are not limited to, the following:

- I. Surveying, Roadway Design & Plans Preparation Section
 - A. Survey Data

Not Applicable

B. Roadway Design FilesNot Applicable

C. Computer Aided Drafting Files

Clark County will make existing design drawings available to the Consultant for their design of the Bluetooth MAC address readers. The files will include curblines, sidewalk, signal equipment, and right-of-way as created for previous signal optimization projects. The Consultant's Plans involves providing information to a Contractor to install the MAC address readers on existing signal poles, and installing cabling from the signal pole to the existing signal cabinet via existing conduits and junction boxes.

| D. | Specify the Agency's Right to Review Product with the Consultant |
|----|---|
| | Clark County will review plan submittals by the Consultant for accuracy and constructibility. |
| | |
| | |
| | |
| | |
| E. | Specify the Electronic Deliverables to Be Provided to the Agency |
| | The Consultant shall provide all electronic AutoCAD files version 2010 or newer to Clark County. All drafting will be in model space in AutoCAD, to allow the County to add the infrastructure to the County's record drawings. |
| | |
| | |
| | |
| | |
| F. | Specify What Agency Furnished Services and Information Is to Be Provided |
| | N/A |
| | |
| | |
| | |
| | |
| | |

| II. | Any Other Electronic Files to Be Provided |
|-----|--|
| | The County will provide access to the server applications that contain the BlueMAC Bluetooth data, the Wavetronix Count Station data, the Trafficware traffic signal high resolution and space time diagram data, along with signal timing and other information from the county owned and operated servers. |
| | |

III. Methods to Electronically Exchange Data

Clark County will provide the electronic data showing the curblines, conduit, junction boxes, traffic signal equipment, right-of-way, and other information via a FTP site.

The Consultant shall provide the final electronic copies of their plans to Clark County via email or FTP site.

| A. | Agency | Software | Suite |
|----|--------|------------|-------|
| | | COTOLICATO | CHACO |

Clark County utilizes AutoCAD. All electronic drafting files shall be provided to Clark County in a native AutoCAD format, version 2010 or newer

B. Electronic Messaging System e-mail

C. File Transfers Format

Native file formats for applications.

Exhibit D Prime Consultant Cost Computations

See Attached

| | TASK | Grade 37 (Project Manager) (| Grade 37 Grade 29 Grade 20 Project Grade 29 Grade 20 Manageri (Quality Control) (Deputy PM) | | Grade 22 (Task Grade Leader-Signal Lea Timing) Rep | Grade 16 (Task Gran Leader (Transp Reporting) Design | Grade 19 Gra (Transportation (D Design Lead) Scie | Grade 12 Grad (Data (Traffi Scientist) Ass | DAS Associates Grade 13 Grade 12 (Traffic Eng (Graphics Asst.) Designer) | 12 Grade 11 Hiss (CAD ver) Technician | 11 Grade 19 (Project an) Control Specialist) | Project Tech N (Admi | Admin Ho | us Lab | x Exper | ues Total | 7 | 101415 | | |
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| | Task 1 - Project Management and Coordination | | | | | A STATE OF | | | | | | | | | | | | | | |
| Segitive the control of the control | Task 1.1 - Project Management and Coordination Task 1.2 - Project Meetings 1.3 - Cqastey Control Plan (QCP) and Quality Control Checklist (QCC) | 117 | 001 | 111 26 2 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | *** | 200 | | w w w | | ALC: UNK | 42,533 34,034 3,023 | | |
| 3.51 In the control of the cont | TOTAL TASK HOURS | 179 | n | 192 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 8 | \$ | * | | | 79,589 | TOTAL Project Mana | eme |
| State of the control | Sub Task 2.1 - Draft and Final Concept of Operations | 60 0 | 7. | z. | 0 0 | 160 | 00 | 00 | 8 - | ¥ ° | 00 | 0 0 | 0 0 | •• • | | | | 32,641 | | |
| Column C | Sub lass Z.Z Uraft and Final System requirements. Sub Task Z.Z Draft and Final Verification Plan | 3 2 | 19 2 | n + 81 | | 16 | 000 | 000 | 0 0 8 | 0 7 | 000 | 000 | 000 | n vs vs | | n vo v | 1 | 2,913 | E | |
| | Task 3 - Bluetooth Design (PS&E) | | | | | | | | | | | | | | E852 | | - | | | |
| | Sub Task 3.1 - Site visit/Review Record Drawings Sub Task 3.2.1 - 50% Bluetooth Design Plans | 04 | 0 9 | 0 9 | 00 | 00 | 98 98 | 00 | 95 98 | 00 | 0 46 | 00 | 00 | 5 5 | | * * | | 10,217 | | |
| | Sub Task 3.2.2 - 50% Temporary Traffic Control Plans | | 2 1 | m H | 00 | 00 | 01 E | 00 | 19 | 0 0 | 01 0 | 0 0 | 00 | w w | - | w v | | 4,910 | | |
| | Sub Task 3.3.1 - 99% Bluetooth Design Plans | | | 00 4 | 00 | 00 | \$ 52 | 00 | 83 | 00 | 88 5 | 00 | | | | | 711 | 22,023 | | |
| Teld Sires-trong | Sub Task 3.3.3 - 99% Engineers Estimate | | . 7 | 7 7 | 0 | 0 0 | * | 00 | 00 | 0 0 | . 0 | 00 | 0 0 | 0 00 | | • • | | 2,101 | | |
| Fig. 5 in the control of the control | Sub Task 3.3.4 - 99% Specifications Sub Task 3.4.1 - Final Bluetooth Design Plans | | m es | 9 7 | 00 | 0 0 | 9 | 0 0 | 17 | 0 0 | 12 | 00 | 00 | s s | | s s | | 3,687 | | |
| Held Filter Turing | Sub Task 3.4.2 - Final Temporary Traffic Control Plans | 0 0 | 00 | 0 | 00 | 0 0 | 7 7 | 0 0 | s | 0 0 | ~ ~ | 00 | 0 0 | | | ** | | 1,035 | | |
| Held filter-Trining | Sub Task 3.4.3 - Final Specifications | 00 | 0 = | 2 00 | 0 0 | 0 0 | 1 1 | 00 | 0 0 | 0 0 | 00 | 00 | 0 0 | n vn | | s ss | | 318 | | |
| Feld filter-Truing Feld filter-Truing Feld | TOTAL TASK HOURS | 13 | 23 | 33 | 0 | 0 | 182 | 0 | 286 | 0 | 140 | 0 | 0 | s | _ 80 | \$ 0 | - No. | 75,060 | TOTAL Bluetooth De | E. |
| Held file-funning 1 | Lask 4 - Synchro Model | - | | - | 75 | c | 0 | 0 | 2 | • | | | | | 99 | | - | 200 00 | | |
| ## ## ## ## ## ## ## ## ## ## ## ## ## | Subtata Ask HOURS | 1 | 3 6 | | 3. 3. | 0 | 0 0 | 0 | 3 | 0 | 0 | 0 0 | 0 | | | n «n | | 12,226 | TOTAL Synchro Mod | 10000 |
| Fight Fine-Furing Color Fight Fine-Furing Figh | Task 5 - Traffic Count Data | | TO THE PERSON NAMED IN | | | Carlo Carlo | THE STATE OF | | | | | | | | | | | | | |
| ## 15 1 1 1 1 1 1 1 1 1 | SubTask S - Traffic Count Data | 00 | | | 9 9 | 0 0 | 00 | 28 | 3 3 | 0 0 | 00 | 00 | 0 0 | ** | | | 1514 | 25,920 | TAYAL Traffic Counts | |
| 1 | GE . | BE: | | | No. of spirit | | | | | The second | | | | · E | 5000 | | | OSC C | TOTAL HARM COUNTY | |
| | SubTask 6.1 - Signal Timing Development and Optimization | | 2 . | Е . | 29 | 0 0 | 0 0 | 0 5 | 3. 8 | 0 0 | 0 | 0 1 | 0 | | | ss . | | 14,888 | | |
| 1 | | n ** | 4 10 | 2 5 | 166 | 0 0 | 00 | 8 8 | 122 | 0 0 | 0 0 | 0 0 | 0 0 | w w | | vs vs | | 26,117 | TOTAL Signal Timing | |
| 16 | Task 7 - Review Potential MOE Standards | | | | | | | | | | | | | | | | | | | |
| 1 | Task 7.1 Gather and Process Existing Data Sources | | | | | 7 | | ; | | | , | | , | , | | | | | | |
| 2 2 2 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | Gather and Process Data Draft Corridor Adas | ef 80 | 2 0 | 16 8 | 00 | 24 | o 8 | 2 | 0 08 | 9 0 | 00 | 00 | 0 4 | u u | | s s | 16 | 12,361 | | |
| 16 | Final Corridor Atlas Task 7.2 Identify Potential MOEs and Critical Factors | 2 | 2 | 80 | 0 | 0 | 16 | 0 | 24 | 60 | 0 | 0 | 2 | s | | s | | 7,929 | | |
| Second Control of the control of t | Oraft summary of critical factors and MOEs | 16 | eQ 1 | 24 | eg / | 100 | 0 (| 140 | 0 (| 0 (| 0 | 0 1 | 0 | s · | | 45 | | 675,69 | | |
| 15 | Final summary of critical factors and MOEs Task 7.3 Analyze the Corridors and Prepare MOE Working Paper | 91 | • | OT | , | 0 | 0 | 48 | 5 | 0 | D | 0 | 0 | • | | n | | 24,071 | | |
| 6 16 16 16 16 17 17 17 17 17 17 17 17 17 17 17 17 17 | Draft MOE working paper Final MOE working paper | 00 | 00 | 00 | 0 0 | 00 | 00 | 00 | 0 0 | 0 0 | 00 | 00 | 00 | s s | | ss ss | res. | | | |
| 12 12 13 13 13 14 15 15 15 15 15 15 15 | | 46 | 16 | 99 | 10 | 172 | 26 | 252 | 104 | 28 | 0 | 0 | 9 | \$ | | \$ | | 139,041 | TOTAL MOE Standan | - |
| 12 | Lask 8 - Developing the Framework for MUEs | | | | | | | | | | | | | | | | | | | |
| 15 | Task 8.1 Develop the MOE Framework Draft MOE Framework and Standards Working Paper | 40 | 60 | 0 | 40 | 100 | 0 | 08 | 0 | 0 | 0 | 0 | 0 | s | | S | | 54,238 | | |
| 12 12 12 13 14 14 14 14 14 14 14 | Final MOE Framework and Standards Working Paper Tank B.2 Develors the MOE Grandlers | 16 | * | 0 | • | 48 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | s | | 8 | | 21,532 | | |
| 1 | Draft and final mockups of the potential MOE's | 71 | 2 | 24 | 80 6 | 0 (| 0 0 | 16 | 0 | 0 | 0 | 0 | 0 | 62.5 | | 40 | | 11,777 | | |
| 1 | Draft prototype MOE graphics Revised MOE graphics | 17 | 0 4 | 0 0 | 0 0 | 0 0 | 00 | 8 8 | 0 0 | 0 0 | 00 | 0 0 | 0 0 | us us | | w w | | 9,130 | | |
| State Type and Location (Future) State | Final MOE graphics | 4 8 | 20 2 | 0 75 | 0 82 | 148 | 00 | 8 224 | 00 | 0 0 | 00 | 00 | 00 | | | 5 4 | 1/4/1 | 2,547 | TOTAL MADE Commun | |
| 1 | Ber | 90 | Location (| uture) | THE REAL PROPERTY. | The state of the s | | | | | | | | | 1500 | | | 170'000 | TOTAL MOL TIAMER | 4 |
| 15 | Sub Task 9 - Evalaluation of Arrival on Green by Detector Type and Location | 0 0 | 00 | 00 | 00 | 0 6 | 0 0 | 0 0 | 0 0 | 00 | 0.0 | 0 0 | 0 0 | | | | | | | |
| 15 11 18 0 0 90 0 0 446 15 0 0 0 0 195 \$ 23,206 \$. \$ 23, | - 日 | | | , | | , | THE PERSON NAMED IN | | , | | | | 2 | | | | 100 | | TOTAL Arrival on Gre | c |
| 15 11 18 0 90 0 0 46 15 0 0 0 10 18 21206 \$. \$ 21206 | Sub Task 10 - Executive Summary Framework | 15 | 11 | 18 | 0 | 8 | 0 | 0 | 46 | 15 | 0 | 0 | 0 | S | 93 | s | | 33,296 | | |
| 19 12 34 0 132 0 48 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | TOTAL TASK HOURS | 15 | п | 18 | 0 | 8 | 0 | 0 | 46 | 15 | 0 | 0 | 0 | s | - 80 | \$ | | 33,296 | TOTAL Exectuve Sum | nary |
| 13 12 34 0 132 0 44 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Lask LI - Use: Manual | 10 | 12 | 2 | c | 113 | c | *** | c | c | 0 | | | | 1000 | | | OCT 05 | | |
| 10 | Sub lask II - Usets manual TOTAL TASK HOURS | 19 | 12 | x z | 0 | 132 | 0 | \$ | 0 0 | 0 0 | 0 | 0 | 0 0 | | - 1 | n •n | | 39,776 | TOTAL User Manual | |
| 10 30 0 0 772 0 44 0 8 0 0 0 144 5 22/43 \$ -27/43 \$ 5 27/43 \$ 5 17/43 \$ 17/43 \$ 5 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/43 \$ 17/4 | Task 12 - Before and After Study Reports | | | | | | | | | | | | | | | | | | | |
| 11/2 3 0 7 0 0 0 8 0 0 0 0 0 18 \$ 2,578 \$ 5,578 \$ 5 0,57 | Sub Task 12 - Before and After Study Reports TOTAL TASK HOURS | 2 2 | 9 9 | 8 8 | 00 | מע | 00 | 3 3 | 00 | 60 60 | 00 | 00 | 0 0 | s s | | s s | 1 | 32,743 | TOTAL Before/After | udie |
| 3 0 7 0 0 0 0 0 0 18 5 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,548 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 2,578 \$ 3,487 </td <td>Task 13 - Modifications to Bluetooth Reporting</td> <td></td> | Task 13 - Modifications to Bluetooth Reporting | | | | | | | | | | | | | | | | | | | |
| 0 0 2 0 0 8 0 0 0 0 0 10\$ 988 | Sub Task 13.1 New Visualizations for Bluetooth Data Sub Task 13.2 Design and Implementation of Graphical and Statistical Evaluations | 8 2 | 00 | 7 20 | 0 0 | 00 | ss 40 | 00 | 00 | 0 0 | 00 | 00 | 0 0 | | 2,578 | s v | | 6,718 | | |
| 3 0 4 0 0 0 0 0 0 0 0 0 2 1,170 5 | Sub Task 13.3 New Method of Anabysis Sub Task 13.4 Portal Modified Travel Time Anabysis | 00 | 00 | 7 7 | 00 | 00 | 0 80 | 80 O | 00 | 0 0 | 00 | 00 | 00 | | 988 | | (Long | 6,508 | | |
| | Sub Task 13.5 Bluetooth Reporting Working Paper | E | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1,170 | · vs | | 2,034 | | |

