

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

No. 066-15-002

Project Specifications and Instructions
for Submitting a Proposal to Furnish

Statewide NDOT Operational Audit

Due: March 17, 2015



Rudy Malfabon, P.E., Director
Department of Transportation

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SECTION I - INSTRUCTIONS TO PROPOSER

The enclosed Request for Proposal (RFP) is being advertised for use in submitting information that will be used to select a firm with whom the Nevada Department of Transportation (DEPARTMENT) hopes to negotiate an agreement for the described services.

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statement of Qualifications (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

The proposer shall submit one (1) CD containing one (1) typewritten, legible proposal as instructed above as well as in Section X (B), contained within one (1) Portable Document Format (PDF) file. The proposer shall also submit one (1) Cost Proposal in a separate envelope included with their proposal package. In addition, the DEPARTMENT is testing new functionality with the DEPARTMENT's electronic portal/website, located at www.nevadadot.com/Doing_Business/Vendors/Vendor_Portal_Login.aspx. Proposers are encouraged also submit the proposal electronically through the portal to assist with our testing, however, this is NOT required.

If the proposer chooses to submit proposals electronically through the above link, Vendor registration is required. If you are not a registered vendor with the DEPARTMENT, please register online using the [vendor registration](#) form and follow the instructions. After submitting the online application, you will receive an email with your registration number. Once you receive the registration number, you will be able to submit your proposal electronically.

Proposals must be received **NO LATER THAN 3:00 P.M. PST, on Tuesday March 17, 2015**, and the proposal package containing the CDs must be addressed **exactly** as follows:

Agreement Services
Nevada Department of Transportation
Attn: RFP 498-14-002
1263 South Stewart Street, Room 101A
Carson City, NV 89712

Proposals received after the specified deadline or submitted to the wrong location **will not** be considered and will be disposed of in an appropriate manner suitable to the DEPARTMENT.

Proposals and Statements of Qualification will first be reviewed to determine if minimum qualification requirements are met. Any proposals submitted that do not meet the minimum qualification requirements, as outlined below, will be disposed of in an appropriate manner, at the sole discretion of the DEPARTMENT, and without further review.

Qualification Requirements:

- The firm must be well versed with at least three (3) years' experience performing similar audits.
- The firm must have knowledge and demonstrated experience in evaluating internal controls, policies and procedures, construction contracts, procurement processes, facility and shop operations.

Any proposal received prior to the date and time specified above for receipt of proposals may be withdrawn or modified; electronically submitted proposals can be modified through the Vendor Portal Login webpage, while proposals submitted on CDs can be modified through a written request from the proposer. To be considered, however, a written request to withdraw the proposal or the modified proposal must be received before the time and date specified above for receipt of proposals. Oral interviews may be conducted for each firm that submits a written proposal. The DEPARTMENT has the sole discretion as to whether it will or will not conduct oral interviews. In the event that the DEPARTMENT elects to conduct oral interviews, each proposer in the competitive range will be advised of the format for such interview, and will be provided with a schedule for such interview. Competitive range refers to a list of the most highly rated proposals based on the initial ranking of the proposals; it is based on the initial rating of each proposal measured against all evaluation criteria set forth in this RFP.

Confidential Information, Trade Secrets, and/or Proprietary Information must be uploaded into the Confidential/Proprietary folder provided on the Vendor Proposal webpage if submitted electronically, or sealed in a separate package with each page clearly marked "Confidential" if submitted on CD. The failure to separate and mark this information as per NRS 333.020 and 333.333 shall constitute a complete waiver of any and all claims for damages caused by release of the information by the DEPARTMENT. If the DEPARTMENT reviews the confidential information and determines that the information is not considered confidential pursuant to NRS Chapter 333, the DEPARTMENT will contact the proposer. The proposer must advise the DEPARTMENT as to whether it either accepts the DEPARTMENT's determination that the information is not confidential, or withdraws the information. The proposer will not be allowed to alter the proposal after the date and time set for receipt of proposals shown above. Notwithstanding the provisions in NRS Chapter 333, the DEPARTMENT retains its immunity pursuant to the provisions of NRS 239.012 for any "good faith" release of information, and the immunities from liability provided to it pursuant to NRS Chapter 41.

Issuance of this RFP shall in no way constitute a commitment by the DEPARTMENT to execute an agreement. The DEPARTMENT reserves the right to reject any or all proposals received in response to this RFP, or to cancel this RFP if it is deemed in the best interest of the DEPARTMENT to do so.

The DEPARTMENT reserves the right to issue supplemental notices to this RFP prior to the closing date. If a firm chooses to download this procurement from the www.nevadadot.com website, it is the firm's responsibility to check for any supplemental notices to this procurement from the www.nevadadot.com website.

The DEPARTMENT assumes no financial responsibility in connection with the proposers' costs incurred in the preparation and submission of the proposal packets, or by attending the oral interviews, if such interviews are conducted by the DEPARTMENT in its sole discretion.

Proposers should provide a minimum of three (3) references from similar projects performed for the state and/or large local government clients within the last three (3) years. Proposers are required to submit a Reference Questionnaire to the business references listed within the proposal. The business

references must submit the Reference Questionnaire directly to the DEPARTMENT's Agreement Services Section. It is the proposer's responsibility to ensure the completed forms are received by the DEPARTMENT on or before the proposal submission deadline for inclusion in the evaluation process. The DEPARTMENT may contact any or all business references for validation of information submitted. With this RFP, the proposer is furnished a copy of an Agreement sample (see Attachment F - Agreement Sample). To maintain consistency between the DEPARTMENT and its SERVICE PROVIDERS, only those portions of the Agreement sample which are open for negotiation shall be blank.

A pre-negotiation audit may be required by the DEPARTMENT's Internal Audit Division. All DEPARTMENT audits will be conducted in accordance with the AASHTO Uniform Audit and Accounting Guide 2012, which can be found at www.transportation.org. The Specific Rates of Compensation method of compensation shall be used for the proposer's services, as set forth in 48 CFR Chapter 1.

The following rules of contact shall apply during this procurement for the project:

A. After release of the RFP and through the Notice of Intent to the Notice of Award of the agreement, the proposers shall **ONLY** correspond with the DEPARTMENT regarding this RFP through the DEPARTMENT's designated representative as per NAC 333.155. The designated representative's contact information is:

Agreement Services
Nevada Department of Transportation
1263 South Stewart Street, Room 101A
Carson City, Nevada 89712
Phone: 775-888-7070, Option 1
Fax: 775-888-7101
agreeservices@dot.state.nv.us

B. The proposers shall not contact the DEPARTMENT's employees, including department heads, members of the review committee and/or any official who will participate in the decision to award the agreement regarding the project, except through the process identified above;

C. Any communications determined to be improper may result in disqualification, at the sole discretion of the DEPARTMENT;

D. Any official information regarding the RFP will be disseminated by the DEPARTMENT. Specific information necessary for the preparation of proposals will be disclosed to all proposers;

E. The DEPARTMENT will not be responsible for any oral exchange or any other information or exchange that occurs outside the official process specified herein.

SECTION II - PROPOSER QUESTIONS

The DEPARTMENT will respond to questions regarding the RFP, including requests for clarification and requests to correct errors, submitted in writing by proposers. Only **written** requests as described above will be considered. No oral requests will be considered. No requests for additional information or clarification to any other DEPARTMENT office, consultant, employee or the FHWA will be considered.

Any questions raised by proposers must be submitted in writing to Agreement Services, 1263 South Stewart Street, Room 101A, Carson City, Nevada, 89712, faxed to (775) 888-7101, submitted electronically on the Open Procurements section of www.nevadadot.com, or emailed to agreeservices@dot.state.nv.us and **received by 3:00 P.M. PST, on February 20, 2015**. Written responses will be distributed by the DEPARTMENT on or before **February 26, 2015**.

SECTION III - RFP SCHEDULE

Task	Date
Advertised	02/04/2015, 02/11/2015, and 02/18/2015
Proposers' Questions Due	02/20/2015
DEPARTMENT's Response to Proposers' Questions Distributed	02/26/2015
Proposal Due	03/17/2015

SECTION IV - DBE REQUIREMENTS

There are no Disadvantaged Business Enterprise (DBE) requirements for the project.

SECTION V - NEVADA BUSINESS LICENSE REQUIREMENT

The selected firm, prior to doing business in the State of Nevada, must be appropriately licensed by the Office of the Secretary of State pursuant to NRS 76.100. Information regarding the Nevada State Business License can be located at www.nvsos.gov.

Firms must provide the following:

A. Nevada State Business License Number, and

B. Business Entity's Legal Name (affirm that it is the same name under which the proposer is doing business)

Additionally, if the firm is a corporation, LLC, LP, LLP, or LLLP, or non-profit corporation based out of state, it must be registered as a foreign business entity equivalent in Nevada, in active status, and in good standing with the Nevada Secretary of State.

Each proposer shall clearly state, at the time of proposal, its willingness to adhere to this requirement by providing a copy of its Nevada State Business License, a copy of its application from the Secretary of State Office, or a print out of the entity status, which can be obtained from the Nevada Business Search found on the homepage of the Nevada Secretary of State's website at www.nvsos.gov.

Award of any RFP is contingent on a proposer having and holding an active and valid Nevada State Business License. The successful proposer must satisfy this requirement within five (5) business days of issuance of the Notice of Intent. If a proposer is unable or unwilling to adhere to this requirement, the DEPARTMENT will deem the proposer to be non-responsive, and the DEPARTMENT shall proceed to negotiate with the next most qualified firm, and so on, until an agreement, that is acceptable to the DEPARTMENT, is negotiated.

To apply for a Nevada State Business License or to file appropriate formation documents with the Nevada Secretary of State's office, please visit www.nvsos.gov. Business licenses can be obtained immediately by applying on-line; however, paper applications may take several weeks to process.

SECTION VI - SELECTION PROCESS

Selection will be based on the factors listed in the Evaluation Criteria Items section (see Section X (A)), which will be used by a Review Committee to evaluate the proposals. If the committee elects, in its sole discretion, to conduct oral interviews, each proposer in the competitive range shall be notified of the interview schedule, and will be required to confirm their willingness to attend the oral interview. Failure of a proposer to appear at the oral interview, if the committee elects to conduct such interviews, will be considered non-responsive, and that proposer will be eliminated from any further consideration. The committee tasked with ranking the proposals will be comprised of DEPARTMENT staff and other

members representing local entities, who shall remain anonymous to protect the integrity of the procurement process.

The committee may use the information submitted in the proposer's proposal package, the information referencing this RFP, and the information presented at the interview, if applicable, to arrive at the final ranking. The proposals will be ranked and an agreement shall be negotiated following the selection of a firm. If an acceptable agreement cannot be reached with the highest ranked firm, the DEPARTMENT shall proceed to negotiate with the next highest ranked firm, and so on, until an acceptable agreement is negotiated, or the DEPARTMENT, in its sole discretion, elects to terminate the solicitation.

SECTION VII - BACKGROUND

The DEPARTMENT's Director's Office has the need for a firm with the ability to perform financial and operational audits, and other related audit work of various operational areas within the DEPARTMENT.

SECTION VIII - SCOPE OF SERVICES

The Scope of Services consists of operational audits of various areas of the DEPARTMENT to identify opportunities for improving internal controls and to evaluate effectiveness and efficiency. The objectives of each audit include an initial assessment and a detailed assessment. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks.

The objectives of said audits are:

1. PROCUREMENT CARDS

- a. Initial assessment
 - i. Review current policies and procedures related to Procurement Cards;
 - ii. Review segregation of duties;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed;
 - ii. Determine if the proper accounting records and other documentation is available to support charges;
 - iii. Determine if the segregation of duties is adequate;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improvements to the policies and procedures and internal controls.

2. PURCHASING SUPPLIES AND EQUIPMENT

- a. Initial assessment
 - i. Review current policies and procedures related to Purchasing Supplies and Equipment;
 - ii. Review established policies and procedures for purchasing non-rental equipment;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed by HQ Divisions, and Districts;
 - ii. Determine if the appropriate controls are being followed consistently in the stockrooms located statewide for supplies and equipment;
 - iii. Determine if the established policies and procedures for purchasing vehicles (light fleet) and heavy equipment estimated to cost over \$50,000.00 are being followed (proper justification, approvals, procurement and reporting);
 - iv. Determine if the proper accounting records and other documentation is available to support charges;
 - v. Report on exceptions;

- vi. Recommend opportunities for improvements to the policies and procedures and internal controls

3. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Review established policies and procedures for coding productive labor and overhead activities appropriately on time sheets;
 - iii. Recommend opportunities for improvements to the policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the equipment mechanics are coding productive labor and overhead activities appropriately on time sheets;
 - ii. Determine if activities that should be coded as overhead are appropriately identified by equipment mechanics on time sheets;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improvements to the policies and procedures and internal controls.

4. OVERTIME

- a. Initial assessment
 - i. Review current policies and procedures related to Overtime;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if overtime is pre-approved per adopted policies and procedures (HQ Divisions, and Districts statewide);
 - ii. Determine if maintenance call-out procedures have been adopted in each District and are being followed for emergency maintenance activities;
 - iii. Determine if furlough restrictions on overtime are being followed;
 - iv. Report on exceptions;
 - v. Recommend opportunities for reducing the amount of overtime accrued at the District and Division level.
 - vi. Recommend opportunities for improvements to the policies and procedures and internal controls.