EXHIBIT D



Project Name: STEVE CRP 352122

| Project Name: STEVE CR | | | | | Move | moures 1 |
|--|----|--------------------------|----------|-------------|------------|-------------|
| Title/Position | 0 | Maximum Firect Salary | Overhead | Fixed Fee | | mum Rate |
| | | ricct Salary | Overnead | i ixed i ee | Dillilling | Rate |
| Tech Level A Receptionist | \$ | 9.75 | 173.21% | 30.0% | \$ | 29.55 |
| Tech Level B Receptionist | \$ | 9.89 | 173.21% | 30.0% | \$ | 30.00 |
| Tech Level C Receptionist | \$ | 11.54 | 173.21% | 30.0% | \$ | 35.00 |
| Tech Level D/Grade 1 Receptionist/Admin/Eng. Intern | \$ | 13.19 | 173.21% | 30.0% | \$ | 40.00 |
| Tech Level E/Grade 2 Receptionist/Admin/Eng. Intern | \$ | 14.84 | 173.21% | 30.0% | \$ | 45.00 |
| Tech Level F/Grade 3 Receptionist/Admin/Eng. Intern | \$ | 16.49 | 173.21% | 30.0% | \$ | 50.00 |
| Tech Level G/Grade 4 Receptionist/Admin/Eng. Intern | \$ | 18.14 | 173.21% | 30.0% | \$ | 55.00 |
| Tech Level H/Grade 5 Receptionist/Admin/Eng. Intern | \$ | 19.79 | 173.21% | 30.0% | \$ | 60.00 |
| Tech Level I/Grade 6 Receptionist/Admin/Eng. Intern | \$ | 21.44 | 173.21% | 30.0% | \$ | 65.00 |
| Tech Level J/Grade 7 Admin/CAD Tech/Eng. Assistant | \$ | 23.09 | 173.21% | 30.0% | \$ | 70.00 |
| Tech Level K/Grade 8 Admin/CAD Tech/Eng. Assistant | \$ | 24.74 | 173.21% | 30.0% | \$ | 75.00 |
| Tech Level L/Grade 9 Admin/CAD Tech/Eng. Assistant | \$ | 26.38 | 173.21% | 30.0% | \$ | 80.00 |
| Tech Level M/Grade 10 Admin/CAD Tech/Eng. Assistant | \$ | 28.03 | 173.21% | 30.0% | \$ | 85.00 |
| Tech Level N/Grade 11 Admin/CAD Tech/Eng. Assistant/Graphics/Project Engineer | \$ | 29.68 | 173.21% | 30.0% | \$ | 90.00 |
| Tech Level O/Grade 12 Admin/Eng. Assistant/Graphics/CAD Tech/Project Engineer | \$ | 31.33 | 173.21% | 30.0% | \$ | 95.00 |
| Tech Level P/Grade 13 Eng. Assistant/Graphics/Project Engineer | \$ | 32.98 | 173.21% | 30.0% | \$ | 100.00 |
| Tech Level Q/Grade 14 Project Engineer | \$ | 34.63 | 173.21% | 30.0% | \$ | 105.00 |
| Tech Level R/Grade 15 Project Engineer | \$ | 36.28 | 173.21% | 30.0% | \$ | 110.00 |
| Tech Level S/Grade 16 Project Engineer | \$ | 37.93 | 173.21% | 30.0% | \$ | 115.00 |
| Tech Level T/Grade 17 Project Engineer/Project Manager | \$ | 39.58 | 173.21% | 30.0% | \$ | 120.00 |
| Tech Level U/Grade 18 Project Engineer/Project Manager/Sr. Project Engineer | \$ | 41.23 | 173.21% | 30.0% | \$ | 125.00 |
| Tech Level V/Grade 19 Sr. Project Engineer/Project Manager/Sr. Project Manager | \$ | 42.87 | 173.21% | 30.0% | \$ | 130.00 |
| Tech Level W/Grade 20 Sr. Project Engineer/Project Manager/Sr. Project Manager | \$ | 44.52 | 173.21% | 30.0% | \$ | 135.00 |
| Tech Level X/Grade 21 Sr. Project Engineer/Project Manager/Sr. Project Manager | \$ | 46.17 | 173.21% | 30.0% | \$ | 140.00 |
| Tech Level Y/Grade 22 Sr. Project Engineer/Project Manager/Sr. Project Manager | \$ | 47.82 | 173.21% | 30.0% | \$ | 145.00 |
| Tech Level Z/Grade 23 Principal/Sr. Project Manager | \$ | 49.47 | 173.21% | 30.0% | \$ | 150.00 |
| Grade 24 Principal/Sr. Project Manager | \$ | 51.12 | 173.21% | 30.0% | \$ | 155.00 |
| Grade 25 Principal/Sr. Project Manager | \$ | 52.77 | 173.21% | 30.0% | \$ | 160.00 |
| Grade 26 Principal/Sr. Project Manager | \$ | 54.42 | 173.21% | 30.0% | \$ | 165.00 |
| Grade 27 Principal/Sr. Project Manager | \$ | 56.07 | 173.21% | 30.0% | \$ | 170.00 |
| Grade 28 Principal/Sr. Project Manager | \$ | 57.72 | 173.21% | 30.0% | \$ | 175.00 |
| Grade 29 Principal/Sr. Project Manager | \$ | 59.36 | 173.21% | 30.0% | \$ | 180.00 |
| Grade 30 Principal/Sr. Project Manager/ | \$ | 61.01 | 173.21% | 30.0% | \$ | 185.00 |
| Grade 31 Principal/Sr. Project Manager/Specialist | \$ | 62.66 | 173.21% | 30.0% | \$ | 190.00 |
| Grade 32 Principal/Sr. Project Manager/Specialist | \$ | 64.31 | 173.21% | 30.0% | \$ | 195.00 |
| Grade 33 Principal/Sr. Project Manager/Specialist/ | \$ | 65.96 | 173.21% | 30.0% | \$ | 200.00 |
| Grade 34 Principal/Sr. Project Manager/Specialist/Technical Expert | \$ | 67.61 | 173.21% | 30.0% | \$ | 205.00 |
| Grade 35 Principal/Sr. Project Manager/Specialist/Technical Expert | \$ | 69.26 | 173.21% | 30.0% | \$ | 210.00 |
| Grade 36 Principal/Sr. Project Manager/Specialist/Technical Expert | \$ | 70.91 | 173.21% | 30.0% | \$ | 215.00 |
| Grade 37 Principal/Sr. Project Manager/Specialist/Technical Expert | \$ | 72.56 | 173.21% | 30.0% | \$ | 220.00 |
| | | | | | | |



Lynn Peterson Secretary of Transportation Transportation Building 310 Maple Park Avenue S.E. P.O. Box 47300 Olympia, WA 98504-7300 360-705-7000 TTY: 1-800-833-6388 www.wsdot.wa.gov

February 2, 2016

DKS Associates 719 Second Avenue, Suite 1250 Seattle, WA 98104

Subject: Acceptance FYE 2015 ICR - Cognizant Review

Dear Ms. Betsy McCarthy:

We have accepted your firms FYE 2015 Indirect Cost Rate (ICR) of 173.21% based on the "Cognizant Review" from ODOT. Your ICR acceptance is in accordance with 23 CFR 172.7 and must be updated on an annual basis. This rate will be applicable for:

✓ WSDOT Agreements
 ✓ Local Agency Contracts in Washington State only

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

Any other entity contracting with your firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at (360) 705-7104 or via email consultantrates@wsdot.wa.gov.

Regards;

ERIK K. JONSON

Manager, Consultant Services Office

EKJ:rck



Memorandum

February 1, 2016

TO:

Erik Jonson, Contracting Services Manager

FROM:

Schatzie Harvey, Agreement Compliance Audit Manager

SUBJECT:

DKS Associates Indirect Cost Rate

for Fiscal Year Ended April 30, 2015

The Oregon Department of Transportation (ODOT) has concluded their cognizant review of DKS Associates for the above referenced fiscal year. ODOT is the Cognizant State for DKS Associates. As such, ODOT has performed its cognizant review and accepted the audit performed by OUM & Co. LLP.

Based on ODOT's acceptance of the DKS Associates Indirect Cost Rate, we are issuing this memo establishing the DKS Associates rate for the fiscal year ended April 30, 2015 at 173.21% of direct labor (rate includes 0.23% Facilities Cost of Capital).

Costs billed to agreements will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement.

If you have any questions, feel free to call me at (360) 705-7006, or via email at harveys@wsdot.wa.gov

Attachment

cc: Steve McKerney

File



Department of Transportation Central Services – Audit Services 355 Capitol St. NE – MS52 Salem, OR 97301-2528 (503)986-3213

January 27, 2016

The Board of Directors DKS Associates 1970 Broadway, Suite 740 Oakland, CA 94612

Re:

DKS Associates

Schedule of Direct Labor, Burden, Fringe Benefits, and Overhead Costs

Fiscal Year Ended April 30, 2015

We have performed a cognizant review of DKS Associates' documentation and the working papers of your independent CPA firm, OUM & Co. LLP, of their audit of the Schedule of Direct Labor, Burden, Fringe Benefits, and Overhead Costs for DKS Associates' Fiscal Year Ended April 30, 2015 in accordance with our role as Cognizant Agency as defined in 23 U.S.C. 112(b)(2)(c) and 23 CFR 172.3 and 172.7. Our cognizant review was performed in accordance with the AASHTO Review program for CPA Audits of Consulting Engineers' Indirect Cost Rates.