5. STATE VEHICLE USAGE

- a. Initial assessment
 - i. Review current policies and procedures related to State Vehicle Usage;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if prior approvals are obtained for home storage;
 - ii. Determine if home storage is properly reported to Accounting Division;
 - iii. Determine if reported improper use of state vehicles is investigated, and appropriate corrective measures are taken, if necessary;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

6. PROPER MAINTENANCE OF DEPARTMENT FACILITIES

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance of Department Facilities;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment

- i. Determine if maintenance schedules are kept for various building control systems (for example, HVAC) for each DEPARTMENT facility;
 - ii. Determine if facility maintenance is managed at each DEPARTMENT facility;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
7. **COST EFFECTIVENESS OF EQUIPMENT REBUILD PROGRAM** – For the last six years, the DEPARTMENT Equipment Division has rebuilt drive trains for selected heavy fleet such as trucks, loaders, and paint strippers. Some rebuild work is contracted out and some is performed in-house. The equipment mechanics working on the rebuild program are less available for day-to-day equipment maintenance functions. The DEPARTMENT has also had major maintenance on agency aircraft, such as new engines. The DEPARTMENT would like to assess the cost effectiveness of the major equipment rebuild program in the equipment division and the major maintenance program of agency aircraft and determine if it is an efficient use of DEPARTMENT resources.
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. Investigate and determine the cost effectiveness of the equipment rebuild program and major maintenance on agency aircraft;
 - ii. Recommend improvements to increase cost effectiveness or;
 - iii. Recommend other alternatives that would be more cost effective than the current program;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
8. **PROPER MANAGEMENT AND ADMINISTRATION OF MAINTENANCE CONTRACTS** – The DEPARTMENT contracts out various maintenance services. This can be outsourced work normally performed by maintenance forces (street sweeping, contracted surface treatments on pavements, janitorial services, facilities maintenance) and unique work that the DEPARTMENT does not have resources to perform (certain facilities maintenance activities, maintenance of elevators and escalators at pedestrian bridges). The DEPARTMENT would like to assess if the managers of maintenance contracts have the proper skills and training to monitor performance by contracted service providers and training for proper administration. For example, does a DEPARTMENT maintenance contractor manager receive training on proper review of invoices for work performed? How is performance monitored on maintenance contracts?
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. For outsourced maintenance contracts, determine who administers the contracts and assess whether the administration of contracts is delegated to the appropriate level;
 - ii. Assess whether the administrators of maintenance contracts receive appropriate training;
 - iii. In general, make recommendations to improve the effectiveness of administering and monitoring maintenance contracts;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls
9. **INTERLOCAL AGREEMENTS** – An agreement between public agencies to obtain a service from a public agency is known as an Interlocal Agreement. The DEPARTMENT also can enter into a Cooperative Agreement, which is an agreement between two or more public agencies for the

joint exercise of powers, privileges and authority. Authority is granted under NRS 277.045 and 277.180. An example of an Interlocal agreement is the DEPARTMENT distributing federal funds to a metropolitan planning organization (MPO) for their use on programs and projects.

- a. Initial assessment
 - i. Review current policies and procedures related to Interlocal Agreements;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - ii. Review amendments to Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - iii. Review the reported Interlocal Agreements and amendments for compliance with the reporting matrix approved by the Board of Transportation (as appropriate for the execution date of the agreement/amendment; the reporting matrix has been amended periodically);
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

10. PROFESSIONAL SERVICES CONTRACTS – The DEPARTMENT uses professional services contracts when it has insufficient resources to perform the work in-house, when it does not have in-house expertise, or to meet delivery schedule requirements in a timely manner. The DEPARTMENT would like to assess and improve how its technical Divisions determine when to outsource professional services. The following technical Divisions which use professional services contracts shall be considered under this item: Project Management; Roadway Design; Structures; Hydraulics; Landscape & Aesthetics; Right-of-Way; Environmental; Maintenance & Asset Management; Architectural; Traffic Operations; Construction; Materials; Roadway Systems; Multimodal Planning; Program Development; Safety; Locations. This task shall be limited to a review of state fiscal years 2011-2014.

- a. Initial assessment
 - i. Review current policies and procedures related to Professional Services Contracts;
 - ii. Interview the technical divisions listed above to assess how they determine the need to outsource professional services;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review sample scopes of work to determine if all or a portion of work should be considered to be eliminated from outsourcing in the future;
 - ii. Review amendments to professional services contracts to assess if they were anticipated in the original agreement or unanticipated. (For instance, that the original agreement allowed for the addition of future phases of work that was substantially more effort than the original scope of work, as with preliminary engineering proceeding after environmental clearance on design projects);
 - iii. Make recommendations to improve how the assessment to determine the need to outsource professional services is conducted;
 - iv. Make recommendations on reducing the number and cost of amendments to professional services contracts;
 - v. Make recommendations regarding where current staff may be better utilized before hiring outside professional services.

11. CONSTRUCTION CONTRACT CHANGE ORDERS – Construction contracts can be revised by change order. The contracts closed out in state fiscal years 2011 – 2014 shall be reviewed.

- a. Initial assessment

- i. Review current policies and procedures related to Construction Contract Change Orders;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Work with the Construction Division, and confirm the percentage of cost overruns/underruns due to change orders;
 - ii. Review the cause of change orders (design error; unforeseen conditions; added scope; etc.) and report on the distribution of change orders;
 - iii. Identify areas that commonly resulted in change orders that could be avoided through improved design review and other measures;
 - iv. Make recommendations on reducing the number of Construction Contract Change Orders.

12. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review the productivity of the Equipment Division and District equipment shops;
 - ii. Review equipment maintenance and repair that is outsourced and make recommendations on whether the work should continue to be outsourced or performed in-house;
 - iii. Review equipment maintenance and repair that is performed in-house and make recommendations on whether the work should continue to be performed in-house or outsourced;
 - iv. Report on observed discrepancies of productivity statistics between the equipment shops;
 - v. Make recommendations on how to improve the overall productivity of equipment shops.

SECTION IX - PROJECT SCHEDULE

It is anticipated that the project schedule will be twelve (12) to fifteen (15) months from the execution date of the agreement.

SECTION X - PROPOSAL CONTENT

A section of the proposal shall be devoted to each Evaluation Criteria Item. The proposal must be signed by the individual(s) legally authorized to bind the firm as per NRS 333.337.

A. EVALUATION CRITERIA ITEMS

1. Project Approach:

- a. Describe your firm's understanding of project requirements contained in the Scope of Services.
- b. Identify specific methods to be used to complete each project requirement.
- c. Identify potential complications or difficulties that might be encountered in the implementation of required services along with suggested resolutions for each.

2. Project Team:

- a. Provide a summary of the education including CPE Hours & Course Listing, and experience of each member of the Project Team who will be assigned to this project, including resumes for the project manager and the key principals.

- b. Include a current organizational chart of the project team, including sub-consultant(s) with responsibilities of team members identified therein.
- c. Identify the location(s) where actual work will be completed.
- d. Provide a percentage of work to be completed at each location.
- e. Identify the location of the office which will provide primary project control for this project.

3. Past Performance:

- a. Describe your firm's competence in the services to be provided contained in the Scope of Services.
- b. Provide the details of the audits completed, including Attestation Engagements, in accordance with Generally Accepted Government Auditing Standards in the past three (3) years.
- c. Provide information that your firm is free from personal, external, and organizational impairments to independence and avoid the appearance of such impairments to independence for the project contained in the Scope of Services.
- d. Provide a copy of the most recent Peer Review Report of the firm and Letter of Comments, if any.

4. Availability and Capacity:

- a. Provide a listing of your firm's technical equipment which will support this effort.
- b. Provide a matrix or chart which lists all current projects of the Project Team, the number of hours remaining for completion of each project and the estimated completion date for each project.
- c. In view of this data, describe your firm's ability to meet time lines established for this project.
- d. Identify the availability of Project Team to attend meetings and interact with DEPARTMENT staff on short notice.

5. Proximity of Project Team:

- a. Describe your firm's location in the geographical area.
- b. Describe your knowledge of the locality of the project.

6. Cost: Submitted in a separate sealed envelope.

Proposals shall be submitted in two (2) distinct parts - the **Technical Proposal** and the **Cost Proposal**. The Technical Proposal **must not** include any cost information. Electronic Cost Proposal submissions must be uploaded in the Cost Proposal file. While Technical Proposals submitted on CD and the hardcopy Cost Proposal may be shipped together in the same shipping container, the Technical Proposals and the Cost Proposal must be placed in separate envelopes within the shipping container and clearly marked with the proposer's name and the RFP number; each respective envelope must be marked "Technical Proposal" or "Cost Proposal," as appropriate.

B. PROPOSAL LIMITATIONS

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statements of Qualification (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

C. DISCLOSURE OF CURRENT AND FORMER STATE EMPLOYEES

Proposals from firms employing current employees or former employees of the State of Nevada will be considered pursuant to the requirements and limitations set forth in the NRS Chapter 333.705, and the State Administrative Manual, Sections 322 and 323.

If the apparent top-ranked firm proposes any current state employees or former state employees who left state service within the preceding two (2) years, the DEPARTMENT must request approval from the State Board of Examiners (BOE) prior to entering into an agreement with such firm. The proposer shall submit, as part of their proposal, the "Authorization Current Employee, Authorization Former Employee Form" to assist the DEPARTMENT in requesting approval from the BOE.

The forms are located at http://purchasing.state.nv.us/contracting/current_and_former.htm. In the event of a denial by the BOE, the proposer will be allowed one (1) opportunity to replace the disapproved employee with another employee who possesses substantially equivalent capabilities. The DEPARTMENT has the authority to approve or deny the equivalent employee.

SECTION XI - AWARD PROCESS

The DEPARTMENT shall issue its Notice of Intent in accordance with NAC §333.170. Any award is contingent upon the successful negotiation of final contract terms and upon approval of the Transportation Board, when required. Negotiations shall be confidential and not subject to disclosure to competing firms. The terms agreed to by the parties shall be confidential until an agreement is executed. If contract negotiations cannot be concluded successfully, the DEPARTMENT, at its sole discretion and upon written notice to all firms, may negotiate a contract with the next highest ranking firm or withdraw the RFP and cancel this procurement.

The DEPARTMENT shall issue a Notice of Award in accordance with NAC §333.170, at which time proposals are no longer confidential and can be requested by the public from the DEPARTMENT via a Public Records Request, which can be located at: www.nevadadot.com/Contact_Us/Public_Records_Requests.aspx.

SECTION XII - TERMS, CONDITIONS AND EXCEPTIONS

This procurement is being conducted in accordance with NRS Chapters 333 and 408 and NAC Chapter 333.

The DEPARTMENT reserves the right to alter, amend, or modify any provisions of this RFP, or to withdraw this RFP, at any time prior to the award of a contract pursuant hereto, if, in the sole discretion of the DEPARTMENT, it is in the best interest of the state to do so.

The DEPARTMENT reserves the right to waive informalities and minor irregularities in proposals received.

The DEPARTMENT reserves the right to reject any or all proposals received prior to contract award (NRS §333.350).

The DEPARTMENT shall not be obligated to accept the lowest priced proposal, but will make an award in the best interests of the State of Nevada after all factors have been evaluated (NRS §333.335).

Any irregularities or lack of clarity in the RFP must be brought to Agreement Service's attention as soon as possible, so that corrective addenda may be furnished to all proposers.

Alterations, modifications or variations to a proposal may not be considered unless authorized by the RFP, or by an addendum or an amendment to the RFP.

Proposals which appear unrealistic in the terms of technical commitments, lack of technical competence, or are indicative of failure to comprehend the complexity and risk of this contract, may be rejected.

All materials submitted in accordance with the prescribed deadline become the property of the DEPARTMENT and will not be returned. The DEPARTMENT's selection or rejection of a proposal does not affect this right. The master copy of each proposal shall be retained for official files and will become public record after execution of a contract. Only specific parts of the proposal may be labeled a "trade secret," provided that the proposer agrees to defend and indemnify the DEPARTMENT for honoring such a designation (NRS §333.333); unsuccessful proposals containing "trade secrets" will be returned pursuant to NRS 293.010. The failure to so label any information shall constitute a complete waiver of any and all claims for damages caused by any release of such information by the DEPARTMENT. The DEPARTMENT shall not be liable for disclosure or release of information when authorized or required by law to do so pursuant to NRS 239.012.

A proposal submitted in response to this RFP must identify any sub-consultants, and outline the contractual relationship between the awarded proposer and each such sub-consultant. An official of each proposed sub-consultant must sign, and include as part of the proposal submitted in response to this RFP, a statement to the effect that the sub-consultant has read this RFP, and agrees to abide by the awarded proposer's obligations. A sub-consultant's compliance with these requirements does not create a contractual relationship between the sub-consultant and the DEPARTMENT.

The awarded proposer will be the sole point of contract responsibility. The DEPARTMENT will look solely to the awarded proposer for the performance of all contractual obligations, which may result from an award based on this RFP, and the awarded proposer shall not be relieved for the non-performance of any or all of its sub-consultants.

The awarded proposer must maintain, for the duration of its contract, insurance coverage as set forth in the agreement executed in response to this RFP. Work on the contract shall not begin until after the awarded proposer has submitted to the DEPARTMENT acceptable evidence of the required insurance coverage. Failure to maintain any required insurance coverage or alternative method of insurance acceptable to the DEPARTMENT in its sole discretion will be deemed a breach of contract.

Each proposer must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict must be disclosed. By submitting a proposal in response to this RFP, proposers affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a proposer's proposal. An award will not be made where a conflict of interest exists. The DEPARTMENT, in its sole discretion, will determine whether a conflict of interest exists and whether it may reflect negatively on the DEPARTMENT's selection of a proposer. The DEPARTMENT reserves the right in its sole discretion to impose additional requirements upon the proposer to mitigate

such conflict of interest or to disqualify any proposer on the grounds of an actual or an apparent conflict of interest.

The DEPARTMENT will not be liable for Federal, State, or Local excise taxes.

The DEPARTMENT reserves the right to negotiate final contract terms with any proposer selected in accordance with NAC §333.170. The contract between the parties will consist of the final executed contract, the RFP with any modifications thereto, and the awarded proposer's proposal with any modifications and clarifications thereto that are incorporated at the request of the DEPARTMENT during the evaluation and negotiation process. In the event of any conflict or contradiction between or among these documents, the documents shall control in the following order of precedence: the final executed contract, addenda to the RFP, the RFP, any modifications and clarifications to the awarded proposer's proposal, and the awarded proposer's proposal. Specific exceptions to this general rule may be noted in the final executed contract.

The proposer understands and acknowledges that the representations above are material and important, and will be relied on by the DEPARTMENT in its evaluation of a proposal. Any misrepresentation by a proposer shall be treated as fraudulent concealment from the DEPARTMENT of the true facts relating to the proposal.

No announcement concerning the award of a contract as a result of this RFP can be made without the prior written approval of the DEPARTMENT.

The Nevada Attorney General will not render any type of legal opinion regarding this transaction.

SECTION XIII - PROTEST PROCEDURE

Protests may be filed only with respect to:

1. Allegations that the terms of the RFP are wholly ambiguous, are contrary to legal requirements applicable to the procurement, or exceed the DEPARTMENT's authority, and/or
2. A determination as to whether a proposal is responsive to the requirements of the RFP, or failed any Pass/Fail criteria, as applicable, and/or
3. The award of an Agreement.

A. DEADLINES FOR PROTESTS

Protests concerning the issues described in Section XIII (1) and contained in the RFP must be filed no later than ten (10) calendar days prior to the proposal due date, and those contained in any amendment to the RFP must be filed no later than three (3) business days after the DEPARTMENT distributes the related addenda.

Protests concerning the issues described in Section XIII (2) must be filed within ten (10) calendar days after the DEPARTMENT issues to the proposer a notice regarding the failure of any pass/fail criteria, or a notice regarding the non-responsiveness of the proposal.