We were provided with a copy of independent auditor's report dated October 16, 2015, copies of their working papers and additional documentation from DKS Associates.

Based on our review, we accepted the audited Schedule of Direct Labor, Burden, Fringe Benefits, and Overhead Costs Rate. This letter of concurrence establishes DKS Associates' Schedule of Direct Labor, Burden, Fringe Benefits and Overhead Costs Rate for the fiscal year ended April 30, 2015 at 172.98% of direct labor and a Facilities Capital Cost of Money factor of 0.23% of direct labor.

A copy of this letter will be forwarded to the appropriate ODOT contracting offices, California and Washington DOTs. If you or any representative of DKS Associates has any questions, please contact me at (503) 986-3213 or Inna Smyth at (503) 986-3174.

Cincerela

Margaret Cole, CPA

External Audit Services Manager Oregon Department of Transportation

cc: Lisa Loudon, CFO, DKS Associates

SCHEDULE OF DIRECT LABOR, BURDEN, FRINGE BENEFITS, AND OVERHEAD COSTS

FISCAL YEAR ENDED APRIL 30, 2015

| Cost Élements | Proposed | Audit Adjustments | Footnote | Audited | BFO Rates |
|--|--------------|----------------------|--------------|--------------|--------------|
| Direct labor | \$ 5,360,069 | \$ - | 10000 | \$ 5,360,069 | |
| Burden and fringe benefits: | | | | | |
| Payroll taxes - FICA/Medicare | \$ 614,760 | s - | | 5 614,760 | 11.47 |
| Payroll taxes - disability | 19,776 | | | 19,776 | 0.37 |
| Payroll taxes - unemployment | 80,183 | (13,889) | 4n | 66,294 | 1.24 |
| Insurance-hospitalization | 973,868 | 4.77 | • | 973,868 | 28.17 |
| Insurance - group life | 17,043 | (14,364) | 41 | 2,679 | 0.05 |
| Insurance - dental | 80,552 | | 110 d T.P. 1 | 80,552 | 1,50 |
| Insurance - workers' compensation | 39,116 | - | • | 39,116 | 0.73 |
| Paid leave - vacation | 584,987 | | | 584,987 | 10.91 |
| Paid leave - holiday | 263,176 | | | 263,176 | 4.91 |
| Paid leave - sick | 214,311 | - | | 214,311 | 4.00 |
| Profit sharing plan | 44,928 | | | 44,928 | 0.84 |
| ESOP expense | 300,000 | | | 300,000 | 5.60 |
| Flexible spending / Commuter checks | 84,355 | | | 84,355 | 1.57 |
| Total burden and fringe benefits | 3,317,055 | (28,253) | | 3,288,802 | 61.36 |
| Overhead: | 9 | - | | | , |
| Indirect labor | 3,191,413 | (143,295) | 4a,4g | 3,048,118 | 56.87 |
| Office rent | 864,842 | | | 864,842 | 16.13 |
| Business insurance | 301,799 | | | 301,799 | 5,63 |
| Auto and travel | 310,376 | (88,282) | · 4], 4k | 222,094 | 4.14 |
| Depreciation and amortization | 301,974 | (21,000) | 41 | 280,974 | 5.24 |
| Equipment rental and maintenance | 189,462 | 1.341.71 | | 189,462 | 3,53 |
| Bad debt expense | 12,000 | (12,000) | 4b | | |
| Telephone | 139,791. | - | | 139,791 | 2.61 |
| Office supplies and services | 332,625 | (81,309) | 4e, 4f, 4h | 251,316 | 4.69 |
| Consultants | 182,907 | - | | 182,907 | 3.41 |
| Legal and accounting | 204,441 | - | | 204,441 | 3.81 |
| Dues, training and publications | 170,521 | (3,557) | 4d, 4e | 166,964 | 3.11 |
| Business taxes and licenses | 124,681 | (5,780) | 4m | 118,901 | 2.72 |
| Recruiting costs | 12,111 | - | • | 12,111 | 0.23 |
| Contributions | 28,822 | (28,822) | 4c | | |
| Total overhead | 6,367,765 | (384,045) | | 5,983,720 | 111,62 |
| Total burden, fringe benefits and overhead | \$ 9,684,820 | \$ (412,298) | | \$ 9,272,522 | 172.98 |

See accompanying notes to the schedule.

Uncompensated sick leave

The Company does not accrue sick leave costs earned during the fiscal year, as accumulated sick leave is not paid to an employee upon termination.

Contract labor

The Company uses contract labor for engineering related services, and bills this labor directly as cost reimbursements.

NOTE 3 - Depreciation and amortization:

Depreciation expense totaling \$280,974 reflected on the accompanying schedule of direct labor, fringe, and general overhead costs is determined using the 150% declining balance method over the useful service lives of the assets, which range from five to seven years, and is allowable under FAR §31.205-11(e).

Amortization expense totaling \$21,000 related to the amortization of goodwill is unallowable under FAR \$31,205-49.

NOTE 4 - Unallowable costs:

| | | 156 | Reference | A | mount |
|-------------|--|-----|--------------|-----|---------|
| : a. | Unallowable advertising and marketing costs (labor & fringe) | | 31,205-1 | 8 | 53,303 |
| b. | Unallowable bad debt and collection costs | | 31,205-3 | | 12,000 |
| c | Unallowable contributions and donations | | 31,205-8 | ian | 28,822 |
| d. | Unallowable lobbying costs | | 31.205-22 | | 3,182 |
| e. | Unallowable entertainment costs | | 31.205-14 | | 58,746 |
| f. | Unallowable fines and penalty costs | | 31.205-15 | | 138 |
| g. | Unallowable compensation and bonus | | 31.205-6 | | 103,881 |
| h. | Unallowable employee gifts | | 31,205-13 | | 22,800 |
| i, | Unallowable insurance costs officers life, net | | 31.205-19 | | 14,364 |
| j. | Unallowable auto allowance | | 31.205-46(d) | | 86,701 |
| k. | Unallowable travel costs | | 31.205-46 | | 1,581 |
| I. | Unallowable goodwill amorfization | | 31.205-49 | | 21,000 |
| m | Unallowable taxes | | 31.205-41 | | 5,780 |
| | | | | \$ | 412,298 |
| | | | | | |

NOTE 5 - Certain other costs:

Bonuses, included in indirect labor, totaled \$500,000 for the fiscal year ended April 30, 2015. Employee bonuses of \$100,016 accrued for as of April 30, 2014 were not paid in fiscal 2015, and therefore, are deemed unallowable under FAR \$31,205-6.

NOTE 8 - Facilities Capital Cost of Money (FCCM):

The Facilities Capital Cost of Money Rate has been calculated in accordance with FAR Section 31.205-10, using average net book values of equipment and facilities multiplied by the average treasury rates for the applicable period, as shown:

| Net capital assets, April 30, 2014 Net capital assets, April 30, 2015 | | | | \$ 610,991 560,817 |
|--|--|---|---|--------------------------|
| Total | | | | 1,171,808 Divide by 2 |
| Average net capital assets | | , | ٠ | \$ 585,904 |
| Average treasury rate | | | | 2.125% |
| Facilities capital cost of money | | | | \$ 12,450 |
| Direct labor base | | | | 5,360,069 |
| FCCM rate (\$12,450/\$5,360,069) | | | | 0.232% |

NOTE 9 - Subsequent events:

The Company has evaluated events subsequent to April 30, 2015 to October 16, 2015, the date upon which the Statement of Direct Labor, Fringe Benefits, and General Overhead was available for issuance.

NOTE 10 - Auditor contact:

The person to contact relative to this audit engagement is:

Scott Miller, CPA
Partner
OUM & Co. LLP
465 California Street, Suite 700
San Francisco, CA 94104
(415) 434-3744
smiller@oumcpa.com

Exhibit E Sub-consultant Cost Computations

There isn't any sub-consultant participation at this time. The CONSULTANT shall not sub-contract for the performance of any work under this AGREEMENT without prior written permission of the AGENCY. Refer to section VI "Sub-Contracting" of this AGREEMENT.

See Attached

Clark County Signal Timing, Evaluation, Verification & Enhancement (STEVE)

| | | | | The Real Property lies | M MEMBERS nd State University | | | | | | |
|---|--|--|------------------------------|------------------------|----------------------------------|-------|----------|----------------------|-------|---|------------------------|
| TASK | Principal Investigator Kristin Tufte | Assistant Professor Dr. Feng Liu | Resea Assista Morgan I | rch ant | | Labor | Expenses | | Total | TOTALS | |
| Task 1 - Project Management and Coordination | | But the | | | and the second | | | | | | |
| Task 1.1 - Project Management and Coordination Task 1.2 - Project Meetings Task 1.3 - Quality Control Plan (QCP) and Quality Control Checklist (QCC) TOTAL TASK HOURS | 31 | | 0 | | 0 \$ 31 \$ 0 \$ | 3,072 | | \$ \$ | - | \$ 42,533 \$ 34,034 \$ 3,023 | |
| Task 2 - ITS Plan Document | 31 | | | 0 | 31 \$ | 3,072 | | \$ | 3,072 | \$ 79,589 | TOTAL Project Managem |
| Sub Task 2.1 - Draft and Final Concept of Operations Sub Task 2.2 - Draft and Final System Requirements Sub Task 2.2 - Draft and Final Verification Plan TOTAL TASK HOURS | 0 | | 0 | 0 | 0 \$ 0 \$ 0 \$ 0 \$ | - | \$ - | \$ \$ \$ | - | \$ 32,641 \$ 7,343 \$ 2,913 \$ 42,897 | TOTAL ITS Plan |
| Task 3 - Bluetooth Design (PS&E) | A SECTION | | | | | | | | | 12,00 | |
| Sub Task 3.1 - Site visit/Review Record Drawings Sub Task 3.2.1 - 50% Bluetooth Design Plans Sub Task 3.2.2 - 50% Temporary Traffic Control Plans Sub Task 3.2.3 - 50% Engineers Estimate Sub Task 3.3.1 - 99% Bluetooth Design Plans | AND | | | | 0 \$ 0 \$ 0 \$ 0 \$ | - | | \$ \$ \$ \$ | - | \$ 10,217 \$ 17,564 \$ 4,910 \$ 1,477 \$ 22,023 | |
| Sub Task 3.3.2 - 99% Temporary Traffic Control Plans Sub Task 3.3.3 - 99% Engineers Estimate Sub Task 3.3.4 - 99% Specifications Sub Task 3.4.1 - Final Bluetooth Design Plans | | | | | 0 \$ 0 \$ 0 \$ 0 \$ | : | | \$ \$ \$ | : | \$ 5,944 \$ 2,101 \$ 3,687 \$ 4,459 | |
| Sub Task 3.4.2 - Final Temporary Traffic Control Plans Sub Task 3.4.3 - Final Engineers Estimate Sub Task 3.4.4 - Final Specifications TOTAL TASK HOURS | 0 | | 0 | 0 | 0 \$ 0 \$ 0 \$ 0 \$ | : | \$ - | \$ \$ \$ | : | \$ 1,035 \$ 318 \$ 1,326 \$ 75,060 | TOTAL Bluetooth Design |
| Task 4 - Synchro Model SubTask 4 - Synchro Model | A CALL | | | | 0 \$ | | | Ļ | | 4 42 226 | |
| TOTAL TASK HOURS | 0 | | 0 | 0 | 0 \$ | | \$ - | \$ | | \$ 12,226 \$ 12,226 | TOTAL Synchro Model |
| Task 5 - Traffic Count Data | Mark to | | | | | | | | | | |
| SubTask 5 - Traffic Count Data STOTAL TASK HOURS | 0 | | 0 | 0 | 0 \$ 0 \$ | W.E. | \$ - | \$ | | \$ 25,920 \$ 25,920 | TOTAL Traffic Counts |
| Task 6 - Signal Timing, Implementation, and Field | Fine-Tunii | ng | | | | | | | | | |
| SubTask 6.1 - Signal Timing Development and Optimization SubTask 6.2 - Signal Timing Implementation and Fine Tuning TOTAL TASK HOURS | 0 | | 0 | 0 | 0 \$ 0 \$ 0 \$ | - | \$ - | \$ \$ | | \$ 14,888 \$ 26,117 \$ 41,006 | TOTAL Signal Timing |
| Task 7 - Review Potential MOE Standards | | | | | | | | | | | |
| Task 7.1 Gather and Process Existing Data Sources Gather and Process Data Draft Corridor Atlas Final Corridor Atlas | | | | | 0 \$ 0 \$ 0 \$ | : | | \$ \$ | | \$ 12,361 \$ 25,102 \$ 7,929 | |
| Draft summary of critical factors and MOEs | | | | | 0 \$ 0 \$ | : | | \$ | : | \$ 69,579 \$ 24,071 | |
| Final summary of critical factors and MOEs Final summary of critical factors and MOEs Task 7.3 Analyze the Corridors and Prepare MOE Working Paper Draft MOE working paper | | | | | 0 \$ | | | \$ | | \$ - | |

| Final MOE working paper | Later Land Bill | | | 0 \$ | | | \$ | | \$ | | la succession of |
|--|-----------------|----|--------------|--------|--------|-------------|----|--------|-----|---------|--|
| TOTAL TASK HOURS | 0 | 0 | 0 | 0 \$ | | \$ | \$ | 200 | \$ | 139,041 | TOTAL MOE Standards |
| Task 8.1 Develop the MOE Framework | | | | | | | | | | | |
| Draft MOE Framework and Standards Working Paper | | | | 0 \$ | - | | \$ | | \$ | 54,238 | |
| Final MOE Framework and Standards Working Paper | | | 0.000 | 0 \$ | | | \$ | | \$ | 21,532 | |
| Task 8.2 Develop the MOE Graphics | | | | | | | | | | | |
| Draft and final mockups of the potential MOE's | | | The state of | 0 \$ | - | | \$ | - | \$ | 11,777 | |
| Draft prototype MOE graphics | | | | 0 \$ | | | \$ | - | \$ | 9,130 | |
| Revised MOE graphics | | | | 0 \$ | - | | \$ | - | \$ | 4,703 | |
| Final MOE graphics | | | | 0 \$ | | | \$ | - | \$ | 2,547 | |
| TOTAL TASK HOURS | 0 | 0 | 0] | 0 \$ | | \$ - | \$ | | \$ | 103,927 | TOTAL MOE Framework |
| Sub Task 9 - Evalaluation of Arrival on Green by Detector Type and Location | | | 1 | 0 \$ | | | \$ | | \$ | | |
| TOTAL TASK HOURS | 0 | 0 | 0 | 0 \$ | | \$ - | \$ | | \$ | | TOTAL Arrival on Green |
| Sub Task 10 - Executive Summary Framework | | | | 0 \$ | | | \$ | | \$ | 33,296 | The second second |
| TOTAL TASK HOURS | 0 | 0 | 0 | 0 \$ | | \$ - | \$ | 1 | \$ | | TOTAL Exectuve Summary |
| Sub Task 11 - Users Manual | | | | 0 \$ | | | \$ | | \$ | 39,770 | BOOK THE TEN |
| TOTAL TASK HOURS | 0 | 0 | 0 | 0 \$ | | \$ | \$ | - | \$ | | TOTAL User Manual |
| Sub Task 12 - Before and After Study Reports | Fu. | | | 0 \$ | | | \$ | | \$ | 32,743 | and the Philippe of the Philip |
| TOTAL TASK HOURS | 0 | 0 | 0 | 0 \$ | - | \$ - | \$ | | \$ | | TOTAL Before/After Studies |
| Sub Task 13.1 New Visualizations for Bluetooth Data | 30 | | 15 | 45 \$ | 4,140 | | \$ | 4,140 | \$ | 6,718 | |
| Sub Task 13.2 Design and Implementation of Graphical and Statistical Evaluations | 20 | 40 | 60 | 120 \$ | 12,223 | | \$ | 12,223 | | 14,719 | |
| Sub Task 13.3 New Method of Analysis | 40 | 0 | 20 | 60 \$ | 5,520 | | \$ | 5,520 | | 6,508 | |
| Sub Task 13.4 Portal Modified Travel Time Analysis | 60 | 0 | 280 | 340 \$ | 27,735 | | \$ | 27,735 | 100 | 29,012 | |
| Sub Task 13.5 Bluetooth Reporting Working Paper | 4 | | 6 | \$ | 863 | | \$ | 863 | \$ | 2,034 | |
| TOTAL TASK HOURS | 154 | 40 | 381 | 565 \$ | 50,481 | \$ | \$ | 50,481 | \$ | 58,992 | TOTAL Bluetooth Reporting |
| TOTAL | 165 | 40 | 381 | 596 \$ | 53 553 | \$ 1-100 | 5 | 53 553 | - | | |
| CONTINGENCY Sub Task 13.6 Additional Bluetooth Reporting Services | 50 | | 110 | \$ | 13,515 | | \$ | 13,515 | \$ | 15,422 | The second second |

GRAND TOTAL NON-CONTINGENCY PROJECT BUDGET \$ 684,366

\$ **15,422** \$ 699,888

ACTUAL NOT TO EXCEED TABLE (ANTE)

RATE SHEET--WSDOT (Amount not to Exceed--ANTE)
SAFE HARBOR RATES are calculated with 110% overhead

Portland State University PO Box 751 (SPA), Portland, OR 97207-0751

| Labor Classifications | Direct L | ahor Rates | Safe Harbo WSDOT Ap Overhead | | Fixed F | ee 30% | All Inclu Billing R | sive Hourly ate NTE |
|--|----------|------------|------------------------------------|-------|---------|--------|------------------------|------------------------|
| Principal Investigator (Dr. Kristin Tufte) | \$ | 66.73 | \$ | 32.36 | \$ | - | \$ | 99.09 |
| Assistant Professor (Dr. Feng Liu) | \$ | 86.85 | \$ | 42.12 | \$ | - C. | \$ | 128.97 |
| Research Assistant (Morgan Harvey) | \$ | 52.40 | \$ | 25.41 | \$ | | \$ | 77.81 |

RATE SHEET--WSDOT (Amount not to Exceed--ANTE)

SAFE HARBOR RATES are calculated with 110% overhead Portland State University PO Box 751 (SPA), Portland, OR 97207-0751

| Labor Classifications | Direct L | abor Rates | Safe Harb WSDOT A Overhead | • • | Fixed F | ee 30% | All Inclu Billing R | sive Hourly ate NTE |
|--|----------|------------|----------------------------------|-------|---------|--------|------------------------|------------------------|
| Principal Investigator (Dr. Kristin Tufte) | \$ | 66.73 | \$ | 32.36 | \$ | | \$ | 99.09 |
| Assistant Professor (Dr. Feng Liu) | \$ | 86.85 | \$ | 42.12 | \$ | - | \$ | 128.97 |
| Research Assistant (Morgan Harvey) | \$ | 52.40 | \$ | 25.41 | \$ | - | \$ | 77.81 |



Transportation Building 310 Maple Park Avenue S.E. P.O. Box 47300 Olympia, WA 98504-7300 360-705-7000 TTY: 1-800-833-6388 www.wsdot.wa.gov

October 18, 2016

Portland State University P.O. Box 751 Portland, OR 97207-0751

Subject:

Acceptance FYE 2015 ICR - Risk Assessment Review

Dear Mr. Michael Clark:

Based on Washington State Department of Transportation's (WSDOT) Risk Assessment review of your Indirect Cost Rate (ICR), we have accepted your proposed FYE 2015 ICR of 48.50%. This ICR acceptance is in accordance with 23 CFR 172.7 and must be updated on an annual basis. This rate may be subject to additional review if considered necessary by WSDOT and will be applicable for:

■ WSDOT Agreements
 ■ Local Agency Contracts in Washington State only

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with the firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at (360) 705-7104 or via email consultantrates@wsdot.wa.gov.

Regards;

Manager, Consultant Services Office

EKJ:kms

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN:

ORGANIZATION:

Portland State University Office of Graduate Studies P.O. Box 751 Portland, OR 97207-0751 DATE: 05/20/2013

FILING REF.: The preceding

agreement was dated

12/17/2009

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

| SECTION I | : Facilities | And Administ | rative Cost Rates | |
|-------------|--------------|--------------|--------------------------|--|
| RATE TYPES: | FIXED | FINAL P | ROV. (PROVISIONAL) PRED. | (PREDETERMINED) |
| | EFFECTIVE P | ERIOD | | |
| TYPE | FROM | TO . | RATE(%) LOCATION | APPLICABLE TO |
| PRED. | 07/01/2012 | 06/30/2013 | 45.50 On-Campus | Organized Research |
| PRED. | 07/01/2013 | 06/30/2014 | 47.50 On-Campus | Organized Research |
| PRED. | 07/01/2014 | 06/30/2.015 | 48.00 On-Campus | Organized . Research |
| PRED. | 07/01/2015 | 06/30/2017 | 48.50 On-Campus | Organized Research |
| PRED. | 07/01/2012 | 06/30/2013 | 49.50 On-Campus | Instruction |
| PRED. | 07/01/2013 | 06/30/2017 | 50.00 On-Campus | Instruction |
| PRED. | 07/01/2012 | 06/30/2013 | 31.00 On-Campus | Other Sponsored Activities |
| PRED. | 07/01/2013 | 06/30/2017 | 33,50 On-Campus | Other Sponsored Activities |
| PRED. | 07/01/2012 | 06/30/2017 | 26.00 Off-Campus | Organized Research / Instruction |
| PRED. | 07/01/2012 | 06/30/2013 | 24.80 Off-Campus | Other Sponsored Activities |
| PRED. | 07/01/2013 | 06/30/2017 | 26.00 Off-Campus | Other Sponsored Activities |

ORGANIZATION: Portland State University

AGREEMENT DATE: 5/20/2013

TYPE FROM TO RATE(%) LOCATION APPLICABLE TO

PROV. 07/01/2017 Until (1)

Amended

*BASE

Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000.

(1) Use same rates and conditions as those cited for fiscal year ending June 30, 2017.

U62001

ORGANIZATION: Portland State University

AGREEMENT DATE: 5/20/2013

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

This organization charges the actual cost of each fringe benefit direct to Federal projects. However, it uses a fringe benefit rate which is applied to salaries and wages in budgeting fringe benefit costs under project proposals. The following fringe benefits are treated as direct costs:

FICA, WORKERS COMPENSATION, MEDICAL/DENTAL/LIFE INSURANCE, UNEMPLOYMENT, LONG TERM DISABILITY, EMPLOYEE LIABILITY INSURANCE, AND RETIREMENT.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

DEFINITION OF EQUIPMENT

Equipment is defined as tangible nonexpendable personal property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit.

DEFINITION OF OFF-CAMPUS:

A project is considered off-campus if the activity is conducted at locations other than in University operated facilities (either owned or rented) and indirect costs associated with physical plant and library are not considered applicable to the project.