Protests concerning the issue described in Section XIII (3) must be filed within ten (10) calendar days after the DEPARTMENT issues the Notice of Award.

The DEPARTMENT will not accept any protests received after the above-stated deadlines for receipt of such protests.

B. PROTEST CONTENTS

Protests shall include information about the protesting firm, including the firm's name, mailing address, and phone number, as well as the name of the individual responsible for the submission of the protest. Protests shall completely and succinctly state the grounds for the protest, its legal authority, and its factual basis; protests shall include all factual and legal documentation in sufficient detail to establish the merits of the protest. Statements shall be sworn and submitted under penalty of perjury.

C. FILING OF PROTEST

Protests shall be in writing, and filed by hand delivery on or before the applicable deadline to:

Nevada Department of Transportation
ATTN: Administrative Services/Dispute Resolution Office
1263 South Stewart Street, Room 101A
Carson City, NV 89712

The proposer filing the protest shall concurrently submit a copy of the protest to the other proposers; the other proposers' addresses may be obtained from the DEPARTMENT.

D. COMMENTS FROM OTHER PROPOSERS

Other proposers may file statements in support of or in opposition to the protest within seven (7) calendar days of the filing of the protest. The DEPARTMENT shall promptly forward copies of all such statements to the protester. Any statements shall be sworn and submitted under penalty of perjury.

E. BURDEN OF PROOF

The protester shall have the burden of proving the basis of its protest. The DEPARTMENT may, in its sole discretion, discuss the protest with the protester and other proposers. No hearing will be held on the protest. The protest shall be decided on the basis of written submissions.

F. DECISION ON PROTEST

The DEPARTMENT's Director or designee shall issue a written decision regarding the protest within thirty (30) calendar days after the filing of the detailed statement of protest. If it is necessary to address the issues raised in a protest, the DEPARTMENT may, in its sole discretion, make appropriate revisions to the RFP by issuing addenda.

G. PROTESTER'S PAYMENT OF COSTS

If a protest is denied, the proposer filing the protest shall be liable for the DEPARTMENT's costs reasonably incurred to defend against or resolve the protest, including attorney's fees, consultant fees and costs, and any reasonably unavoidable damages sustained by the DEPARTMENT as a consequence of the protest.

H. RIGHTS AND OBLIGATIONS OF PROPOSERS

Each proposer, by submitting its proposal, expressly recognizes the limitation on its rights to protest provided in this Section XIII and expressly waives all other rights and remedies, and agrees that the decision on the protest is final and conclusive. If a proposer disregards, disputes, or does not follow the exclusive protest remedies provided in this section, it shall indemnify and hold harmless the DEPARTMENT and its officers, employees, agents, and consultants from and against all liabilities, fees and costs, including legal and consultant fees and costs, and damages incurred or suffered as a result

of such proposer's actions. **Each proposer, by submitting a proposal, shall be deemed to have irrevocably and unconditionally agreed to this indemnity obligation.**

No Stay Pending Final Determination: Agreement negotiations with the selected proposer shall not be stayed during the pendency of any protest. Any agreement with the selected proposer shall be made contingent upon the outcome of any pending protest.

ATTACHMENTS

- Attachment A - Statement of Qualification
- Attachment B - Reference Questionnaire
- Attachment C - Cost Proposal
- Attachment D - Checklist
- Attachment E - Title VI Compliance Questionnaire
- Attachment F - Agreement Sample

Attachment A
Statement of Qualification

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Statement_of_Qualification_Form.pdf

The Statement of Qualification Form must be completed in full, and submitted as part of the proposal package per Request for Proposal instructions.

1. Date prepared: _____
2. Firm's name: _____
3. Firm's address: _____
Phone: _____ FAX: _____
4. Is your local office the main office? _____ or branch office? _____ or sole office? _____
5. Year your firm was established: _____
6. Year your local office was established: _____
7. Location of:
 - a. Main office: _____
 - b. Local office: _____
 - c. Invoice remit-to office: _____
8. Year former firm(s) were established:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
9. Name, title, telephone number, address and e-mail address of one principal in firm who may be contacted:

10. List locations of other offices (no more than five):

	<u>Address</u>	<u>Telephone</u>	<u>No. of Personnel</u>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____

11. Total employees presently employed:
- a. At your local Northern Nevada office: _____
 At your local Southern Nevada office: _____
- b. Total in your firm: _____
12. By category, give the number of projects your firm is working on / has worked:
- | | <u>Current/Active</u> | <u>Last Five (5) Years</u> |
|------------------------|-----------------------|----------------------------|
| a. Public/Governmental | _____ | _____ |
| b. Commercial | _____ | _____ |
| c. Residential | _____ | _____ |
| d. Other | _____ | _____ |
13. Nevada Department of Transportation encourages the participation and utilization of minority and women-owned businesses.
- a. Is your firm certified as a minority-owned, women-owned or disabled veteran-owned business?
 Yes ___ No ___ Specify _____
- b. If yes, by what governmental agency? _____
14. Specialty: _____ (i.e.: Project Management, etc.)

The DEPARTMENT periodically engages consultants to perform work of a specialized nature including (but not limited to) such areas as DBE Supportive Services, Claims Review, etc.

I. Briefly describe your specialty as it applies to this Project's discipline, and the scope of the services that your firm provides.

II. Select three recent projects that have applicability to this Project, and list a reference that the DEPARTMENT may contact for each.

PROJECT NAME	REFERENCE	TELEPHONE
		()
		()
		()



**Attachment B
Reference Questionnaire
State of Nevada
Department of Transportation**

RFP No. 066-15-002 REFERENCE QUESTIONNAIRE
FOR:

(Name of company requesting reference)

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Reference_Questionnaire_070-028_Jan2014.pdf

This form is being submitted to your company for completion as a business reference for the company listed above. Please return this form to the Nevada Department of Transportation (NDOT) via email to agreeservices@dot.state.nv.us, or fax to (775) 888-7101 no later than **March 17, 2015, at 3:00pm**. Do not remit this document to the company requesting the reference.

The information contained in this questionnaire will be confidential and will not be accessible to the referenced company. For questions or concerns regarding this form, please contact the Agreement Services Division by phone (775) 888-7070 or email agreeservices@dot.state.nv.us and refer to the RFP number.

CONFIDENTIAL INFORMATION

Company providing reference: _____
 Contact name and title/position: _____
 Contact telephone number: _____
 Contact email address: _____

Questions:

1. In what capacity have you worked with this company in the past? Please explain the company's responsibilities.
COMMENTS:

2. How would you rate this company's knowledge and expertise?
____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

3. How would you rate the company's flexibility relative to changes in the project scope and timelines?
____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

4. What was your level of satisfaction with hard-copy materials/products developed by the company?
_____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

5. Was the work done by this company completed on time and within budget?
COMMENTS on Time:

COMMENTS on Budget:

6. Who were the company's principal representatives involved in your project and how would you rate them individually? Please comment on the skills, knowledge, behaviors or other factors on which you base your rating.
(3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

COMMENTS:

7. With which aspect(s) of this company were you:
Most satisfied with
COMMENTS:

Least satisfied with
COMMENTS:

8. Would you recommend this company's service to your organization again?
COMMENTS:

**Attachment C
Cost Proposal**

RFP No.: 066-15-002 Statewide NDOT Operational Audit

INSTRUCTIONS: The Cost Proposal shall be itemized by task, and then added up for the Total Proposed Cost. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks. Each task is described in Section VIII - Scope of Services.

The DEPARTMENT has established an initial budget for the Statewide NDOT Operational Audit of \$650,000.00.

Task	Cost Per Task
1a. Procurement Cards-Initial assessment	
1b. Procurement Cards-Detailed assessment	
2a. Purchasing Supplies And Equipment-Initial assessment	
2b. Purchasing Supplies And Equipment-Detailed assessment	
3a. Maintenance And Equipment Shops-Initial assessment	
3b. Maintenance And Equipment Shops-Detailed assessment	
4a. Overtime-Initial assessment	
4b. Overtime-Detailed assessment	
5a. State Vehicle Usage-Initial assessment	
5b. State Vehicle Usage-Detailed assessment	
6a. Proper Maintenance of Department Facilities-Initial assessment	
6b. Proper Maintenance of Department Facilities-Detailed assessment	
7a. Cost Effectiveness of Equipment Rebuild Program-Initial assessment	
7b. Cost Effectiveness of Equipment Rebuild Program-Detailed assessment	
8a. Proper Management and Administration of Maintenance Contracts-Initial assessment	
8b. Proper Management and Administration of Maintenance Contracts-Detailed assessment	
9a. Interlocal Agreements-Initial assessment	
9b. Interlocal Agreements-Detailed assessment	
10a. Professional Services Contracts-Initial assessment	
10b. Professional Services Contracts-Detailed assessment	

11a. Construction Contract Change Orders-Initial assessment	
11b. Construction Contract Change Orders- Detailed assessment	
12a. Maintenance and Equipment Shops-Initial assessment	
12b. Maintenance and Equipment Shops-Detailed assessment	
Total Proposed Cost:	

Name

Signature

Firm Name

Attachment D Checklist

This checklist is provided for the proposer's convenience only, and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite items in the number and form set forth in the proposal instructions, may in the sole discretion of the DEPARTMENT, be deemed non-responsive and not considered for contract award.

1. Number of Pages within Page Range (see Section X (B))
2. Sections match Evaluation Criteria Items (see Section X (A))
3. Technical Proposal
4. Cost Proposal in a separate sealed envelope
5. Statement of Qualification (see Section X (B))
6. Nevada State Business License (see Section V)

Attachment E
Title VI Compliance Questionnaire

Title VI is a statute provision of the Civil Rights Act of 1964:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 U.S.C. Sec 2000d)

The following information will be used by the Nevada Department of Transportation (DEPARTMENT) and the Federal Highway Administration (FHWA) for statistical purposes only. This information will be stored confidentially, and will not affect any decisions made by the DEPARTMENT.

Your participation is voluntary, but would be greatly appreciated.

Choose one ethnic group with which the principal owner(s) most identify:

- Black** (Not of Hispanic origin: All persons having origins in any of the Black racial groups.)
- Asian/Pacific Islander** (All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.)
- Hispanic** (All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)
- Native American** (All persons having origins in any of the original peoples of North America and who maintain cultural identification through a tribal affiliation or community recognition.)
- White** (Not of Hispanic origin: All persons having origins in any of the original peoples of Europe, North Africa, or Middle East.)
- Other** (All persons not matching one of the other choices.)

Sex: Male Female

- I understand my participation is voluntary and decline to provide the requested information

Firm Name: _____

Owner Name (Print): _____

Owner Name (Sign): _____

Date: _____

Attachment F
Agreement Sample
SERVICE AGREEMENT

This Agreement, made and entered into the _____ day of _____, _____ by and between the STATE OF NEVADA, acting by and through its DEPARTMENT OF TRANSPORTATION (hereinafter "DEPARTMENT") and **NAME AND ADDRESS** (hereinafter "SERVICE PROVIDER"). Individually they are each a "Party" and collectively they are the "Parties."

WITNESSETH:

WHEREAS, the Director of the DEPARTMENT may, pursuant to Nevada Revised Statutes (hereinafter "NRS") Chapter 333 & Chapter 408, contract for technical services that may be required; and

WHEREAS, NRS Chapter 333 authorizes heads of state departments to contract for the services of independent contractors; and

WHEREAS, **PROJECT IDENTIFICATION**, is necessary for **PROJECT EXPLANATION** (hereinafter "PROJECT"); and

WHEREAS, SERVICE PROVIDER's services will be of great benefit to the DEPARTMENT and to the people of the State of Nevada.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is agreed by and between the Parties as follows:

ARTICLE I - SCOPE OF SERVICES

1. The SERVICE PROVIDER agrees to **SUMMARIZE PROJECT DESCRIPTION OR INSERT:** perform services listed in Attachment A - Scope of Services attached hereto and incorporated herein.
2. The SERVICE PROVIDER agrees to furnish all labor, materials, services, equipment, tools and other expenses necessary to perform the professional services required under the terms of this Agreement, except as specifically provided otherwise herein.
3. The SERVICE PROVIDER agrees to comply with all requirements contained in the underlying Request for Proposal which is incorporated into this Agreement by reference. **ONLY USE PARAGRAPH IF APPLICABLE**

ARTICLE II - PERFORMANCE

1. The term of this Agreement shall be from the date first written above through and including **DATE**, unless a change extending the term is further agreed to by written amendment signed by all parties to this Agreement and approved by appropriate official action of the governing body of the DEPARTMENT prior to such term expiration date.

OR

1. The term of this Agreement shall be from the date first written above through and including **DATE**, thereby terminating **NUMBER (#)** years from the above date or upon completion of the case, including any appeal, whichever comes first. **ONLY USE PARAGRAPH FOR EXPERT WITNESS OR LEGAL**

2. In the event that the SERVICE PROVIDER performs or causes to be performed any work after: (a) the Agreement's expiration date as set forth within this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date; or (b) termination of this Agreement prior to the expiration date set forth within this Agreement; then the DEPARTMENT shall make no payment for work performed following the expiration or termination dates, and the SERVICE PROVIDER shall forfeit any and all right to payment for such work.

3. The SERVICE PROVIDER, on behalf of itself, its spouses, heirs, executors, administrators, successors, subrogees, servants, insurers, attorneys, independent representatives, personal representatives, agents, and assigns, does hereby waive, release, and forever discharge the State of Nevada, the DEPARTMENT, and each and every of their departments, divisions, agencies, officers, directors, agents, contractors, and

employees, from any and all claims, demands, liens, liability, actions, causes of action, and suits for damages, at law and in equity, in any way connected with or arising from the SERVICE PROVIDER's provision of services and work performed following termination of this Agreement, and/or following the expiration date of this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date.

4. Neither the State of Nevada, the DEPARTMENT, nor any of their departments, divisions, agencies, officers, directors, agents, contractors, and employees, shall have authority to extend this Agreement beyond the expiration date set forth within this Agreement, unless such extension is set forth within a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date. The SERVICE PROVIDER shall not rely upon any oral or written representations expressed extrinsic to a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date, purporting to alter or amend this Agreement, including but not limited representations relating to the extension of the Agreement's expiration date.

5. Paragraphs 1 through 4 of this Article II - Performance, shall survive the termination and expiration of this Agreement.