ORGANIZATION: Portland State University

AGREEMENT DATE: 5/20/2013

SECTION III: GENERAL

A. LINITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement pariod. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement regular prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the dosts for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs,

D. USE BY OTHER PEDERAL AGENCIES :

The rates in this Agreement were approved in accordance with the authority in Office of Management and Rudget Circular A-21, and should be applied to grapts, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. DTHERL

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) cradit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs

| | State University | DEPARTMENT OF HEALTH AND HUMAN SERVICES |
|--------|------------------|---|
| COLUMN | willing Fine | CAPTERION & MO |
| IGNATU | | (SIGNATURE) |
| | JONATHAN FINK | Arif Karim |
| ME) | | (NAME) |
| | Vice President | Director, Division of Cost Allocation |
| TLE) | | (TITLE) |
| | * | |
| | 6/4/2013 | 5/20/2013 |
| | | (DATE) 2001 |
| (TB) | | |
| ATE) | | |

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PORTLAND STATE UNIVERSITY FACILITIES AND ADMINISTRATIVE COST RATES FOR THE PERIOD JULY 1, 2012 THROUGHT JUNE 30, 2017

EXHIBIT A PAGE 1 OF 2

| BUILDING |
|-----------------------------------|
| EQUIPMENT |
| INTEREST |
| OPERATIONS & MAINTENANCE |
| LIBRARY |
| GENERAL ADMINISTRATION |
| DEPARTMENT ADMINISTRATION |
| SPONSORED PROJECTS ADMINISTRATION |
| STUDENT SERVICES |
| ADMINISTRATION COMPONENTS |
| |
| TOTAL |

| Γ | ORGANI | ZED RESE | ARCH | ORGANIZ | ED RESE | ARCH | ORGANI | ZED RESE | ARCH | ORGAN | IZED RESE | ARCH |
|---|----------------|-------------|-------------|-----------------|------------|-------------|----------------|-------------|-------------|----------------|-------------|-------------|
| J | ULY 1, 2012 TI | HROUGHT JUI | NE 30, 2013 | JULY 1, 2013 TH | ROUGHT JU | NE 30, 2014 | JULY 1, 2014 T | HROUGHT JUI | NE 30, 2015 | JULY 1, 2015 7 | HROUGHT JU | NE 30, 2017 |
| Γ | 0 | N-CAMPUS O | FF-CAMPUS | 10 | N-CAMPUS O | FF-CAMPUS | 0 | N-CAMPUS O | FF-CAMPUS | 9 | N-CAMPUS OF | FF-CAMPUS |
| ı | | 3.3% | | 20 16 1 | 3.3% | | | 3.3% | | | 3.3% | |
| ı | | 4.8% | | - | 2.5% | 56 | | 2.5% | 237 | | 2.5% | |
| ١ | | 1.0% | | | 2.0% | | | 2.0% | 10000 | | 2.3% | |
| ı | | 9.1% | | | 12.0% | | C. Page | 12.5% | | | 12.7% | |
| ı | | 1.3% | | | 1.7% | | | 1.7% | | | 1.7% | |
| ı | 16.9% | | | 16.9% | | | 16.9% | | | 16.9% | | |
| ı | 21.3% | | | 21.3% | | | 21.3% | | 7.00 | 21.3% | | |
| ı | 7.1% | | | 7.1% | | 2.4 | 7.1% | | | 7.1% | | |
| ı | 0.0% | | | 0.0% - | | 9 | 0.0% | | | 0.0% | | |
| ı | 45.3% | 26.0% | 26.0% | 45.3% | 26.0% | 26.0% | 45.3% | 26.0% | 26.0% | 45.3% | 26.0% | 26.0% |
| | | 45.5% | 26.0% | | 47.5% | 26.0% | | 48.0% | 26.0% | | 48.5% | 26.0% |

AMINISTRATIVE COMPONENTS ARE CAPPED AT 26.0% IN ACCORDANCE WITH OMB A-21, DATED JULY 26, 1993. CONCUR:

(SIGNATURE)

VICE PRESIDENT

TITLE

6/4/2013

DATE

PORTLAND STATE UNIVERSITY FACILITIES AND ADMINISTRATIVE COST RATES FOR THE PERIOD JULY 1, 2012 THROUGHT JUNE 30, 2017

BUILDING **EQUIPMENT** INTEREST **OPERATIONS & MAINTENANCE** LIBRARY GENERAL ADMINISTRATION DEPARTMENT ADMINISTRATION SPONSORED PROJECTS ADMINISTRATION STUDENT SERVICES ADMINISTRATION COMPONENTS TOTAL

| | INS | TRUCTION | | INS | TRUCTION | | OTHER | SPONSOF | RED | OTHE | R SPONSO | RED |
|------|------------|-------------|-------------|-----------------|------------|-------------|-----------------|------------|-------------|----------------|-------------|-------------|
| JULY | 1, 2012 Th | HROUGHT JUN | VE 30, 2013 | JULY 1, 2013 TH | ROUGHT JUI | NE 30, 2017 | JULY 1, 2012 TH | ROUGHT JUI | NE 30, 2013 | JULY 1, 2013 T | HROUGHT JU | NE 30, 2017 |
| | 0 | N-CAMPUS OF | FF-CAMPUS | 0 | N-CAMPUS O | FF-CAMPUS | O | N-CAMPUS O | FF-CAMPUS | 0 | N-CAMPUS OF | F-CAMPUS |
| | | 1.5% | | | 1.6% | | | 0.9% | | | 1.0% | |
| | | 0.9% | | | 0.9% | | | 0.0% | | | 0.2% | |
| | | 9.5% | | | 9.7% | | | 3.6% | | | 0.2% | |
| | | 11.6% | | | 11.8% | | | 1.7% | | | 5.5% | |
| | | 0.0% | | | 0.0% | | | 0.0% | | | 0.6% | |
| | 8.2% | | | 16.9% | | | 8.2% | | | 16.9% | | |
| , | 18.9% | | | 23.2% | | | 11.3% | | | 57.6% | | |
| | 5.3% | | | 7.1% | | | 5.3% | | | 7.1% | | |
| | 23.5% | | | 29.4% | | | 0.0% | | | 0.0% | | |
| | 55.9% | 26.0% | 26.0% | 76.6% | 26.0% | 26.0% | 24.8% | 24.8% | 24.8% | 81.6% | 26.0% | 26.0% |
| | | 49.5% | 26.0% | | 50.0% | 26.0% | | 31.0% | 24.8% | | 33.5% | 26.0% |

AMINISTRATIVE COMPONENTS ARE CAPPED AT 26.0% IN ACCORDANCE WITH OMB A-21, DATED JULY 26, 1993. CONCUR:

(SIGNATURE)

VICE PRESIDENT

JONATHAN FINK

TITLE

6/4/2013

DATE

Doc ID: ea97d77ead8ae9fedcbc013bc0419fa64acc644

Clark County Signal Timing, Evaluation, Verification & Enhancement (STEVE)

| Application of the second second second | | | TEAM MEME University of Wa | | | | THE RESERVE | |
|--|--|----------------|--------------------------------|---------------------|-------------|--------------------------------------|---|----------------------|
| TASK | Principal Investigator Res Mark Hallenback Jo | searh Engineer | Hours | Labor | Expenses | Total | TOTALS | |
| Task 1 - Project Management and Coordination | | | | | | | | 1 |
| Task 1.1 - Project Management and Coordination Task 1.2 - Project Meetings Task 1.3 - Quality Control Plan (QCP) and Quality Control Checklist (QCC) TOTAL TASK HOURS | 42 | 0 | 0 \$ 42 \$ 0 \$ 42 \$ | 6,734 - 6,734 | | \$ - \$ 7,814 \$ - \$ 7,814 | \$ 42,533 \$ 34,034 \$ 3,023 \$ 79,589 | |
| Task 2 - ITS Plan Document | | | | | | | | |
| Sub Task 2.1 - Draft and Final Concept of Operations Sub Task 2.2 - Draft and Final System Requirements Sub Task 2.2 - Draft and Final Verification Plan TOTAL TASK HOURS | 0 | 0 | 0 \$ 0 \$ 0 \$ 0 \$ | - | \$ - | \$ - \$ - \$ - | \$ 32,641 \$ 7,343 \$ 2,913 \$ 42,897 | |
| Task 3 - Bluetooth Design (PS&E) | | | | | | | | |
| Sub Task 3.1 - Site visit/Review Record Drawings Sub Task 3.2.1 - 50% Bluetooth Design Plans Sub Task 3.2.2 - 50% Temporary Traffic Control Plans | Water and the second se | | 0 \$ 0 \$ 0 \$ | - | | \$ - \$ - \$ - | \$ 10,217 \$ 17,564 \$ 4,910 | |
| Sub Task 3.2.3 - 50% Engineers Estimate Sub Task 3.3.1 - 99% Bluetooth Design Plans | | | 0 \$ | 200 | | \$ - | \$ 1,477 \$ 22,023 | |
| Sub Task 3.3.2 - 99% Temporary Traffic Control Plans Sub Task 3.3.3 - 99% Engineers Estimate | | | 0 \$ | | | \$ - | \$ 5,944 \$ 2,101 | |
| Sub Task 3.3.4 - 99% Specifications Sub Task 3.4.1 - Final Bluetooth Design Plans Sub Task 3.4.2 - Final Temporary Traffic Control Plans Sub Task 3.4.3 - Final Engineers Estimate | | | 0 \$ 0 \$ 0 \$ | | | \$ - \$ - | \$ 3,687 \$ 4,459 \$ 1,035 \$ 318 | |
| Sub Task 3.4.4 - Final Engineers Estimate Sub Task 3.4.4 - Final Specifications TOTAL TASK HOURS | 0 | 0 | 0 \$ | | \$ - | \$ - | \$ 318 \$ 1,326 \$ 75,060 | |
| Task 4 - Synchro Model | | | | | | | | |
| OsubTask 4 - Synchro Model O TOTAL TASK HOURS TASK 5 - Traffic Count Data | 0 | 0 | 0 \$ 0 \$ | | \$ - | \$ - | \$ 12,226 \$ 12,226 | TOTAL Synchro Model |
| SubTask 5 - Traffic Count Data | | | 0 \$ | | | \$ - | \$ 25,920 | |
| TOTAL TASK HOURS | 0 | 0 | 0 \$ | | \$ - | \$ - | | TOTAL Traffic Counts |
| riask oʻsigilal illillig, liliplettletitatioti, aliu fletu | Fine-Tuning | | | | | | 2, | |
| SubTask 6.1 - Signal Timing Development and Optimization SubTask 6.2 - Signal Timing Implementation and Fine Tuning TOTAL TASK HOURS | 0 | 0 | 0 \$ 0 \$ 0 \$ | | \$ - | \$ - \$ - | \$ 14,888 \$ 26,117 \$ 41,006 | |
| Task 7 - Review Potential MOE Standards Task 7.1 Gather and Process Existing Data Sources | | | | | | | | |
| Task 7.1 Gather and Process Existing Data Sources | | | | | | | | |
| Gather and Process Data | 2 | 4 | 6 \$ | 877 | \$ 1,080.00 | | | |
| Gather and Process Data Draft Corridor Atlas Final Corridor Atlas Task 7.2 Identify Potential MOEs and Critical Factors | 8 2 | 16 | 24 \$ 6 \$ | 3,509 877 | | \$ 3,509 \$ 877 | | |
| Draft summary of critical factors and MOEs Final summary of critical factors and MOEs Task 7.3 Analyze the Corridors and Prepare MOE Working Paper | 48 12 | 192 48 | 240 \$ 60 \$ | 34,417 8,604 | \$ 2,160.00 | \$ 36,577 \$ 8,604 | | |

19fa64acc644

| Draft MOE working paper | | | 0 \$ | - \$ | - \$ | | \$ - | 1 |
|--|------------------------------|-----|--------|------------|-------------|-----------|--|----------------------------|
| Final MOE working paper | | | 0 \$ | | \$ | - | \$ - | |
| OTAL TASK HOURS | 72 | 264 | 336 \$ | 48,285 \$ | 3,240 \$ | 51,525 | \$ 139,041 | TOTAL MOE Standards |
| isk 8.1 Develop the MOE Framework | | | | | | | | |
| Draft MOE Framework and Standards Working Paper | 60 | 100 | 160 \$ | 23,537 \$ | 1,080.00 \$ | 24,617 | \$ 54,238 | 1 |
| Final MOE Framework and Standards Working Paper | 20 | 20 | 40 \$ | 5,990 | \$ | | | |
| The state of the s | 20 | 20 | 40 \$ | 3,390 | Þ | 5,990 | \$ 21,532 | 1 |
| sk 8.2 Develop the MOE Graphics | | 10 | | 2.002 4 | 4 000 00 4 | 2442 | | 1 |
| oraft and final mockups of the potential MOE's | 4 | 10 | 14 \$ | 2,033 \$ | 1,080.00 \$ | 3,113 | | |
| Oraft prototype MOE graphics | 4 | 8 | 12 \$ | 1,755 | \$ | 1,755 | | |
| Revised MOE graphics | 2 | 4 | 6 \$ | 877 | \$ | 877 | | |
| Final MOE graphics | 2 | 2 | 4 \$ | 599 | \$ | 7,000,000 | \$ 2,547 | |
| DTAL TASK HOURS | 92 | 144 | 236 \$ | 34,792 \$ | 2,160 \$ | 36,952 | \$ 103,927 | TOTAL MOE Framework |
| ub Task 9 - Evalaluation of Arrival on Green by Detector Type and Location | | 1 | 0 \$ | | \$ | | \$ - | |
| OTAL TASK HOURS | 0 | 0 | 0 \$ | - \$ | - \$ | | \$ - | TOTAL Arrival on Green |
| | | | | • | * | | * | TO THE PARTY OF OF COM |
| | | | | | | | | |
| b Task 10 - Executive Summary Framework | | | 0 \$ | - | \$ | - | \$ 33,296 | |
| TAL TASK HOURS | 0 | 0 | 0 | 0 | 0 | 0 | | TOTAL Exectuve Summary |
| | | | | | | | 50,230 | To The Execute Summary |
| ab Task 11 - Users Manual | 3 . | | 0 \$ | | \$ | | \$ 39,770 | |
| TAL TASK HOURS | 0 | o | 0 | 0 | 0 | 0 | The second secon | TOTAL User Manual |
| | | | | | | | | |
| b Task 12 - Before and After Study Reports | | | 0 \$ | - | \$ | - | \$ 32,743 | |
| OTAL TASK HOURS | 0 | 0 | 0 | 0 | 0 | 0 | \$ 32,743 | TOTAL Before/After Studies |
| b Task 13.1 New Visualizations for Bluetooth Data | | | 0 \$ | | \$ | | \$ 6,718 | |
| b Task 13.2 Design and Implementation of Graphical and Statistical Evaluations | | 1 | 0 \$ | | Š | | \$ 14,719 | • |
| b Task 13.3 New Method of Analysis | | 1 | 0 \$ | | Ś | | \$ 6,508 | • |
| ab Task 13.4 Portal Modified Travel Time Analysis | | - | 0 \$ | | , | | , ,,,,,, | |
| ab Task 13.5 Bluetooth Reporting Working Paper | | | 0 \$ | | Ś | | \$ 29,012 \$ 2,034 | |
| OTAL TACK HOURS | 0 | o | 0 | 0 | 0 | 0 | | |
| OTAL TASK HOURS | THE PERSON NAMED IN COLUMN 1 | | | | The second | | \$ 58,992 | TOTAL Bluetooth Reporting |
| TOTAL | 206 | 408 | 614 \$ | \$9.811 \$ | 6.480 \$ | 96,291 | | |
| ONTINGENCY Sub Task 13.6 Additional Bluetooth Reporting Services | | | 0 \$ | | \$ | • | \$ 15,422 | 1 |
| | | | | | | | \$ 684,466 | |
| | | | | | | | \$ 15,422 | |
| | | | | | | | | |
| | | | | | | 100 | \$ 699,888 | |
| | | | | | | | | |
| CONTINGENCY Sub Task 13.0 Additional Brieflood Reporting Services | | | | | | | | |
| | | | | | | | | |
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| | 14.2 | | | | | | | |
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| | | | | | | | | |