6. The SERVICE PROVIDER shall not proceed with said work until a copy of this Agreement is fully executed, signed by all individuals on the signatory lines below (hereinafter the "Final Execution Date"), and the Agreement is received by the SERVICE PROVIDER, which shall then constitute the written "Notice to Proceed" from the DEPARTMENT. The SERVICE PROVIDER shall notify the DEPARTMENT in writing of the exact date of commencement. If the SERVICE PROVIDER does commence said work prior to receiving said "Notice to Proceed" or prior to the Final Execution Date, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Final Execution Date and/or Notice to Proceed. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

OR

6. The SERVICE PROVIDER shall not proceed with work until the SERVICE PROVIDER receives a written "Notice to Proceed" from the DEPARTMENT. If the SERVICE PROVIDER does commence said work prior to receiving said Notice to Proceed, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Notice to Proceed and/or Final Execution Date. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR PARTIALLY OR FULLY FEDERALLY FUNDED PROJECTS**

7. The SERVICE PROVIDER agrees to complete the PROJECT within **NUMBER (#)** calendar **OR** working days of the commencement day of the PROJECT and agrees to pay to the DEPARTMENT, the sum of **NUMBER** and **#/100 Dollars (\$#)** for each and every calendar day past said date when the delay is caused by negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's direct control. These damages are not intended as a penalty. Damages are difficult to ascertain and the Parties agree that this amount is a reasonable estimate of presumed actual damages. **ONLY USE PARAGRAPH IF APPLICABLE**

8. In the event the DEPARTMENT discovers a SERVICE PROVIDER's error or omission before its discovery by the SERVICE PROVIDER, the DEPARTMENT shall not unreasonably delay in notifying SERVICE PROVIDER of such error or omission. DEPARTMENT's notice to SERVICE PROVIDER shall specify the maximum time period SERVICE PROVIDER will be allowed for correction. The SERVICE PROVIDER shall make all necessary corrections resulting from its errors and omissions, and shall without delay make any corrections necessitated by the negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's control, and shall make such corrections without additional compensation. SERVICE PROVIDER shall track all related costs for the correction. Acceptance of the professional services by the DEPARTMENT will not relieve the

SERVICE PROVIDER of the responsibility for any subsequent correction of any such errors and omissions, and the clarification of any ambiguities. The SERVICE PROVIDER will be responsible for additional costs in subsequent related construction resulting from its errors or omissions. Should the DEPARTMENT use its own personnel, supplies or equipment to remedy the deficiency, all such costs incurred by the DEPARTMENT shall be deducted from the sum due or which may become due to the SERVICE PROVIDER. In the event all such costs and charges incurred by the DEPARTMENT exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall reimburse the DEPARTMENT the amount of said excess.

9. The SERVICE PROVIDER shall assign one individual throughout the life of this Agreement who shall have overall PROJECT responsibility unless illness or termination requires replacement. **IF APPLICABLE ADD:** This individual shall be registered in accordance with NRS Chapter 625, Professional Engineers and Land Surveyors. This individual shall ensure that each sheet of the final submittal, including the title sheet, is stamped (electronic or wet stamp acceptable), signed and dated (original signature and date required) in accordance with NRS Chapter 625 and Nevada Administrative Code, Chapter 625.

10. A key person is defined as any individual identified by the SERVICE PROVIDER in its proposal as being part of the team to be assigned to the PROJECT. The SERVICE PROVIDER acknowledges and agrees, that the award of this Agreement was based, in part, on its ability to manage the PROJECT, and the qualifications, experience, and capacity of the SERVICE PROVIDER's aforementioned key persons and team. The SERVICE PROVIDER represents, warrants and covenants that such key persons are and will continue to be available to undertake and perform all services identified herein and fulfill the roles identified in its proposal. The SERVICE PROVIDER shall notify the DEPARTMENT in writing within ten (10) calendar days when a key person leaves the PROJECT team. **ONLY USE PARAGRAPH IF APPLICABLE**

a. If a key person leaves the PROJECT team, the SERVICE PROVIDER shall promptly propose a replacement within thirty (30) calendar days to and for the DEPARTMENT's review and written consent.

b. The DEPARTMENT shall have the unilateral right to terminate this Agreement:

(1) If a key person leaves the PROJECT team for a reason other than death, retirement, incapacitation or leaving SERVICE PROVIDER's employment (including the employment with SERVICE PROVIDER's affiliates, subsidiaries and parent companies/organizations);

(2) If a key person listed by the SERVICE PROVIDER in its proposal to perform or supervise various aspects of design is changed or leaves the PROJECT team; or

(3) If the DEPARTMENT does not accept the SERVICE PROVIDER's proposed key person replacement.

c. If this Agreement is terminated pursuant to the above, the SERVICE PROVIDER shall be paid for actual costs incurred for all services rendered and accepted by the DEPARTMENT and an amount of fee proportional to the work completed as of the date of termination. Additionally, the SERVICE PROVIDER shall not be entitled to any settlement costs, if any. Such termination will not occur if the SERVICE PROVIDER provides a replacement that is acceptable to the DEPARTMENT within thirty (30) calendar days of the date when the key person is changed or has left the PROJECT team.

11. The SERVICE PROVIDER shall at all times maintain control over and have complete responsibility for all services performed pursuant to this Agreement by the SERVICE PROVIDER and any of its subcontractors.

12. The SERVICE PROVIDER warrants that all deliverables and professional services produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry. The standard of care applicable to SERVICE PROVIDER's services will be of the degree of skill and diligence normally employed by professional engineers **OR** SERVICE PROVIDERS performing the same or similar services at the time said services are performed.

13. This Agreement, and any amendments, may be suspended temporarily, either wholly or in part, by the DEPARTMENT upon oral notice confirmed in writing within ten (10) calendar days, when the DEPARTMENT determines that conditions beyond the control of the SERVICE PROVIDER are unfavorable to its satisfactory continuation of work. Should such conditions be encountered, the time for completion may be extended in an amount determined by the DEPARTMENT to be equivalent to the delay. Requests for suspension of time by the SERVICE PROVIDER must have the written approval of the DEPARTMENT. No allowance shall be made for delay or suspension of the services solely due to the fault of the SERVICE PROVIDER.

14. An alteration ordered by the DEPARTMENT which substantially changes the services provided for by the expressed intent of this Agreement will be considered extra professional services and shall be specified in a written amendment signed by all Parties, which will set forth the nature and scope thereof. The method of payment for extra professional services shall be specified at the time the amendment is written.

15. The SERVICE PROVIDER shall not assign or subcontract, any of the professional services performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER will, subsequent to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the contract or agreement for professional services. The SERVICE PROVIDER shall require any subcontractor to comply with all provisions of 48 CFR Chapter 1, Part 31, in its agreement with the subcontractor, if the SERVICE PROVIDER subcontracts any professional services contemplated by this Agreement. The SERVICE PROVIDER will be responsible for any costs or deficiencies resulting from noncompliance if the subcontractors fail to comply with 48 CFR Chapter 1, Part 31.

16. The SERVICE PROVIDER agrees to complete and sign Attachment B - "AFFIDAVIT REQUIRED UNDER SECTION 112(c) of Title 23 United States Code, Act of August 27, 1958 and Part 29 of Title 49, Code of Federal Regulations, November 17, 1987," Attachment C - "CERTIFICATION REQUIRED BY SECTION 1352 of TITLE 31, UNITED STATES CODE, RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS," and "INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES," attached hereto and incorporated herein. **ONLY USE PARAGRAPH IF PROJECT IS FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

17. The SERVICE PROVIDER acknowledges that the DEPARTMENT has established a Disadvantaged Business Enterprise (DBE) participation requirement of **NUMBER** percent (#%) of the total dollar value of the Agreement costs. A DBE must be a small business concern as defined by the U.S. Small Business Act, 15 U.S.C. § 632 or by 49 CFR Subtitle A, Part 26. **ONLY USE PARAGRAPH IF APPLICABLE**

18. Failure by the Service Provider to fulfill the DBE Agreement requirements and to demonstrate good faith efforts, either in the Service Provider's proposal or during the performance period, constitutes a breach of this Agreement. In event of such a breach, the DEPARTMENT may:

(a) Withhold progress payments or a portion thereof;

(b) Deduct, as damages, an amount equal to the unmet portion of the DBE commitment not achieved. This amount will be determined by multiplying the percentage of DBE participation proposed by the total cost set forth in the agreement and then multiplying the actual percentage of DBE participation used during the agreement by the total cost set forth in the agreement. In the event the actual percentage of DBE participation is less than the proposed percentage of DBE participation, the difference in these two figures shall be the amount of damages due to the DEPARTMENT;

(c) Remove the SERVICE PROVIDER from the prequalified list for repeated violations, falsifications, or misrepresentations; and/or

(d) Terminate the Agreement.

19. This Agreement shall not become effective until and unless approved by the State Board of Examiners. **ONLY USE PARAGRAPH IF APPLICABLE**

20. This Agreement is contingent upon the verification that the SERVICE PROVIDER has a valid and active Nevada Business License and is in good standing in all areas of the Secretary of State's business requirements. If the SERVICE PROVIDER is an out of state provider, the SERVICE PROVIDER must be registered as a foreign business entity equivalent in Nevada, in active status and in good standing.

ARTICLE III - TERMINATION

1. The DEPARTMENT may terminate this Agreement without cause **NUMBER (#)** calendar **OR** working days after service of a termination letter to the SERVICE PROVIDER. In the event this Agreement is terminated in this manner, the SERVICE PROVIDER shall be paid for the cost of the professional services which have been completed and accepted by the DEPARTMENT up to the date of termination.

2. The continuation of this Agreement beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Nevada State Legislature and/or federal sources. The DEPARTMENT may terminate this Agreement, and the SERVICE PROVIDER waives any and all claims for damages, effective immediately upon receipt of written notice, or any date specified therein, if for any reason the DEPARTMENT's funding from state and/or federal sources is not appropriated or is withdrawn, limited or impaired.

3. A default or breach may be declared with or without termination. This Agreement may be terminated by either Party upon written notice of default or breach to the other Party as follows:

a. If the SERVICE PROVIDER fails to provide or satisfactorily perform any of the professional services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or

b. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law or regulation to be held by the SERVICE PROVIDER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed or not renewed; or

c. If the SERVICE PROVIDER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of a bankruptcy court; or

d. If DEPARTMENT materially breaches any material duty under this Agreement and any such breach impairs the SERVICE PROVIDER's ability to perform; or

e. If it is found by the DEPARTMENT that any quid pro quo or gratuities in the form of money, services, entertainment, gifts or otherwise were offered or given by the SERVICE PROVIDER, or any agent or representative of the SERVICE PROVIDER, to any officer or employee of the State of Nevada with a view toward securing an agreement or securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performing of such agreement.

4. Termination upon a declared default or breach may be exercised after service of written notice and the subsequent failure of the defaulting Party, within fifteen (15) calendar days of service of that notice, to provide evidence, satisfactory to the aggrieved Party, showing the declared default or breach has been corrected. Such correspondence shall be deemed to have been served on the date of postmark.

5. In the event of the SERVICE PROVIDER's breach of this Agreement, all costs and charges incurred by the DEPARTMENT, together with the cost of completing the work under this Agreement, shall be deducted from any money due or which may become due to said SERVICE PROVIDER. If expenses exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall be liable and shall pay to the DEPARTMENT the amount of said excess.

6. This Agreement shall be terminated when the professional services contemplated and covered by this Agreement have been completely performed by the SERVICE PROVIDER, and all items of professional services have been approved and accepted by the DEPARTMENT.

ARTICLE IV - COST

1. The "specific rates of compensation" method of compensation shall be used for the SERVICE PROVIDER's services.

2. The total cost of the services by the SERVICE PROVIDER shall not exceed the sum of **NUMBER** and **#/100 Dollars (\$#)**, which includes the fixed fee.

3. The rate will be reimbursed at **NUMBER** and **#/100 Dollars (\$#)** per **DESCRIPTION** and shall include direct salary costs, indirect costs, other direct costs and fixed fee. **IF APPLICABLE, INCLUDE SCHEDULE AS AN ATTACHMENT**

4. The DEPARTMENT will pay the SERVICE PROVIDER in monthly installments based upon progress and final payment reports submitted by the SERVICE PROVIDER and as approved by the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

5. The SERVICE PROVIDER is required to submit a monthly progress report in the DEPARTMENT's format showing the status of the professional services and the degree of completion thereof.

6. The SERVICE PROVIDER agrees to complete and sign Attachment D - Service Provider Cost Certification of Final Indirect Costs, attached hereto and incorporated herein. **ONLY USE FOR PROJECTS PARTIALLY OR FULLY FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

IF APPLICABLE, INSERT THE FOLLOWING THREE PARAGRAPHS AT THE END OF THE METHOD OF COMPENSATION CHOSEN AND RENUMBER THEM ACCORDINGLY, EXCEPT WHEN THE LUMP SUM METHOD OF PAYMENT IS USED, IN WHICH CASE THEY ARE NOT TO BE INSERTED.

X. Travel costs will be reimbursed at the current rates allotted to state employees. Travel costs will be reimbursed based on actual costs limited by Federal Travel Regulations (FTR) and the CONUS rate for Nevada. The FTR breaks down meals and incidental expenses at its website: www.gsa.gov/mie. The first and last travel days are calculated at seventy-five percent (75%). The lodging rate excludes taxes and fees. Taxes and fees are reimbursable. See this website for lodging in Nevada: <http://www.gsa.gov/portal/category/100120>. The SERVICE PROVIDER shall provide lodging receipts.

X. The SERVICE PROVIDER shall be reimbursed for the use of company vehicles as agreed upon with the Project Manager. Cost shall include a direct expense that includes anticipated mileage, insurance, maintenance and a lease fee, if applicable.

X. When requested by the DEPARTMENT, the SERVICE PROVIDER shall schedule its own airline and rental car reservations by the most economical means for reimbursement. Original receipts for airfare and rental cars must be submitted with the "Claim for Travel Expense." The DEPARTMENT is not responsible for payment of any premium, deductible or assessments on insurance policies purchased by the SERVICE PROVIDER for a rental vehicle.

ARTICLE V - SCHEDULE OF PAYMENTS

1. The SERVICE PROVIDER shall submit a signed invoice monthly **OR** bi-weekly **OR** quarterly **OR** semi-annually **OR** yearly **OR** upon completion for all services rendered along with one copy of substantiating documentation. The invoice must be submitted on the SERVICE PROVIDER's stationery using the DEPARTMENT's format or submitted on the DEPARTMENT's standard invoice form. The DEPARTMENT will utilize its normal accounting procedure in the payment of the invoices submitted. **IF APPLICABLE ADD:** The Fixed Fee shall be paid monthly and shall be calculated as a percentage of the direct salary plus overhead costs of that month's invoice until the full agreed fee is paid.