RATE SHEET--WSDOT (Amount not to Exceed--ANTE)

University of Washington (TRAC-UW)
4333 Brooklyn Ave NE, Box 359472, Seattle, WA 98195-9472

| Direct L | abor Rates | | | Fixed Fe | ee 30% | | sive Hourly ate NTE |
|----------|------------|---------------|-----------------------------|--|------------------------------------|--|--|
| \$ | 103.78 | \$ | 56.56 | \$ | - | \$ | 160.34 |
| \$ | 90.08 | \$ | 49.09 | \$ | - | \$ | 139.17 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | NTE \$ 103.78 | NTE Overhead R \$ 103.78 \$ | NTE Overhead Rate (54.5%) \$ 103.78 \$ 56.56 | NTE Overhead Rate (54.5%) Fixed Fe | NTE Overhead Rate (54.5%) Fixed Fee 30% \$ 103.78 \$ 56.56 \$ - | NTE Overhead Rate (54.5%) Fixed Fee 30% Billing R \$ 103.78 \$ 56.56 \$ - \$ |



Transportation Building 310 Maple Park Avenue S.E. P.O. Box 47300 Olympia, WA 98504-7300 360-705-7000 TTY: 1-800-833-6388 www.wsdot.wa.gov

October 27, 2016

University of Washington P.O. Box 359472 Seattle, Wa 98195-9472

Subject:

Acceptance FYE 2015 ICR - Risk Assessment Review

Dear Mr. Mark Hallenbeck:

Based on Washington State Department of Transportation's (WSDOT) Risk Assessment review of your Indirect Cost Rate (ICR), we have accepted your proposed FYE 2015 ICR of 54.50%. This ICR acceptance is in accordance with 23 CFR 172.7 and must be updated on an annual basis. This rate may be subject to additional review if considered necessary by WSDOT and will be applicable for:

☐ WSDOT Agreements☐ Local Agency Contracts in Washington State only

Costs billed to agreements/contracts will still be subject to audit of actual costs, based on the terms and conditions of the respective agreement/contract.

This was not a cognizant review. Any other entity contracting with the firm is responsible for determining the acceptability of the ICR.

If you have any questions, feel free to contact our office at (360) 705-7104 or via email consultantrates@wsdot.wa.gov.

Regards;

Manager, Consultant Services Office

EKJ:kms

UW Home > Discover UW > Research > OSP > GIM Table of Contents

GIM 13 Supplement: Table of F&A Rates and Base Types for the University of Washington

UNIVERSITY OF WASHINGTON

Office of Research Office of Sponsored Programs

GRANTS INFORMATION MEMORANDUM 13

June 11, 2015

Use F&A rates below for preparing sponsored program proposals.

Review GIM 13. Procedures and Guidance to identify activity, location, rate and base.

| Activity Location | Activity Type | Rate | Base Type | Effective Dates | Fiscal Year |
|--|--|-------|--------------|-------------------------------|----------------------------|
| SOUTH LAKE UNION (SLU) 750 Republican Street Seattle, WA 98109 | Organized Research | 74% | MTDC | 07/01/2014 - 06/30/2016 | FY 2014 - FY 2016 |
| Rosen Building 960 Republican Street Seattle, WA 98109 | | 75% | MTDC | 07/01/2016 - 06/30/2017 | FY 2017 |
| Brotman Building 850 Republican Street Seattle, WA 98109 | e Bonden i in liposod viti Silin i in substituti i unban lisa | 76% | MTDC | 07/01/2017 - 06/30/2019 | FY 2018 - FY 2019 |
| A, B, and C Wing 850 Republican Street Seattle, WA 98109 | | 76.5% | MTDC | 07/01/2019 - 06/30/2020 | FY 2020 |
| 1616 Eastlake Avenue East Seattle, WA 98109 | Other Sponsored Activity | 33.8% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| | | 37% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |

| | | - | | | |
|---|---|--------|------|-------------------------------|----------------------------|
| | Instruction | 53% | MTDC | 07/01/2009 - 06/30/2020 | FY 2010 - FY 2020 |
| | Industry Sponsored Clinical Trial ¹ | 27% | TDC | 10/01/2011 - 09/30/2014 | |
| | Research Affiliate Program | 20% | TDC | 01/01/2010 - 12/30/2014 | |
| ON-CAMPUS 4333 Brooklyn Ave NE Box 359472 Seattle, WA 98195-9472 | Organized Research | 54.50% | MTDC | 07/01/2012 - 06/30/2017 | FY 2013 - FY 2017 |
| | | 55% | MTDC | 07/01/2017 - 06/30/2018 | FY 2018 |
| | | 55.5% | MTDC | 07/01/2018 - 06/30/2020 | FY 2019 - FY 2020 |
| | Other Sponsored Activity | 33.8% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| | | 37% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |
| | Instruction | 53% | MTDC | 07/01/2009 - 06/30/2020 | FY 2010 - FY 2020 |
| | Industry Sponsored Clinical Trial ¹ | 27% | TDC | 10/01/2011 - 09/30/2014 | |
| 610C | Research Affiliate Program | 20% | TDC | 01/01/2010 - 12/30/2014 | |
| OFF-CAMPUS | | | | 07/01/2009 | FY 2010 |

| Actual performance site location and Seattle Cancer Care Alliance (SCCA) | Organized Research | 26% | MTDC | - 06/30/2020 | - FY 2020 |
|--|--|-------|------|-------------------------------|----------------------------|
| | Other Sponsored Activity | 26% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| | den i den Se principal de Se principal de | 25% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |
| | Instruction | 26% | MTDC | 07/01/2009 - 06/30/2020 | FY 2010 - FY 2020 |
| | Industry Sponsored Clinical Trial ¹ | 27% | TDC | 10/01/2011 - 09/30/2014 | |
| | Research Affiliate Program | 20% | TDC | 01/01/2010 - 12/30/2014 | |
| PRIMATE CENTER Washington National Primate | Organized Research - Primate Center Core | 42% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| Center Box 357330 Seattle, WA 98195-7330 | | 38.1% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |
| | Organized Research - Primate Center Other | 78% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| | Between the second seco | 83.1% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |
| | Organized Research - Primate Center Non- Federal | 83% | MTDC | 07/01/2014 - 06/30/2016 | FY 2015 - FY 2016 |
| | | | | e z Usimos | FY |

| | | 90.6% | MTDC | 07/01/2016 - 06/30/2020 | 2017 - FY 2020 |
|--|--------------------|-------|------|-------------------------------|----------------------------|
| APL 1013 NE 40th Street Seattle, WA 98105 | Organized Research | 17% | MTDC | 07/01/2009 - 06/30/2016 | FY 2010 - FY 2016 |
| | | 19% | MTDC | 07/01/2016 - 06/30/2020 | FY 2017 - FY 2020 |
| RESEARCH VESSEL | Organized Research | 25% | S&W | 07/01/2009 - 06/30/2014 | FY 2010 - FY 2014 |

¹ Please contact OSP for rate to be negotiated for clinical trials of \$1 million or more per year.

Questions on the application of F&A rates during the life of a sponsored project? Contact the Office of Sponsored Programs, (206) 543-4043 or osp@uw.edu.



Office of Sponsored Programs
4333 Brooklyn Ave NE | Box 359472
Seattle, WA 98195-9472 | (206) 543-4043 | Fax 685-1732 | Contact Us

Modified: May 17, 2016

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 916001537

ORGANIZATION:

University of Washington

Management Accounting and Analysis

4311 11th Ave NE

Box 354988

Seattle, WA 98195-4988

DATE: 03/02/2016

FILING REF .: The preceding

agreement was dated

04/23/2015

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

RATE TYPES:

FIXED

FINAL

PROV. (PROVISIONAL)

PRED. (PREDETERMINED)

EFFECTIVE PERIOD

| TYPE | FROM | TO | RATE(%) LOCATION | APPLICABLE TO |
|-------|------------|------------|------------------|----------------|
| FINAL | 07/01/2009 | 06/30/2010 | 54.00 (1) & (A) | Organized Res. |
| PRED. | 07/01/2010 | 06/30/2012 | 54.00 (1) & (A) | Organized Res. |
| PRED. | 07/01/2012 | 06/30/2014 | 54.50 (1) & (A) | Organized Res. |
| FINAL | 07/01/2009 | 06/30/2010 | 26.00 (1) & (B) | Organized Res. |
| PRED. | 07/01/2010 | 06/30/2014 | 26.00 (1) & (B) | Organized Res. |
| FINAL | 07/01/2009 | 06/30/2010 | 53.00 (1) & (A) | Instruction |
| PRED. | 07/01/2010 | 06/30/2014 | 53.00 (1) & (A) | Instruction |
| FINAL | 07/01/2009 | 06/30/2010 | 26.00 (1) & (B) | Instruction |
| PRED. | 07/01/2010 | 06/30/2014 | 26.00 (1) & (B) | Instruction |
| FINAL | 07/01/2009 | 06/30/2010 | 42.00 (1) & (C) | Core Grant |
| PRED. | 07/01/2010 | 06/30/2014 | 42.00 (1) & (C) | Core Grant |
| FINAL | 07/01/2009 | 06/30/2010 | 78.00 (1) & (C) | Non-Core Fed |
| PRED. | 07/01/2010 | 06/30/2014 | 78.00 (1) & (C) | Non-Core Fed |
| FINAL | 07/01/2009 | 06/30/2010 | 17.00 (1) & (D) | |
| PRED. | 07/01/2010 | 06/30/2014 | 17.00 (1) & (D) | |
| FINAL | 07/01/2009 | 06/30/2010 | 25.'00 (2) & (E) | |
| PRED. | 07/01/2010 | 06/30/2014 | 25.00 (2) & (E) | |
| FINAL | 07/01/2009 | 06/30/2010 | 66.00 (1) & (F) | Organized Res. |

ORGANIZATION: University of Washington Management Accounting and

Analysis

AGREEMENT DATE: 3/2/2016

| TYPE | FROM | TO | RATE(%) LOCATION | APPLICABLE TO |
|-------|------------|------------------|------------------|----------------|
| PRED. | 07/01/2010 | 06/30/2011 | 68.00 (1) & (F) | Organized Res. |
| PRED. | 07/01/2011 | 06/30/2012 | 72.00 (1) & (F) | Organized Res. |
| PRED. | 07/01/2012 | 06/30/2013 | 73.00 (1) & (F) | Organized Res. |
| PRED. | 07/01/2013 | 06/30/2014 | 74.00 (1) & (F) | Organized Res. |
| FINAL | 07/01/2009 | 06/30/2010 | 33.80 (1) & (A) | Other Spon Act |
| PRED. | 07/01/2010 | 06/30/2014 | 33.80 (1) & (A) | Other Spon Act |
| FINAL | 07/01/2009 | 06/30/2010 | 26.00 (1) & (B) | Other Spon Act |
| PRED. | 07/01/2010 | 06/30/2014 | 26.00 (1) & (B) | Other Spon Act |
| PROV. | 07/01/2014 | Until Amended | (G) | |

*BASE

- (1) Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials and supplies, services, travel, and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Equipment, capital expenditures, charges for patient care and tuition remission, rental costs, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000 shall be excluded from modified total direct costs.
- (2) Direct salaries and wages including vacation, holiday and sick pay and other paid absences but excluding other fringe benefits.
- (A) On-Campus
- (B) Off-Campus
- (C) Washington National Primate Research Center see Section II Special Remarks.
- (D) Applied Physics Laboratory
- (E) Vessel Operations
- (F) Lake Union Campus
- (G) Use same rates and conditions as those cited for fiscal year ending June 30, 2014.