2. Payment will be made for one hundred percent (100%) of the amount of each invoice, until a maximum of ninety percent (90%) of the total Agreement costs have been billed by the SERVICE PROVIDER. Thereafter, payment for the remaining ten percent (10%) of the total Agreement costs shall be withheld by the DEPARTMENT, until such time as the professional services delivered by the SERVICE PROVIDER have been completely accepted by the DEPARTMENT. The final audit shall be performed after the release of the retained amount, and may cause an adjustment of payments to the DEPARTMENT or to the SERVICE PROVIDER. No interest shall be paid to the SERVICE PROVIDER on this retained amount or any adjustment of payments. **ONLY USE PARAGRAPH IF APPLICABLE**

3. The DEPARTMENT reserves the right to inspect and approve the professional services performed before payment is made to the SERVICE PROVIDER. Payment will be withheld for deliverables and professional services the DEPARTMENT determines to be unsatisfactory in that they have not been provided in a workmanlike manner consistent with standards in the trade, profession or industry. Payment shall remain unpaid until the professional services are completed in accordance with the standards and work requirements defined in this Agreement. In such an event, the DEPARTMENT will provide the SERVICE PROVIDER with a written explanation as to why payment has been withheld.

4. The total cost of services for this Agreement, is the negotiated amount identified in Article IV, Paragraph 2. This amount was based upon the SERVICE PROVIDER's costs and fixed fee as well as the costs and fixed fees, if any, of all of its subcontractors. If a subcontractor does not expend all funds allocated to it for services identified in its agreement with the SERVICE PROVIDER, a copy of which shall be provided to the DEPARTMENT prior to issuance of the Notice to Proceed, the SERVICE PROVIDER shall not redistribute or expend such funds without the prior written approval of the DEPARTMENT. Failure to notify the DEPARTMENT prior to the use of such funds will constitute grounds for denial of reimbursement for such expenditures.

5. Payment of invoices, interest penalties, and discounts shall be paid as follows:

a. The SERVICE PROVIDER shall be paid within sixty (60) calendar days of a postmarked invoice which is complete, correct, and undisputed by the DEPARTMENT.

b. The DEPARTMENT shall have twenty (20) calendar days after postmark of an invoice to dispute any or all of the charges on that invoice. The undisputed amount shall be paid to the SERVICE PROVIDER within sixty (60) calendar days of the date of postmark. The disputed amount shall be negotiated and resolved in good faith by both Parties and paid within forty (40) calendar days after the date the corrected invoice is received by the DEPARTMENT or is approved by both Parties for payment.

c. If the DEPARTMENT fails to pay the SERVICE PROVIDER the undisputed amount within sixty (60) calendar days after the postmark date of the invoice, the interest penalty assessed to the DEPARTMENT shall be one percent (1%) of the undisputed amount per month, not to exceed a total of One Thousand and No/100 Dollars (\$1,000.00).

d. Payment of penalties shall not apply to the final payment or bill pertaining to this Agreement as determined by the post audit.

6. The prevailing party in an action to enforce this Agreement is entitled to reasonable attorney's fees and costs.

ARTICLE VI - MISCELLANEOUS PROVISIONS

1. The SERVICE PROVIDER shall be responsible for and shall comply with all applicable federal, state, and local government obligations and DEPARTMENT policies and procedures. The SERVICE PROVIDER will be responsible for and shall pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are SERVICE PROVIDER's responsibility in accordance with NRS Chapter 361. The SERVICE PROVIDER warrants that it has a valid business license. The SERVICE PROVIDER agrees to be responsible for and shall pay any such government obligations not paid by its subcontractors during performance of this Agreement. The DEPARTMENT may set-off any consideration due against any delinquent government obligation.

2. It is expressly understood that the SERVICE PROVIDER is an independent contractor, and is subject to all statutes and laws, including NRS 333.700 relating to independent contractors. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the DEPARTMENT whatsoever with respect to the indebtedness, liabilities, and obligations of the SERVICE PROVIDER or any other party. Neither the SERVICE PROVIDER nor its employees, agents or representatives shall be considered employees, agents or representatives of the DEPARTMENT.

3. The SERVICE PROVIDER shall be solely responsible for its own employees, and the DEPARTMENT shall have no obligation with respect to:

- a. Withholding of income taxes, FICA or any other taxes or fees;
- b. Industrial insurance coverage;
- c. Participation in any group insurance plans available to employees of the DEPARTMENT;
- d. Participation or contributions by either the SERVICE PROVIDER or the DEPARTMENT to the Public Employees Retirement System;
- e. Accumulation of vacation leave or sick leave; or
- f. Unemployment compensation coverage provided by the DEPARTMENT.

4. The SERVICE PROVIDER shall indemnify and hold the DEPARTMENT harmless from, and defend the DEPARTMENT against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes, fees, insurance, contributions, leave or coverage.

5. Unless expressly provided in this Agreement, the SERVICE PROVIDER shall not engage or use the devices and/or services of the DEPARTMENT's personnel without the prior written consent of the DEPARTMENT.

6. The SERVICE PROVIDER shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT proof of worker's compensation insurance as required by the NRS.

OR

6. The SERVICE PROVIDER, as a sole proprietor who does not use the services of his employees, if any, shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT Attachment E - "Worker's Compensation Insurance Affidavit." **ONLY USE PARAGRAPH IF APPLICABLE; RE-LETTER ATTACHMENTS IF NECESSARY**

7. The SERVICE PROVIDER shall furnish a Certificate of Errors and Omissions Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00). **INCREASE FROM \$1,000,000.00 UP TO \$3,000,000.00 DEPENDING UPON THE SIZE OF THE PROJECT**

8. The SERVICE PROVIDER shall furnish a Certificate, Declarations Page and an Endorsement designating the DEPARTMENT as an additional insured evidencing Commercial General Liability Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00) per occurrence. These policies shall be maintained for the entire period of this Agreement. The policies shall include a 30-day advance written notice of any cancellation of said policies. The SERVICE PROVIDER shall furnish the DEPARTMENT with certificates of such insurance prior to commencement of professional services.

9. All insurance required by this Agreement shall be placed with insurers with a rating from the current issue of Best's Key Rating Guide of no less than A-: VII.

10. The DEPARTMENT has the option of requesting, at any time, a meeting with the SERVICE PROVIDER or its authorized representative to discuss and review PROJECT status and the SERVICE PROVIDER shall furnish thereafter a copy of the minutes of such meetings to the DEPARTMENT.

11. The SERVICE PROVIDER has total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement, and shall check all such material accordingly for completeness, missing items, correct multipliers and consistency. The deliverables shall be reviewed by the DEPARTMENT for conformity with the DEPARTMENT's procedures and contract terms. The SERVICE PROVIDER acknowledges that review by the DEPARTMENT does not include detailed review or checking of major components and related details or the accuracy of such deliverables, and the DEPARTMENT's review shall not relieve the SERVICE PROVIDER of its total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement.

12. The SERVICE PROVIDER shall appear as an expert witness on behalf of the DEPARTMENT in any subsequent court action which involves any of the services required by this Agreement. Compensation for services rendered in this regard will be paid at a rate to be negotiated at the time such services are necessary.

13. Upon completion, termination or cancellation of the services embraced under this Agreement, all professional services inclusive of research, investigation and analysis data, reports (including files stored on mobile media), computations, tabulations, original drawings and design files (including CAD information stored on mobile media), correspondence input from external sources (including subcontractors), etc., shall be delivered to and become the property of the DEPARTMENT, without limitation. Reuse of said materials, information or data, during performance or following termination of this Agreement, on any other project or for any other purpose except as provided for herein, shall be at the DEPARTMENT's discretion and the DEPARTMENT's sole decision. The SERVICE PROVIDER shall not utilize any materials, information or data obtained as a result of performing the services called for in this Agreement in any commercial or academic publication or presentation without the express written permission of the DEPARTMENT. The SERVICE PROVIDER shall not reference an opinion of an employee or agent of the DEPARTMENT obtained as a result of performing the services called for in this Agreement, in any publication or presentation, without the written permission of the employee or agent to whom the opinion is attributed, in addition to the permission of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

14. All design drawings must be created and delivered to the DEPARTMENT in Microstation "dgn" format. Drawing files converted to Microstation format from other formats will not be accepted by the DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

15. All roadway design engineering files must be created and delivered to the DEPARTMENT in InRoads format. Design files converted to InRoads format from other formats will not be accepted by the

DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

16. All reports and notes for special provisions shall be delivered to the DEPARTMENT via FTP or email using the most current version of Microsoft Word. **ONLY USE PARAGRAPH IF APPLICABLE**

17. The SERVICE PROVIDER agrees that any reports, materials, studies, photographs, negatives, drawings or other documents prepared by the SERVICE PROVIDER in the performance of its obligations under this Agreement shall be the exclusive property of the DEPARTMENT. The SERVICE PROVIDER shall remit all such documents to the DEPARTMENT upon completion, termination or cancellation of this Agreement or upon written request of the DEPARTMENT. The SERVICE PROVIDER shall not use, willingly allow or cause to have such documents used for any purpose other than performance of the SERVICE PROVIDER's obligation under this Agreement, without the prior written consent of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

18. The SERVICE PROVIDER and successors, executors, administrators, and assigns of the SERVICE PROVIDER's interest in the professional services or the compensation herein provided shall be bound to the DEPARTMENT to the full legal extent to which the SERVICE PROVIDER is bound with respect to each of the terms of this Agreement.

19. The SERVICE PROVIDER warrants that it has not employed or retained any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) to solicit or secure this Agreement and that the SERVICE PROVIDER has not paid or agreed to pay any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) any fee, commission, percentage, brokerage fee, or any other gifts contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the DEPARTMENT shall have the right to annul this Agreement without liability, or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

20. It is the intent of the Parties to avoid and resolve disputes at the lowest level possible. Accordingly, the DEPARTMENT and the SERVICE PROVIDER will enter into a partnering relationship, pursuant to the provisions set forth in Attachment **LETTER**. Any unresolved disputes will be referred to a nonbinding dispute resolution process pursuant to the terms outlined in Attachment **LETTER**. Nothing herein contained shall impair the Parties' right to file suit in the state district courts of the State of Nevada in the event the dispute resolution process is unsuccessful. **ONLY USE PARAGRAPH IF APPLICABLE**

OR

20. Any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement shall be decided by the DEPARTMENT. It is the intent of the DEPARTMENT to resolve disputes at the lowest level possible. Nothing herein contained shall impair either of the Parties' right to file suit in the state district courts of the State of Nevada.

21. During the performance of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Compliance with Regulations: The SERVICE PROVIDER shall comply with all of the regulations relative to nondiscrimination in federally-assisted programs of 49 CFR Part 21 as they may be amended from time to time (hereinafter "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

b. Nondiscrimination: The SERVICE PROVIDER, with regard to the professional services performed by it during the Agreement, shall not discriminate on the grounds of race, color, age, religion, sex, creed, handicap, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The SERVICE PROVIDER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5. of the Regulations, including employment practices, when the Agreement covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, Including Procurement of Materials, and Equipment: In all solicitations either by competitive bidding or negotiation made by the SERVICE PROVIDER for professional services to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the SERVICE PROVIDER of the SERVICE PROVIDER's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, age, religion, sex, creed, handicap or national origin.

d. Information and Reports: The SERVICE PROVIDER shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a SERVICE PROVIDER is in the exclusive possession of another who fails or refuses to furnish this information, the SERVICE PROVIDER shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the SERVICE PROVIDER's noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding of payments to the SERVICE PROVIDER under the Agreement until the SERVICE PROVIDER complies, and/or

2. Cancellation, termination or suspension of the Agreement, in whole or in part.

f. Agreements with subcontractors will include provisions making all subcontractor records available for audit by the DEPARTMENT or the FHWA.

g. Incorporation of Provisions: The SERVICE PROVIDER will include the provisions of Paragraphs (a) through (f) above in every subcontract including procurement of materials and leases of equipment, unless exempt by Regulations, order, or instructions issued pursuant thereto. The SERVICE PROVIDER will take such action with respect to any subcontract or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. In the event SERVICE PROVIDER becomes involved in, or is threatened with litigation by a subcontractor or supplier as a result of such direction, the SERVICE PROVIDER may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and the SERVICE PROVIDER may request the United States to enter into such litigation to protect the interests of the United States.

22. In the event federal funds are used for payment of all or part of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Debarment and/or Suspension: The SERVICE PROVIDER certifies that neither it nor its subcontractors, nor their principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

b. ADA: The SERVICE PROVIDER and subcontractor shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1980, as amended, and regulations adopted thereunder contained in 49 CFR, Part 27, and any relevant program-specific regulations.

c. Civil Rights: The SERVICE PROVIDER and subcontractor shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or person offered employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition, including AIDS and AIDS-related conditions.

23. Each party agrees to keep and maintain under generally accepted accounting principles full, true and complete records and documents pertaining to this Agreement and present, at any reasonable time, such information for inspection, examination, review, audit and copying at any office where such records and documentation are maintained. It is expressly understood that the duly authorized representatives of the DEPARTMENT and the FHWA shall have the right to inspect/audit the professional services and charges of the SERVICE PROVIDER whenever such representatives may deem such inspection to be desirable or necessary. Such records and documentation shall be maintained for three (3) years after final payment is made.

24. To the fullest extent permitted by law, the SERVICE PROVIDER shall defend, indemnify and hold harmless the State of Nevada, and the employees, officers and agents of the State of Nevada from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorney's fees, that are caused by the negligence, errors, omissions, reckless or intentional misconduct of the SERVICE PROVIDER or the employees or agents of the SERVICE PROVIDER in the performance of this Agreement.

25. The SERVICE PROVIDER shall use its own vehicles and the DEPARTMENT is not responsible for the payment of any premiums, deductible or assessments on any insurance policies purchased by the SERVICE PROVIDER.

26. The SERVICE PROVIDER warrants that all deliverables and work produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry.

27. The SERVICE PROVIDER is required to register as a vendor with the Nevada State Controller's office. The Registration Substitute IRS Form W-9 can be accessed at http://controller.nv.gov/VendorServices/Vendor_Services.html. The SERVICE PROVIDER will follow the Registration Instructions, complete the Registration Substitute IRS Form W-9 and submit it to the State Controller's Office.

28. The SERVICE PROVIDER agrees that, prior to any sale, transfer, business name change, change in principals or any other occurrence that alters or this Agreement in any way, the SERVICE PROVIDER shall notify the DEPARTMENT of such intent at least seven (7) calendar days prior to making said change.

29. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other Party at the address set forth below:

FOR DEPARTMENT:

Rudy Malfabon, P.E., Director
Attn: **DIVISION CHIEF**
Nevada Department of Transportation
Division:
1263 South Stewart Street
Carson City, NV 89712
Phone:
Fax:
E-mail:

FOR SERVICE PROVIDER:

NAME
FIRM
MAILING ADDRESS, CITY, STATE, ZIP CODE
PHYSICAL ADDRESS, CITY, STATE, ZIP CODE
Phone:
Fax:
E-mail:

30. This Agreement and the rights and obligations of the Parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The Parties consent to the exclusive jurisdiction of the Nevada state district courts for enforcement of this Agreement.

31. As used herein the term "SERVICE PROVIDER" shall include the plural as well as the singular, and the feminine as well as the masculine.

32. Neither Party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, or accidents, fires, explosions, earthquakes, floods, winds, failure of public transportation, or any other similar serious cause beyond the reasonable control of either Party. In such an event the intervening cause must not be through the fault of the Party asserting such an excuse, and the excused Party is obligated promptly to perform in accordance with the terms of the Agreement after the intervening cause ceases.

33. In connection with the performance of work under this Agreement, the SERVICE PROVIDER agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability, pregnancy, sexual orientation, genetic information (GINA) or gender identity or expression, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation apprenticeship. The SERVICE PROVIDER further agrees to insert this provision in all

subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

34. The SERVICE PROVIDER shall keep confidential all information, in whatever form, produced, prepared, observed or received by the SERVICE PROVIDER to the extent that such information is confidential by law or otherwise required by this Agreement.

35. Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The Parties **OR** DEPARTMENT will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

36. The SERVICE PROVIDER shall provide a minimum of fifty-one percent (51%) of the combined value of all items of work covered by this Agreement. The SERVICE PROVIDER shall not assign or subcontract any of the work performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER shall, prior to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the subcontract or subagreement for said work. Any assignment of rights or delegation of duties under this Agreement, without the prior written consent of the DEPARTMENT, shall be void.

37. The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of the Agreement and this Agreement shall be construed as if such provision did not exist. The unenforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

38. Except as otherwise provided for by law or this Agreement, the rights and remedies of the Parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, the recovery of actual damages and the prevailing party's reasonable attorney's fees and costs.

39. It is specifically agreed between the Parties executing this Agreement that it is not intended by any of the provisions of any part of this Agreement to create in the public or any member thereof a third party beneficiary status hereunder, or to authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damage, or pursuant to the terms or provisions of this Agreement.

40. The Parties hereto represent and warrant that the person executing this Agreement on behalf of each Party has full power and authority to enter into this Agreement and that the Parties are authorized by law to perform the services set forth herein.

41. This Agreement constitutes the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto and the Attorney General.

GEORGIA DEPARTMENT OF TRANSPORTATION MANAGEMENT REVIEW

REPORT ASH10T1 REVISION 1

Jonathan P. Adams
Robert L. Crosslin
Francis A. Dutch
Max Inman
Bryan K. Neuhaus
Edwin K. Sherman
Anthony E. Wenig



AUGUST 2011

NOTICE:

THE VIEWS, OPINIONS, AND FINDINGS CONTAINED IN THIS REPORT ARE THOSE OF LMI AND SHOULD NOT BE CONSTRUED AS AN OFFICIAL AGENCY POSITION, POLICY, OR DECISION, UNLESS SO DESIGNATED BY OTHER OFFICIAL DOCUMENTATION.

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Executive Summary

The Georgia Department of Transportation (GDOT) wanted to comprehensively review its organization and management, including financial practices and technology and information management systems. In brief, it wanted to answer a question the GDOT chief engineer posed, “Are we headed in the right direction?”

The short answer is “Yes.” GDOT leadership recognizes that recent events have created a new reality. GDOT is implementing management policies and procedures that will move the organization forward and accomplish its mission. However, this new approach is not yet institutionalized throughout the organization.

GDOT, a state agency responsible to the citizens and elected officials of Georgia, is a proud organization with historically high standards of performance. “Do not let the sun set on a pothole” has been a common refrain. Georgia was frequently identified as having the “best highways” in America, but beginning in about 2008, GDOT was buffeted by both the economic downturn and a financial audit that identified an accounting error involving hundreds of millions of dollars. Resources became constrained and outside scrutiny increased. The old, costly way of doing business was no longer viable.

Challenging times require more of public-sector managers: they must become leaders, efficiently and effectively using limited resources, inspiring and motivating staff, and effectively communicating with stakeholders inside and outside government. Senior leadership at GDOT recognized the changed circumstances and began to adopt asset management as an approach to making informed, risk-based, resource allocations.

Asset management is a knowledge-based approach to resource allocation. It requires managers to know their priorities, their inventory, the condition of their assets, how the organization is performing, and the risks of possible outcomes. The asset management framework includes

- ◆ setting goals and planning,
- ◆ organizing in support of asset management,
- ◆ setting agency-wide policies and procedures,

-
- ◆ managing resources,
 - ◆ directing and managing program execution, and
 - ◆ monitoring and controlling program performance.

As part of asset management implementation, we recommend that GDOT do the following:

- ◆ *Develop an agency plan to roll out asset management practices throughout GDOT.* This includes establishing appropriate levels of service (outputs) that reflect the level of resources (inputs), developing policies that support asset management, fully implementing project management for capital and large operations and maintenance projects, and taking advantage of innovative approaches to operations and financing.
- ◆ *Develop a communication plan that reaches out to internal staff, external stakeholders, and the citizen customers of GDOT.*
- ◆ *Develop a strategic human resources plan to adjust to the severely constrained personnel policies stemming from the economic downturn.*
- ◆ *Restructure the organizational staffing.* In particular, have the audit office report directly to senior leadership.
- ◆ *Continue to demonstrate resourceful, flexible leadership.* Continue implementing asset management throughout the organization, so—as leaders and managers, people, and resources fluctuate—the processes defined by policies and procedures remain sound and functional as the guiding philosophy for decision making throughout GDOT.

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Chapter 1

Introduction

The Georgia Department of Transportation (GDOT) asked the American Association of State Highway and Transportation Officials (AASHTO) to comprehensively review GDOT organization and management. AASHTO, in partnership with LMI and Mercator Advisors, did the following:

- ◆ Assessed GDOT financial practices, examining how it has used its funds in the past 2 years and making recommendations going forward.
- ◆ Reviewed technology and information management systems relative to finance, federal-aid, organizational structure, and staffing.
- ◆ Recommended improvements in the short term (1 to 3 years).

GDOT plans, constructs, maintains, and operates the state's roads and bridges; and supports the planning and financing of other modes of transportation such as mass transit, airports, rail, and ports. GDOT's \$2 billion program has nearly 4,700 employees in seven districts and general office across the state to execute and oversee the planning, design, construction, and operation of the state's transportation assets. To better deliver transportation services to the citizens of Georgia, GDOT wanted an external, comprehensive review of the organization and management to identify methods and practices that would make it more efficient and productive, resulting in a better product. This study complements the work of the GDOT Efficiency Committee already underway.

REQUIREMENTS

GDOT asked us to do the following:

1. Define the current state of GDOT services and gain an understanding of the current environment associated with the delivery of GDOT services.
2. Define best practices in transportation management by using our data and knowledge base and by collecting data from state transportation departments recognized as leaders in asset management and innovation. Missouri, Utah, and Michigan were identified as these leading states.
3. Analyze the gaps between GDOT transportation service delivery performance and best practices, identifying GDOT transportation program strengths and weaknesses.

-
4. Review and assess the expenditures of Federal Highway Administration (FHWA) funds by category for the past 2 years, gauging the level of debt service and providing guidance on advanced construction.
 5. Recommend improvements and changes that will enable GDOT to provide high-quality transportation services with a dwindling resource pool.

GDOT further requested that we complete our study and provide preliminary results within 7 weeks—limiting us to an overview of the program.

REPORT ORGANIZATION

The remainder of this report is organized as follows:

- ◆ In Chapter 2, we present our approach using an asset management framework for this review and assessment.
- ◆ In Chapter 3, we discuss our observations, findings, and recommendations regarding GDOT goals and planning.
- ◆ In Chapter 4, we discuss GDOT policies and procedures.
- ◆ In Chapter 5, we discuss GDOT resource management.
- ◆ In Chapter 6, we discuss GDOT financial management, including specific financial issues GDOT requested.
- ◆ In Chapter 7, we discuss GDOT program execution.
- ◆ In Chapter 8, we discuss GDOT monitoring and control.
- ◆ In Chapter 9, we discuss GDOT's organizational attributes.
- ◆ In Chapter 10, we consolidate our recommendations regarding the management of the GDOT transportation program.

Chapter 2

Approach

For our study, we used our knowledge of public agency management practices, combined with best practices in physical transportation infrastructure asset management, to develop a structured, comprehensive framework for analyzing GDOT (see “Asset Management”).

Our approach involved

- ◆ identifying the current state of GDOT operations;
- ◆ identifying industry standards and best practices, particularly those encouraged by AASHTO and employed by other state departments of transportation (DOTs);
- ◆ analyzing the gaps in management practices at GDOT; and
- ◆ making recommendations to improve GDOT performance, particularly in the next 1 to 3 years.

GDOT STATUS

We identified the current state of GDOT management practices and improvement initiatives as follows:

- ◆ We reviewed GDOT documents related to management practices available in the public domain.
- ◆ We supplemented this information with a request for additional documents typically associated with asset management practices.
- ◆ From our review of GDOT documents, we developed a set of core questions related to GDOT management practices.
- ◆ Three study teams interviewed GDOT managers and staff over 3 days.

INDUSTRY STANDARDS AND BEST PRACTICES

Concurrently with defining GDOT's current status, we used various methods and sources to identify and organize applicable best practices to use as a basis for analyzing the gaps in GDOT management practices:

- ◆ Sponsoring an external review of this nature is a best practice, reflecting an organization with self-confidence and a desire for continuous improvement.
- ◆ We searched the literature for industry standards and best practices that could potentially apply to GDOT's current state and planned improvement initiatives. Document sources included the following:
 - FHWA
 - AASHTO
 - Transportation Research Board
 - National Governors Association
 - Various studies and presentations from state DOTs around the nation.
- ◆ We supplemented our literature search with an outreach to the state DOTs in Michigan, Missouri, Utah, and Washington State. AASHTO selected these DOTs because they are recognized leaders in transportation asset management and innovation. We developed lines of inquiry for each of these states and sought information that could benefit GDOT. We shared these lines of inquiry with the DOTs before visiting them to give them a sense of the topics we desired to cover. All the states were very accommodating and enthusiastic in sharing their practices. This outreach gave us insight, improving our analysis and recommendations.

GAP ANALYSIS

Using best practices as the basis, we compared GDOT's current state and ongoing improvement initiatives with those of industry and other state DOTs. We systematically compared our GDOT findings with best practices and then identified GDOT's strengths and potential opportunities for improvement.

We further analyzed the opportunities for improvement to make specific recommendations that GDOT could implement over the next 1 to 3 years. In deciding what to recommend, we applied our knowledge of GDOT's internal and external environmental factors, such as statewide requirements that apply to all Georgia agencies, which could enhance or constrain the success of our recommendations.

ASSET MANAGEMENT

Management Philosophy

Asset management is a knowledge-based approach to managing assets that calls for informed, risk-based, prioritized resource allocations. It expects managers and other decision-makers to know

- ◆ their priorities on the basis of agency goals and requirements,
- ◆ the contents of their inventory,
- ◆ the condition of their assets,
- ◆ how well they are performing through appropriate metrics and measures, and
- ◆ the possible outcomes of decisions and their risks.

Asset management allows decision makers to know the connection between the resources allocated (inputs) and the level of service performed (outputs).

Framework for Best Practices

Transportation asset management is often described as a “strategic approach to managing physical transportation infrastructure.”¹ State transportation agencies manage many assets in managing the physical transportation infrastructure; for this reason, we blended the core principles of transportation asset management into a broader asset management framework that also includes financial and organizational attributes such as human resources (HR) management. This Transportation Agency Management Model (TAMM) has two purposes:

- ◆ Provide a structured, comprehensive framework to guide our document search, data call, and interviews for both GDOT and the four state DOTs making up the AASHTO benchmark.
- ◆ Organize best practices into logical groups of interrelated processes or practices to support the gap analysis.

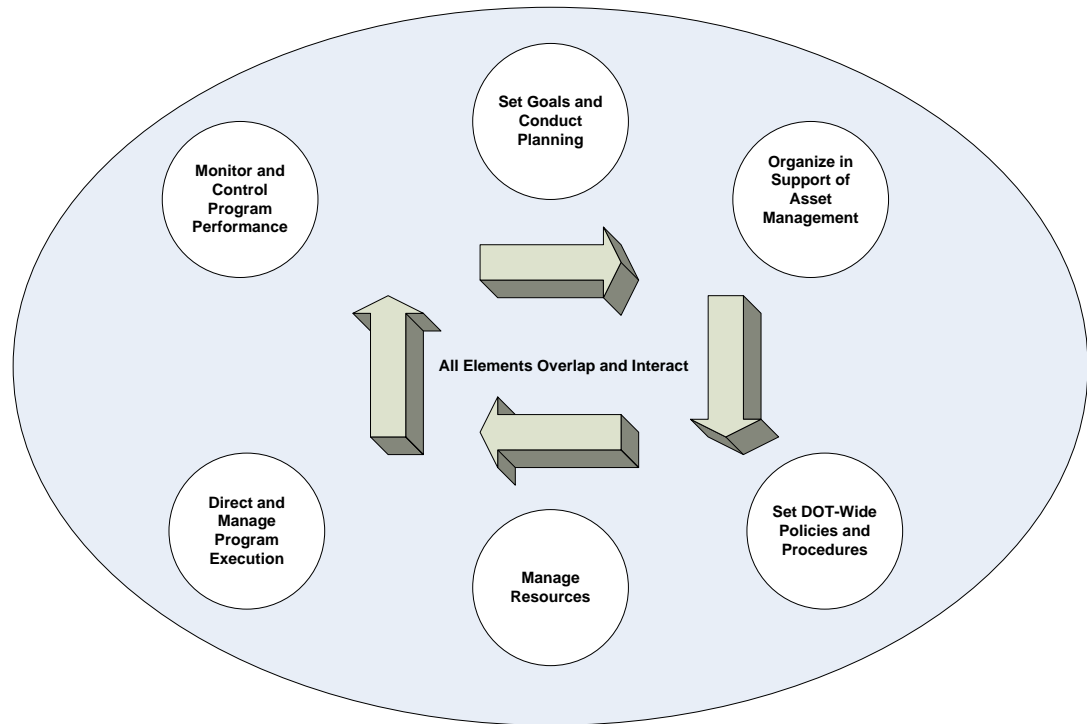
Figure 2-1 shows the framework of the TAMM, which contains six elements:

- ◆ Set goals and conduct planning.
- ◆ Organize in support of asset management.