ORGANIZATION: University of Washington Management Accounting and

Analysis

AGREEMENT DATE: 3/2/2016

| SECTION | I: FRINGE BE | NEFIT RATES** | |
|---------|--------------|---------------|--|
| TYPE | FROM | TO | RATE(%) LOCATION APPLICABLE T |
| FIXED | 7/1/2015 | 6/30/2016 | 24.30 (1) & (B) Faculty & Re Assoc. |
| FIXED | 7/1/2015 | 6/30/2016 | 30.70 (1) & (A) Medical Residents & Senior Fello |
| FIXED | 7/1/2015 | 6/30/2016 | 17.70 (1) & (A) Grad. Studer |
| FIXED | 7/1/2015 | 6/30/2016 | 22.80 (1) & (A) Post Doc. Trainees |
| FIXED | 7/1/2015 | 6/30/2016 | 39.40 (1) & (B) Class. Staff |
| FIXED | 7/1/2015 | 6/30/2016 | 30.50 (1) & (B) Prof. Staff |
| FIXED | 7/1/2015 | 6/30/2016 | 17.60 (1) & (B) (D) |
| FIXED | 7/1/2015 | 6/30/2016 | 21.20 (1) & (B) (E) |
| FIXED | 7/1/2015 | 6/30/2016 | 8.30 (1) & (B) (F) |
| FIXED | 7/1/2015 | 6/30/2016 | 18.80 (1) & (A) Hourly |
| FIXED | 7/1/2015 | 6/30/2016 | 23.90 (1) & (A) Pre-Doctoral Trainees & Fellows |
| FIXED | 7/1/2.015 | 6/30/2016 | 67.50 (2) & (C) Class. Staff |
| FIXED | 7/1/2015 | 6/30/2016 | 53.30 (2) & (C) Prof. Staff |
| FIXED | 7/1/2015 | 6/30/2016 | 51.10 (2) & (C) Faculty & Research Associates |

^{**} DESCRIPTION OF FRINGE BENEFITS RATE BASE:

- (1) Direct salaries and wages including vacation, holiday, and sick pay but excluding other fringe benefits.
- (2) Direct salaries and wages excluding vacation, sick leave, holidays, other paid absences and all other fringe benefits.
- (A) Entire University
- (B) All except Applied Physics Laboratory
- (C) Applied Physics Laboratory
- (D) Professional Staff Global (No Health)
- (E) Professional Staff Global (No Retirement)
- (F) Professional Staff Global (No Health or Retirement)

ORGANIZATION: University of Washington Management Accounting and

Analysis

AGREEMENT DATE: 3/2/2016

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The following fringe benefits are included in the fringe benefit rate(s):

HEALTH INSURANCE, SOCIAL SECURITY & MEDICARE TAXES, WORKERS COMPENSATION, MEDICAL AID & INDUSTRIAL INSURANCE, UWRP, STATE RETIREMENT, UNEMPLOYMENT COMPENSATION, AND SEPARATION LEAVE PAYMENTS FOR CLASSIFIED & PROFESSIONAL STAFF.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences. Beginning July 1, 2011, unused leave payments made upon separation of Classified and Professional Staff are included in the fringe benefit rates.

Beginning October 1, 1996 the Applied Physics Laboratory (APL) has separate fringe benefit rates from the remainder of the University of Washington. These rates include paid absences. Therefore, charges for direct salaries and wages from APL must exclude charges for paid absences, including vacation, sick leave, holidays, and other paid absences.

DEFINITION OF EQUIPMENT

Prior to 07/01/2016, equipment is defined as tangible nonexpendable personal property having a useful life of more than one year, and an acquisition cost of \$2,000 or more per unit. Effective 07/01/2016, equipment is defined as tangible nonexpendable personal property having a useful life of more than one year, and an acquisition cost of \$5,000 or more per unit.

DEFINITION OF ON-CAMPUS, OFF-CAMPUS AND SPECIAL RATES: DEFINITION OF OFF-CAMPUS RATE

- a. An off-campus program is one that is conducted (1) in leased facilities where space related costs (e.g. rent, utilities and maintenance) are charged directly to the program, or (2) in facilities made available (at no cost) to the program by a non-University organization, or (3) away from the University over an uninterrupted period of time in excess of 30 days for field work. The Off-Campus rate is not to be used as a substitute for the Vessel Operations rate or the Applied Physics Laboratory rate. Even though Pack Forest, Big Beef Creek, and Olympic Natural Resource Center are owned and operated by the University, these facilities are considered to be off campus.
- b. Projects conducted at two or more locations:
 There are instances where a project supported by a single grant or contract
 is conducted at two or more locations, thus requiring special consideration

ORGANIZATION: University of Washington Management Accounting and Analysis

AGREEMENT DATE: 3/2/2016

in determining the appropriate indirect cost provision. The following should be observed in such circumstances:

- (1) Where the total annual amount of the grant or contract direct costs is less than \$250,000, a single indirect cost rate will be applied. This rate will be the one currently applicable to the location where the preponderance of project salaries is located.
- (2) Where the total annual amount of the grant or contract direct costs is \$250,000 or more, the appropriate rate for each location will be applied to the modified total direct costs specifically assigned to the respective location. In the absence of the institution's ability to specifically identify and assign costs to each location, the appropriate rate for each location will be applied to total project costs in the same ratio as direct salary costs incurred at each location during the period covered by the project billing or accounting.

PRIMATE CENTER RATES:

The Washington National Primate Research Center (WNPRC) has two Federally recognized rates. The National Center for Research Resources (NCRR) Core Grant rate is 42.0%. The Non-Core Federal Rate of 78.0% is the sum of the Core Grant (42.0%) and the WNPRC specific F&A expenditures (36.0%).

This rate agreement updates the fringe benefits and definition of equipment only.

NEXT PROPOSAL DUE DATE

A fringe benefits proposal based on actual costs for fiscal year ending June 30, 2015 will be due no later than June 30, 2016.

ORGANIZATION: University of Washington Management Accounting and Analysis

AGREEMENT DATE: 3/2/2016

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted: such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

| BY THE INSTITUTION: | ON BEHALF OF THE FEDE | RAL GOVERNMENT: |
|---|-----------------------|--|
| University of Washington Management Accounting and Analysis | DEPARTMENT OF HEALTH | AND HUMAN SERVICES |
| Glishuth Cherry | Arif M. Karim | S Obcitatly stored by Add M. Ratins 5 Districtly, Brill Constrained, assets, burt M. Courteople or Service of the Martins of 2,921-219000000, 194.11-200018291; basis oil 60.04031-06000 |
| (SIGNATURE) | (SIGNATURE) | |
| Elizabeth Cherry | Arif Karim | |
| (NAME) | (NAME) | |
| Interim Vice President, Finance and Facilities | Director, Cost Alloca | tion Services |
| (TITLE) | (TITLE) | |
| March 10, 2016 | 3/2/2016 | |
| (DATE) | (DATE) 2129 | |
| | HHS REPRESENTATIVE: | Janet Turner |
| | Telephone: | (415) 437-7820 |

We do not have a letter from WSDOT. We do have the fact that the federal government audits and approves our indirect cost rate, and WSDOT accepts those. Here are the appropriate links to the federal approvals accepted by WSDOT:

This link will take you to the official web site which lists our federally approved F&A rates (54.5% for conventional on-campus research work)

http://www.washington.edu/research/osp/gim/gim13a.html

The official signed document from DHHS (who is the federal agency that does the official audit) can be obtained from this pdf file:

http://f2.washington.edu/fm/maa/sites/default/files/fa/FringeBenefitAgreementFY2016.pdf

It can be hard to find the 54.5% statistic but its in there. Both of these are reasonably legible, but let me know if you need something else.

We are NOT a SAFE HARBOR company. We are a state agency. We do NOT charge fee. So our fee is \$0, or 0%.

For the rates, we don't compute rates by job category either. We compute rates for individuals, because we have to bill individuals, not job categories. In the UW's billing and accounting systems, people aren't interchangeable from a rate perspective. I did not supply an hourly rate for a graduate student. If Jim (and Rob) want a rate for a Masters student for a quarter, that REALLY doesn't fit into the WSDOT spreadsheet, because we have to pay tuition, to which we don't apply indirect costs, which messes up the WSDOT form. One option would be to hire them as hourly employees, but that is a significant disadvantage to the student, as they have to then pay taxes on their tuition funds. Also, if you want a good grad student you usually have to pay them for an entire quarter (if not, the best ones take jobs with other faculty that WILL pay them for the entire quarter.)

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees, and successors in interest agrees as follows:

- Compliance with Regulations: The CONSULTANT shall comply with the Regulations relative to non-discrimination in federally assisted programs of the AGENCY, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "REGULATIONS"), which are herein incorporated by reference and made a part of this AGREEMENT.
- 2. Non-discrimination: The CONSULTANT, with regard to the work performed during this AGREEMENT, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of sub-consultants, including procurement of materials and leases of equipment. The CONSULTANT shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when this AGREEMENT covers a program set forth in Appendix B of the REGULATIONS.
- 3. Solicitations for Sub-consultants, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiations made by the CONSULTANT for work to be performed under a sub-contract, including procurement of materials or leases of equipment, each potential sub-consultant or supplier shall be notified by the CONSULTANT of the CONSULTANT's obligations under this AGREEMENT and the REGULATIONS relative to non-discrimination on the grounds of race, color, sex, or national origin.
- 4. Information and Reports: The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the AGENCY, the STATE, or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the AGENCY, the STATE, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
- 5. Sanctions for Non-compliance: In the event of the CONSULTANT's non-compliance with the non-discrimination provisions of this AGREEMENT, the AGENCY shall impose such AGREEMENT sanctions as it, the STATE, or the FHWA may determine to be appropriate, including, but not limited to:
 - Withholding of payments to the CONSULTANT under this AGREEMENT until the CONSULTANT complies, and/or;
 - · Cancellation, termination, or suspension of this AGREEMENT, in whole or in part.
- 6. Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (5) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the REGULATIONS, or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any sub-consultant or procurement as the STATE, the AGENCY, or FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided, however, that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a sub-consultant or supplier as a result of such direction, the CONSULTANT may request the AGENCY enter into such litigation to protect the interests of the STATE and/or the AGENCY and, in addition, the CONSULTANT may request the United States enter into such litigation to protect the interests of the United States.