¹ AASHTO, *Transportation Asset Management Guide*, National Cooperative Highway Research Program Report Number 20-24(11), Pub Code: RP-TAMG-1 (Washington, DC: AASHTO, 2002), p. i.

- ◆ Set DOT-wide policies and procedures.
- ◆ Manage resources.
- ◆ Direct and manage program execution.
- ◆ Monitor and control program performance.

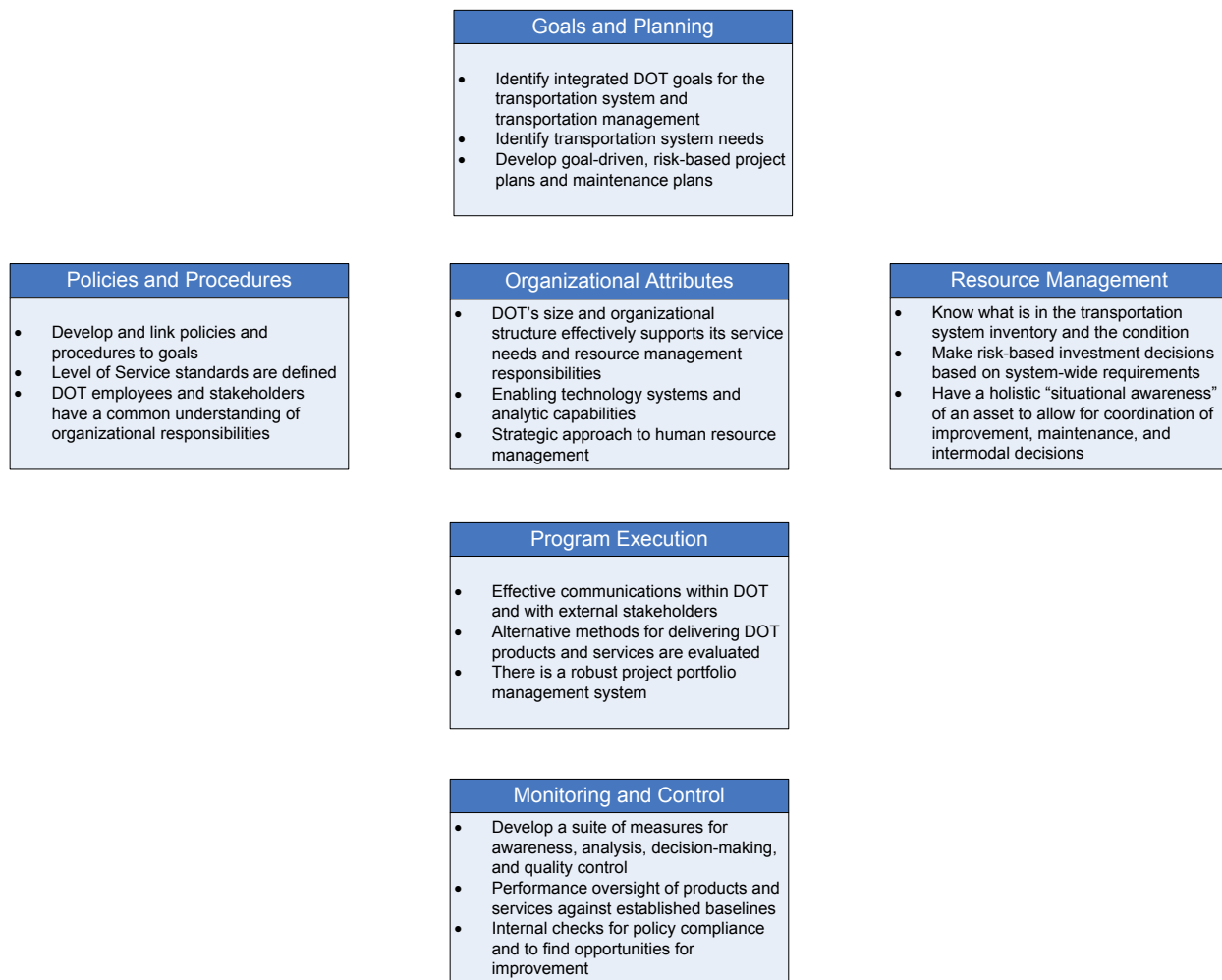
Figure 2-1. Six Elements of TAMM Framework



The six elements are themselves best practices and, at the same time, contain groups of best practices that contribute to performance of the overall element.

Figure 2-2 gives examples of best practices embedded in each element. Each of the six elements is vital to overall agency performance, and each element overlaps and interacts with the other five elements. We will begin subsequent chapters with the text box illustrating element best practice examples.

Figure 2-2. TAMM Best Practices



Within the TAMM, no one overarching approach epitomizes “best” more than asset management. It influences how well the transportation infrastructure supports an agency’s strategic and operational mission requirements, and it influences the life-cycle costs of transportation assets. An effective asset management program results in the construction of the right infrastructure and its functional relevancy throughout its life cycle. The transportation infrastructure’s stakeholders define “right” and “functional relevancy” through systematic, transparent, and persistent interactions. An effective asset management program demystifies and minimizes the acquisition, operations, maintenance, and repair costs necessary to achieve a transportation asset’s design service life and to maintain performance levels acceptable to stakeholders.

Beyond managing the physical transportation infrastructure, the TAMM recognizes that best practices are associated with managing other assets—such as an agency’s HR, finances, and enabling information management technologies—vital to successful management of a transportation program. We know the best practices for these other assets through independent research and

extensive experience helping agencies improve their management functions. We combined this knowledge with extensive documentation on transportation infrastructure asset management to help define the critical requirements for transportation agency management.

Finally, no one asset management solution applies to all state DOTs. We applied our reasoned judgment and knowledge of GDOT's internal and external environmental factors, such as statewide requirements that apply to all Georgia state agencies, to enhance or constrain our recommendations.

Chapter 3

Goals and Planning

This component of asset management sets the priorities for decision making. It determines the transportation system requirements, identifies tradeoffs and risks inherent in the various alternatives, and uses them to develop plans that focus on the organizational goals and priorities. Figure 3-1 shows goals and planning best practices.

Figure 3-1. Goals and Planning Best Practices

Goals and Planning
<ul style="list-style-type: none">• Identify integrated DOT goals for the transportation system and transportation management• Identify transportation system needs• Develop goal-driven, risk-based project plans and maintenance plans

STRATEGIC PLANS

GDOT is making a paradigm shift from a business-as-usual, “worst-first” strategy to an asset management business model strategy. This shift—which follows a prolonged trend of decreasing resources, personnel, and funding—should be an integral part of the organization’s strategic plan.

Current State

GDOT recognizes the status quo strategy cannot be sustained. Manpower has been significantly reduced over the last 10 years and continues to decline as a result of financial constraints, attrition, and other factors. The legislature has passed urging resolution suggesting further staff reductions of nearly 20 percent from current levels. Revenues also continue to decrease, while asset usage in terms of vehicle miles traveled (VMT) continues to increase overall. The justifiable pride of the typical GDOT employee has been shaken by the reality that not everything can be kept at 100 percent, satisfying the historical high standards GDOT has consistently met over the past decades.

Understanding that manpower and other resources cannot continue to decrease without a corresponding decrease in performance and output, GDOT decided to change from a mindset of “keeping everything in great shape” to an asset

management business model strategy, which prioritizes requirements as the cornerstone and foundation of more objectively managing assets and performance with constrained resources. Its decision to make the asset management approach integral to its strategic efforts shows that GDOT is heading in the right direction with its changes. However, strong, persistent, and consistent leadership over time will be required for this approach to be institutionalized throughout the Department. Champions of asset management will be needed to reorient customer expectations in terms of asset management principles and sustain the pride the GDOT employee has worked hard to earn.

Successful and sustainable asset management requires strong connections to an overarching organization strategic plan that guides and focuses efforts on achievable objectives defined and supported by asset management practices. The Georgia state strategic plan (over a 4- to 5-year window) has five goals: an educated Georgia, a safer Georgia, a healthier Georgia, a growing Georgia, and Georgia as a best managed state, with dashboard measures for each goal and performance measures for each agency (including GDOT).¹

GDOT started producing strategic plans in 1994 and following the state's strategic planning guidelines, produced its sixth strategic plan in early 2011, the *GDOT FY2011 Strategic Plan Update* (FY2011 SPU). The state guidelines require agencies to develop strategic plans (over a 3- to 4-year window) that align with state strategic goals and supporting implementation plans (with a 1-year window). In this context, GDOT has a well-defined transportation strategic plan. The GDOT FY2011 SPU focuses on transportation asset management and defines the following four goals, which are linked to one or more of the state's strategic goals and includes strategic, measurable performance objectives:

- ◆ Making GDOT a better place to work will make GDOT a place that works better
- ◆ Making safety investments and improvements where the traveling public is at most risk
- ◆ Taking care of what we have, in the most efficient way possible
- ◆ Planning and constructing the best set of mobility-focused projects we can, on schedule.²

¹ Governor's Office of Planning and Budget, "Strategic Planning," *Planning and Evaluation*, opb.georgia.gov/00/channel_modifieddate/0,2096,161890977_162011915,00.html.

² GDOT, *FY2011 Strategic Plan Update*, February 2011, www.dot.state.ga.us/informationcenter/programs/Documents/Strategic/FY2011-StrategicPlan-FINAL.pdf.

The Division of Planning has developed a *Statewide Strategic Transportation Plan, 2010–2030*, which sets the direction for selection of projects to be included in the Statewide Transportation Plan. The *Statewide Strategic Transportation Plan* contains four goals:

- ◆ Supporting Georgia’s economic growth and competitiveness
- ◆ Ensuring safety and security
- ◆ Maximizing the value of Georgia’s assets, getting the most out of the existing network
- ◆ Minimizing impact on the environment.³

The transportation plan suggests “transportation project[s] should feed an activity center.”⁴ The asset management philosophy in GDOT’s current strategic plan supports this type of long-term guidance. Asset management requires good data to work well. GDOT has good inventory and condition information and data on its roads and bridges, as well as its subsurface utilities. GDOT’s information and condition assessments of other assets in its inventory, however, do not appear as comprehensive and therefore cannot be strategically managed as well as the roads, bridges, and subsurface utilities.

Whether middle managers, decision makers, and district employees fully understand and incorporate the strategic plan and its underlying asset management approach in their group and individual decision-making processes is unclear. The roles of the Director of Planning and the Chief Engineer are potential areas for confusion. The Director of Planning is responsible for planning activities while the Chief Engineer is responsible for implementation of the projects identified by the Director of Planning. A lack of clear coordination between the two could result in unclear priorities and direction, leading to inefficiencies and conflicting efforts in performance and measurement, particularly in the field. The current Director of Planning and Chief Engineer have great communication which bodes well for the Department and the citizens of the state.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

Strategic plans are now commonplace and expected in the transportation community. For example, the U.S. Department of Transportation’s strategic plan provides its mission and strategic goals for guiding efforts affecting the nation’s

³ GDOT, *Statewide Strategic Transportation Plan, 2010–2030*, April 2010, www.it3.ga.gov/Documents/Final-SSTP.pdf.

⁴ Activity centers are areas that include office, retail, service, residential, or civic uses that create a central focus for a larger area.

transportation systems.⁵ Also, the FHWA recently updated its strategic plan, goals, and objectives.⁶ Federal highway funding bills, like the Safe, Accountable, Flexible, Efficient, Transportation Act for Legacy Users (SAFETEA-LU), require strategic plans from participating states, including the involvement of metropolitan planning organizations, to maximize coordination, development, and updating of state transportation improvement programs.⁷ State DOTs commonly have strategic plans that support their own state strategic plans and incorporate federal transportation strategic plan requirements. Together, the state and federal strategic transportation plans provide a united focus and direction to efficiently and effectively improve and strengthen the overall national transportation network.

Successful strategic plans have well-defined performance measures to gauge progress toward strategic goals and objectives. They also assign individual or unit responsibility and accountability for accomplishing goals and objectives. The measures are supported by subplans (such as 2- to 5-year business plans and 1- to 2-year subsequent work plans) with their measures and accountability, embedding the strategic plan and its execution throughout the organization. No one strategic plan or set of measures suits all DOTs, so successful management of the strategic plan requires a manageable number of selected measures carefully identified and defined. Proactive communication and training organization-wide are critical in developing buy-in of the strategic goals and objectives throughout the organization.⁸

PEER STATE BEST PRACTICES

Michigan DOT

Michigan DOT (MDOT) strictly follows a multiyear (5-year) capital project plan process, based on asset management and performance goals, that efficiently and effectively focuses the organization's people and resources. Once a project is in the 5-year plan, changes are the exception and are controlled at a senior MDOT level. Early agreement among key players on project scope contributes significantly to minimizing changes once construction begins. The 5-year project list, developed to achieve strategic goals and objectives, is updated annually; the current year's accomplishments are removed from the plan and a new 5th year is added with new requirements. The 5-year project plan process is a primary driver of the MDOT capital plan and is updated annually through a coordinated process.

⁵ U.S. Department of Transportation, *Department of Transportation Strategic Plan*, "New Ideas for a Nation on the Move," Fiscal Years 2006–2011, www.dot.gov/stratplan2011/.

⁶ FHWA, *FHWA Strategic Plan*, www.fhwa.dot.gov/policy/fhplan.html.

⁷ FHWA, *A SAFETEA-LU*, www.fhwa.dot.gov/safetealu/.

⁸ National Cooperative Highway Research Program (NCHRP) Synthesis 326, *Strategic Planning and Decision Making in State Departments of Transportation, A Synthesis of Highway Practice*, Transportation Research Board, 2004.

MDOT believes and practices the concept that quality, reliable, proactive asset management is essential in providing decision makers with the credible information they need for optimizing decision making and choices. Senior management routinely reviews data and information, minimizing the use of dated or wrong information in decisions.

MDOT created its own strategic planning policy document, *Moving Michigan Forward*, in addition to the long-range transportation plan and short (2011–15) 5-year plan. The State Transportation Commission, which oversees MDOT, approves the 5-year project plan. MDOT employees also have a strategic plan “flier” containing direction and guidance for use in everyday efforts to support MDOT’s four main objectives.