Agreement Number: 733839

Exhibit G Certification Documents

| Exhibit G-1(a) | Certification of Consultant |
|----------------|---|
| Exhibit G-1(b) | Certification of |
| Exhibit G-2 | Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions |
| Exhibit G-3 | Certification Regarding the Restrictions of the Use of Federal Funds for Lobbying |
| Exhibit G-4 | Certificate of Current Cost or Pricing Data |

Exhibit G-1(a) Certification of Consultant

I hereby certify that I am the and duly authorized representative of the firm of DKS Associates whose address is 720 SW Washington Street, Suite 500, Portland, OR 97205 and that neither the above firm nor I have:

- a) Employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this AGREEMENT;
- Agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out this AGREEMENT; or
- c) Paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out this AGREEMENT; except as hereby expressly stated (if any);

I acknowledge that this certificate is to be furnished to the Washington State Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this AGREEMENT involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

| DKS Associates | | |
|---|------------|--|
| Consultant (Firm Name) | | |
| In m | 11/04/2016 | |
| Signature (Authorized Official of Consultant) | Date | |

Exhibit G-1(b) Certification of Agency Offical I hereby certify that I am the: ☑ Agency Official of the Local Agency ☐ Other of the Clark County, Washington , and DKS Associates or its representative has not been required, directly or indirectly as an express or implied condition in connection

a) Employ or retain, or agree to employ to retain, any firm or person; or

Mellely

with obtaining or carrying out this AGREEMENT to:

b) Pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind; except as hereby expressly stated (if any):

I acknowledge that this certificate is to be furnished to the Washington State Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation, in connection with this AGREEMENT involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

Signature Mark McCauley

Date

Exhibit G-2 Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions

- I. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - B. Have not within a three (3) year period preceding this proposal 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) transaction or contract under a public transaction; violation of Federal or State anti-trust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - D. Have not within a three (3) year period preceding this application / proposal had one or more public transactions (Federal, State and local) terminated for cause or default.
- II. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

| DKS Associates | | |
|---|------------|--|
| Consultant (Firm Name) | | |
| | | |
| In m | 11/04/2016 | |
| Signature (Authorized Official of Consultant) | Date | |

Exhibit G-3 Certification Regarding the Restrictions of the Use of Federal Funds for Lobbying

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- 1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative AGREEMENT, and the extension, continuation, renewal, amendment, or modification of Federal contract, grant, loan or cooperative AGREEMENT.
- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative AGREEMENT, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000.00, and not more than \$100,000.00, for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier sub-contracts, which exceed \$100,000, and that all such sub-recipients shall certify and disclose accordingly.

| DKS Associates | | |
|---|------------|--|
| Consultant (Firm Name) | | |
| 0 | | |
| 100 | 11/04/2016 | |
| Signature (Authorized Official of Consultant) | Date | |

Exhibit G-4 Certificate of Current Cost or Pricing Data

This is to certify that, to the best of my knowledge and belief, the cost or pricing data (as defined in section 2.101 of the Federal Acquisition Regulation (FAR) and required under FAR subsection 15.403-4) submitted, either actually or by specific identification in writing, to the Contracting Officer or to the Contracting Officer's representative in support of RFP #706

* are accurate, complete, and current as of March 16, 2016

**

This certification includes the cost or pricing data supporting any advance AGREEMENT's and forward pricing rate AGREEMENT's between the offer or and the Government that are part of the proposal.

Firm: DKS Associates

| | In m | Principal | |
|-----------|------|-----------|--|
| Cianatura | | Title | |

Date of Execution***:

^{*}Identify the proposal, quotation, request for pricing adjustment, or other submission involved, giving the appropriate identifying number (e.g. project title.)

^{**}Insert the day, month, and year, when price negotiations were concluded and price AGREEMENT was reached.

***Insert the day, month, and year, of signing, which should be as close as practicable to the date when the price negotiations were concluded and the contract price was agreed to.

To Be Used Only If Insurance Requirements Are Increased

The professional liability limit of the CONSULTANT to the AGENCY identified in Section XII, Legal Relations and Insurance of this Agreement is amended to \$

The CONSULTANT shall provide Professional Liability insurance with minimum per occurrence limits in the amount of \$

Such insurance coverage shall be evidenced by one of the following methods:

- · Certificate of Insurance.
- Self-insurance through an irrevocable Letter of Credit from a qualified financial institution.

Self-insurance through documentation of a separate fund established exclusively for the payment of professional liability claims, including claim amounts already reserved against the fund, safeguards established for payment from the fund, a copy of the latest annual financial statements, and disclosure of the investment portfolio for those funds.

Should the minimum Professional Liability insurance limit required by the AGENCY as specified above exceed \$1 million per occurrence or the value of the contract, whichever is greater, then justification shall be submitted to the Federal Highway Administration (FHWA) for approval to increase the minimum insurance limit.

If FHWA approval is obtained, the AGENCY may, at its own cost, reimburse the CONSULTANT for the additional professional liability insurance required.

Notes: Cost of added insurance requirements: \$

- · Include all costs, fee increase, premiums.
- This cost shall not be billed against an FHWA funded project.
- · For final contracts, include this exhibit.

Exhibit I Alleged Consultant Design Error Procedures

The purpose of this exhibit is to establish a procedure to determine if a consultant's alleged design error is of a nature that exceeds the accepted standard of care. In addition, it will establish a uniform method for the resolution and/or cost recovery procedures in those instances where the agency believes it has suffered some material damage due to the alleged error by the consultant.

Step 1 Potential Consultant Design Error(s) is Identified by Agency's Project Manager

At the first indication of potential consultant design error(s), the first step in the process is for the Agency's project manager to notify the Director of Public Works or Agency Engineer regarding the potential design error(s). For federally funded projects, the Region Local Programs Engineer should be informed and involved in these procedures. (Note: The Director of Public Works or Agency Engineer may appoint an agency staff person other than the project manager, who has not been as directly involved in the project, to be responsible for the remaining steps in these procedures.)

Step 2 Project Manager Documents the Alleged Consultant Design Error(s)

After discussion of the alleged design error(s) and the magnitude of the alleged error(s), and with the Director of Public Works or Agency Engineer's concurrence, the project manager obtains more detailed documentation than is normally required on the project. Examples include: all decisions and descriptions of work; photographs, records of labor, materials and equipment.

Step 3 Contact the Consultant Regarding the Alleged Design Error(s)

If it is determined that there is a need to proceed further, the next step in the process is for the project manager to contact the consultant regarding the alleged design error(s) and the magnitude of the alleged error(s). The project manager and other appropriate agency staff should represent the agency and the consultant should be represented by their project manager and any personnel (including sub-consultants) deemed appropriate for the alleged design error(s) issue.

Step 4 Attempt to Resolve Alleged Design Error with Consultant

After the meeting(s) with the consultant have been completed regarding the consultant's alleged design error(s), there are three possible scenarios:

- It is determined via mutual agreement that there is not a consultant design error(s). If this is the case, then the process will not proceed beyond this point.
- It is determined via mutual agreement that a consultant design error(s) occurred. If this is the case, then the Director of Public Works or Agency Engineer, or their representatives, negotiate a settlement with the consultant. The settlement would be paid to the agency or the amount would be reduced from the consultant's agreement with the agency for the services on the project in which the design error took place. The agency is to provide LP, through the Region Local Programs Engineer, a summary of the settlement for review and to make adjustments, if any, as to how the settlement affects federal reimbursements. No further action is required.
- There is not a mutual agreement regarding the alleged consultant design error(s). The consultant may
 request that the alleged design error(s) issue be forwarded to the Director of Public Works or Agency
 Engineer for review. If the Director of Public Works or Agency Engineer, after review with their legal
 counsel, is not able to reach mutual agreement with the consultant, proceed to Step 5.

Step 5 Forward Documents to Local Programs

For federally funded projects all available information, including costs, should be forwarded through the Region Local Programs Engineer to LP for their review and consultation with the FHWA. LP will meet with representatives of the agency and the consultant to review the alleged design error(s), and attempt to find a resolution to the issue. If necessary, LP will request assistance from the Attorney General's Office for legal interpretation. LP will also identify how the alleged error(s) affects eligibility of project costs for federal reimbursement.

- If mutual agreement is reached, the agency and consultant adjust the scope of work and costs
 to reflect the agreed upon resolution. LP, in consultation with FHWA, will identify the amount
 of federal participation in the agreed upon resolution of the issue.
- If mutual agreement is not reached, the agency and consultant may seek settlement by arbitration or by litigation.

The purpose of this exhibit is to describe a procedure regarding claim(s) on a consultant agreement. The following procedures should only be utilized on consultant claims greater than \$1,000. If the consultant's claim(s) are a total of \$1,000 or less, it would not be cost effective to proceed through the outlined steps. It is suggested that the Director of Public Works or Agency Engineer negotiate a fair and reasonable price for the consultant's claim(s) that total \$1,000 or less.

This exhibit will outline the procedures to be followed by the consultant and the agency to consider a potential claim by the consultant.

Step 1 Consultant Files a Claim with the Agency Project Manager

If the consultant determines that they were requested to perform additional services that were outside of the agreement's scope of work, they may be entitled to a claim. The first step that must be completed is the request for consideration of the claim to the Agency's project manager.

The consultant's claim must outline the following:

- Summation of hours by classification for each firm that is included in the claim;
- · Any correspondence that directed the consultant to perform the additional work;
- Timeframe of the additional work that was outside of the project scope;
- Summary of direct labor dollars, overhead costs, profit and reimbursable costs associated with the additional work; and
- Explanation as to why the consultant believes the additional work was outside of the agreement scope of work.

Step 2 Review by Agency Personnel Regarding the Consultant's Claim for Additional Compensation

After the consultant has completed step 1, the next step in the process is to forward the request to the Agency's project manager. The project manager will review the consultant's claim and will met with the Director of Public Works or Agency Engineer to determine if the Agency agrees with the claim. If the FHWA is participating in the project's funding, forward a copy of the consultant's claim and the Agency's recommendation for federal participation in the claim to the WSDOT Local Programs through the Region Local Programs Engineer. If the claim is not eligible for federal participation, payment will need to be from agency funds.

If the Agency project manager, Director of Public Works or Agency Engineer, WSDOT Local Programs (if applicable), and FHWA (if applicable) agree with the consultant's claim, send a request memo, including backup documentation to the consultant to either supplement the agreement, or create a new agreement for the claim. After the request has been approved, the Agency shall write the supplement and/or new agreement and pay the consultant the amount of the claim. Inform the consultant that the final payment for the agreement is subject to audit. No further action in needed regarding the claim procedures.

If the Agency does not agree with the consultant's claim, proceed to step 3 of the procedures.

Step 3 Preparation of Support Documentation Regarding Consultant's Claim(s)

If the Agency does not agree with the consultant's claim, the project manager shall prepare a summary for the Director of Public Works or Agency Engineer that included the following:

- · Copy of information supplied by the consultant regarding the claim;
- · Agency's summation of hours by classification for each firm that should be included in the claim;
- Any correspondence that directed the consultant to perform the additional work;
- Agency's summary of direct labor dollars, overhead costs, profit and reimbursable costs associated with the additional work;
- Explanation regarding those areas in which the Agency does/does not agree with the consultant's claim(s);
- · Explanation to describe what has been instituted to preclude future consultant claim(s); and
- · Recommendations to resolve the claim.

Step 4 Director of Public Works or Agency Engineer Reviews Consultant Claim and Agency Documentation

The Director of Public Works or Agency Engineer shall review and administratively approve or disapprove the claim, or portions thereof, which may include getting Agency Council or Commission approval (as appropriate to agency dispute resolution procedures). If the project involves federal participation, obtain concurrence from WSDOT Local Programs and FHWA regarding final settlement of the claim. If the claim is not eligible for federal participation, payment will need to be from agency funds.

Step 5 Informing Consultant of Decision Regarding the Claim

The Director of Public Works or Agency Engineer shall notify (in writing) the consultant of their final decision regarding the consultant's claim(s). Include the final dollar amount of the accepted claim(s) and rationale utilized for the decision.

Step 6 Preparation of Supplement or New Agreement for the Consultant's Claim(s)

The agency shall write the supplement and/or new agreement and pay the consultant the amount of the claim. Inform the consultant that the final payment for the agreement is subject to audit.



TITLE

FILE NAME

DOCUMENT ID

STATUS

Clark County STEVE CRP contract

Contract 733839 STEVE CRP 352122.pdf

ea97d77ead8ae9fedcbc013bc0419fa64acc6444

Completed

Document History

SENT

11/02/2016

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Sent for signature to Jim Peters (jmp@dksassociates.com)

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VIEWED

11/04/2016

Viewed by Jim Peters (jmp@dksassociates.com)

14:01:58 UTC-8

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11/04/2016

Signed by Jim Peters (jmp@dksassociates.com)

SIGNED

14:06:52 UTC-8

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