Missouri DOT

The tangible results of Missouri DOT’s (MoDOT’s) “what gets measured gets done” philosophy are its primary strategic goals, developed in 2004 and updated in 2009. The tangible results, defined as what the customers expect from the department, are affirmed by multiple, ongoing customer and stakeholder satisfaction surveys by an objective third party via contract.

MoDOT’s 17 primary tangible results are monitored via the Tracker, a system of performance measurements established to ensure that MoDOT personnel are accountable for achieving customer expectations in terms of the tangible results.⁹ Quarterly Tracker review meetings help leadership manage diverse transportation responsibilities and adjust plans in near real-time. Supporting Tracker systems at lower organization and work-level units support the 17 primary Tracker measures. The quality of the Trackers has earned MoDOT trust and accountability from public, legislative, and media stakeholders.

Utah DOT

The Utah DOT (UDOT) started small and planned big, beginning with areas that helped build credibility fast, such as pavement and bridges, and expanding to its current, more comprehensive asset management practices. It planned the effort and systems up-front to handle all assets in the department, including signs, culverts, and others.

UDOT’s strategic plan has four main drivers (or goals), called the “Final Four,” (take care of what we have, make the system work better, improve safety, and increase capacity). These were pared down from dozens in use back in the 1990s to provide a “readable” and manageable product. Everything done is tied to the strategic plan and the Final Four.¹⁰ One key to UDOT success is that everyone, from

⁹ MoDOT, “Measures of Performance,” *MoDOT Tracker*, www.modot.mo.gov/about/general_info/Tracker/Jan09Tracker.htm.

¹⁰ UDOT, *Strategic Direction & Performance Measures*, www.udot.utah.gov/main/uconowner.gf?n=4309713963076909.

the director down to the road crew, knows and understands the goals and how they are measured for success.

Involvement with the state legislature is also a factor in UDOT's success, and communication is a priority. UDOT takes the time and effort needed to build relationships and rapport with legislators, key stakeholders, and decision makers. It identifies champions who understand the relationship between transportation and economic development. The Final Four are used in the director's report card to the legislators (and he carries it with him).

Washington DOT

The Washington State DOT (WSDOT) has an asset management program integrated into its strategic plan, and WSDOT has taken a decade to build up to where it is today. A good, useful asset management program cannot be developed all at once or overnight. The six strategic goals in the WSDOT updated 2011–17 strategic plan are institutionalized in all its planning.¹¹ WSDOT has consistently and continuously mapped out what is being done and where it wants to be, using this gap analysis to determine how and when it is going to get there, focusing on ways to make the state's transportation system function as an integrated network. WSDOT integrates data-centric, multimodal considerations in its long-term planning process to minimize duplication and wasted efforts and take advantage of otherwise unrealized or unseen synergies between transportation systems.

STUDY TEAM JUDGMENT

“The vital ingredients of any viable strategy are recognition that ... resources are finite, that all threats [requirements] are not equal, and that failure to reconcile these two realities risks ... bankruptcy.”¹²

All DOT activities should support the DOT's strategic goals and objectives. If an activity's purpose or benefit cannot be shown to support a strategic goal or objective, the value and validity of the activity should be challenged, and it should be modified to support strategic goals and objectives or stopped and deleted.

Real property sustainment models demonstrate that insufficient operations and maintenance (O&M) funding over time results in the deterioration of assets in good condition faster than if they were adequately maintained, shortening their designed useful life and increasing long-term repair and replacement costs as a consequence. Several DOT strategic plans point this out.

¹¹ WSDOT, *Business Directions: WSDOT's 2011-2017 Strategic Plan*, www.wsdot.wa.gov/NR/rdonlyres/533F8188-9F2B-4DAD-BF91-7590086A7904/0/StrategicPlan1117.pdf.

¹² Richard Hart Sinnreich, *The Lawton Constitution*, February 13, 2011, www.swoknews.com/main.asp?SectionID=45&SubSectionID=293&ArticleID=32761.

Recommendation

We recommend that GDOT do the following in regard to strategic planning:

- ◆ *Continue to implement asset management.* GDOT’s decision to focus its strategic plan on transportation asset management is moving in the right direction. GDOT is determining whether its use of resources is explicitly tied to and supports one or more of its strategic goals or objectives, which in turn are tied to state goals and objectives. Any activity or effort that does not clearly support a GDOT goal or objective should be scrutinized for validity and value and either modified or discontinued to maximize the effectiveness of GDOT resources in support of its goals and objectives.
- ◆ *Make strategic asset management part of the GDOT culture.* It must be fully, proactively, and continuously communicated, practiced internally, and advocated externally by strong, sustained, and visible senior management and leadership.
- ◆ *Comprehensively review progress in asset management after 3 years to verify that the implementation plan is on track and moving forward.*

INFORMED, RISK-BASED RESOURCE DECISIONS

Current State

Implementing asset management across the organization to make better informed, risk-based resource allocation and performance decisions is a major GDOT strategic effort. GDOT asset management is in its early stages and needs considerable maturing. Asset management is not yet fully institutionalized but implementation has been initiated in the areas of Pavement and Bridge Maintenance. As asset management requires a change in thinking and culture, it will be implemented throughout all relevant activities over the coming years. In addition, performance management is also being implemented to evaluate the effectiveness of GDOT’s new strategic direction. Coordination with Field Districts has occurred at the management level, however currently it has not reached the staff level. Stakeholder interests are historically geographically focused and do not necessarily support a statewide asset management approach that views Georgia’s transportation system as one entity for decision making.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

“Asset management focuses on the facts about the infrastructure assets, their performance, their preservation, and their anticipated longevity,” and it “helps

transportation agencies to identify program needs and provides the tools to reach defensible decisions that maximize transportation investments.”¹³

A 2007 National Cooperative Highway Research Program (NCHRP) survey observed the following best practices in transportation asset management:

- ◆ The existence of an asset management process and its information were instrumental in securing additional funds from legislatures.
- ◆ Successful asset management processes move away from a “worst-first” investment strategy and adopt investment principles based on life-cycle costing.
- ◆ Successful asset management processes have performance measures that guide investment decisions throughout the organization.
- ◆ No one organizational model covers all asset management, but one key characteristic is the use of a team approach in defining and implementing the process.
- ◆ An organizational self-assessment (using tools such as the AASHTO *Asset Management Self Assessment Guide*) is an important starting point for implementing an asset management process.¹⁴

One of the FHWA’s long-term objectives with asset management is to have state DOTs and other involved entities use asset management as “the norm” for long-range transportation planning, capital program development, strategic business planning, and performance accountability.¹⁵

PEER STATE BEST PRACTICES

MDOT

Michigan legislatively developed a statewide definition of asset management to establish a more consistent method for making funding decisions for its transportation infrastructure. In conjunction, the legislature created the Transportation Asset Management Council (TAMC) under the State Transportation Commission to oversee asset management issues, including all public roads (120,000 miles and 618 different agencies). The legislature created the council because it recognized that the way MDOT managed the state network was needed for the rest of the public roads. This has resulted in a common language and similar metrics

¹³ FHWA, *Asset Management Overview*, December 9, 2007.

¹⁴ NCHRP, *U.S. Domestic Scan Program: Best Practices in Transportation Asset Management*, NCHRP Project 20-68, February 2007, onlinepubs.trb.org/onlinepubs/trbnet/acl/NCHRP2068_Domestic_Scan_TAM_Final_Report.pdf.

¹⁵ See Note 13, this chapter.

throughout the state. The TAMC reports on asset management annually to the legislature to inform it of MDOT's assets and their conditions.

MoDOT

Asset management at MoDOT is incorporated into the organization's overall performance management system. The performance management system established accountability, which has become the norm for managers and frontline workers. Performance management and sustained executive leadership were essential in changing the department culture to data-driven, results-focused asset management.

UDOT

UDOT still sees asset management as a journey several years after its implementation. It uses asset management data to educate legislators so they can make informed decisions. UDOT understands that "good roads cost less" and demonstrates it using photos that show the same road over time, visually depicting the effects of no maintenance. This highly effective communication approach gives the legislature the data it needs to determine funding.

WSDOT

WSDOT has an effective asset management system, which took years to develop, refine, and grow to its current mature state. Key to its success is its approach to prioritizing the implementation on the basis of needs, usefulness of the information, and data generated from the system.

STUDY TEAM JUDGMENT

Asset management clearly links resource allocation (input) to level of service (output), giving managers and decision makers more meaningful, objective information and data with which to make informed decisions on using constrained resources to achieve defined levels of performance. Showing these cause-and-effect scenarios to decision makers and key stakeholders, inside and outside of GDOT, will increase the understanding and success of this management approach.

Allocation of resources based on political or geographical boundaries could impact performance of the Georgia transportation system as a whole, making it a challenge to achieve system-wide goals, objectives, and priorities based on an asset management strategy.

Recommendations

We recommend that GDOT do the following in regard to resource decisions:

- ◆ *Continue with its efforts in transportation asset management.*
- ◆ *Develop and employ a detailed asset management implementation plan.* Include associated communications and change management plans, facilitating the transition from business as usual to the risk-based asset management strategy. The plan should
 - formally map out goals, milestones, and responsibilities for its implementation;
 - define tools and investments needed to achieve the goals, objectives, and milestones;
 - prioritize how transportation assets will be included into asset management;
 - include as few constraints as possible regarding political, organizational, or geographic boundaries to enhance the objectivity and effectiveness of asset management on Georgia's overall transportation network;
 - address the completion of accurate inventories and accompanying condition assessments for all assets under GDOT's responsibility; and
 - address the development and sustainment of user-friendly asset management databases and protocol.

STAKEHOLDER INVOLVEMENT

Current State

The level of coordination by all entities inside and outside of GDOT required in planning, developing, and designing projects is inconsistent. Discussions with key players within GDOT revealed some could be more proactive in planning and coordinating their efforts with other players, and better understand how their efforts support or impact others (and vice versa), to improve the time required to complete a project. There also appear to be opportunities to improve processes through preplanning with stakeholders outside of GDOT whose involvement is required for successful project development and execution (see best practices examples below).

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

A well planned project kickoff meeting gets the team on board and sets the tone for a successful project. All key players, from planning through design, need to be involved from the beginning. Continual information sharing among key stakeholders and project team members is key in a successful, on-time project.¹⁶

PEER STATE BEST PRACTICES

MDOT

MDOT develops and prepositions formal agreements with other state agencies and entities involved in the progress of a project (primarily environmental), clearly delineating responsibilities and expectations, to expedite the process. MDOT also funds positions in other state agencies involved in the process to help expedite the process: the people in these positions treat any MDOT issue as priority so the MDOT project doesn't wait in a queue with projects from other agencies and entities. MDOT also has "approved" historians and archeologists on staff to help expedite field work and research that other state agencies might not have resources to do in a timely manner.

MoDOT

MoDOT developed and uses a web page linking city and county officials to MoDOT projects and programs to develop transportation partnerships with these stakeholders.

UDOT

The UDOT environmental group makes a concerted effort to reduce the time a project takes going through the various required approvals. It has reduced times by obtaining delegated authority, automating forms and signatures, and building relationships and rapport with the other organizations involved in approving projects, such as the Environmental Protection Agency. UDOT has instituted an "every day counts" mindset in planning and doing, continually looking for opportunities to save processing time, which has earned it credibility with stakeholders.

WSDOT

WSDOT looks for creative ways to shorten project delivery schedules, helping build its credibility with stakeholders.

¹⁶ NCHRP, *Guidance for Transportation Project Management*, Web-Only Document 137, March 2009, onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w137.pdf.

STUDY TEAM JUDGMENT

Activities that involve participation of multiple stakeholders representing numerous constituents benefit from a structured approach, particularly in keeping on schedule. Our experience has shown that group “charters” can achieve early buy-in from different participants in a group effort.

Using lean analysis with a project’s key players and team members can streamline processes and eliminate waste. In terms of transportation projects, a lean analysis can be used to map out process flow diagrams of the current project development process, all its steps, and who is responsible for each one. Once the process is clearly defined, the project team can identify which steps add value (produce a project on time and within budget) and which steps do not (delay the progression of the project), and then take steps to eliminate or reduce the impact of the non-value-added steps in the process through reexamination. It can make additional process improvements by reexamining and questioning value-added steps in the process to investigate better ways to accomplish them. To be most effective, this analysis requires all affected key players and team members to participate and reach consensus on process changes.

Recommendations

We recommend that GDOT do the following in regard to stakeholder involvement:

- ◆ *Develop a charter at the start of each capital project.* Involve all team members and key players to establish agreed-upon milestones, schedules, accountability, responsibilities, and performance measures.
- ◆ *Have project managers host and lead initial and recurring team meetings.* Involve all stakeholders, monitor progress against the charter, and address issues from project conception to handoff of the completed project.
- ◆ *Coordinate with other state agencies for project overlaps.* Capture potential economies of scale and reduce duplication of effort.
- ◆ *Conduct a lean analysis of the process flow and value stream of the current project planning process.*

Chapter 4

Policies and Procedures

This component of asset management involves agency-wide policies and the procedures used by the organization, which should be linked to the agency goals and objectives. A key component is determining and defining levels of service for the organization's main deliverables and ensuring stakeholders understand delivery expectations. Figure 4-1 shows policies and procedures best practices.

Figure 4-1. Policies and Procedures Best Practices

Policies and Procedures
<ul style="list-style-type: none">• Develop and link policies and procedures to goals• Level of service standards are defined• DOT employees and stakeholders have a common understanding of organizational responsibilities

LEVELS OF SERVICE AND PERFORMANCE

Current State

As GDOT transitions to the asset management business model, it needs to define and prioritize its core services and associated realistic levels of service or performance goals commensurate with available manpower and resources. Interviews indicated that no statewide performance goals are readily or widely available and known at the districts for some operations. This creates confusion when trying to provide acceptable levels of service. Also, the districts have no clearly defined roles and responsibilities regarding service levels, creating variances in what gets done in various districts.

Many interviewees talked about the traditional high levels of service GDOT has provided over the past decades, and that some focus and levels of service will need to change with the implementation of asset management and reduced budgets. Interviewees also confirmed that districts really don't understand what is going on with asset management, and why it is changing the levels of service they are used to providing. If a GDOT employee in the field doesn't understand why the levels of service are changing, then they cannot explain the change to the public. As a result, the public sees service levels changing, but the GDOT employee

cannot help the public he encounters daily understand why. This leaves the public to draw its own conclusions.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

According to an NCHRP report, performance goals and their supporting measures are critical in the successful application of transportation asset management. Together, they help translate policy objectives into guidance for decision making and provide a framework for evaluating options to define the best mix of investments in and between programs. Integrating effective performance goals and their measures into an organization includes engaging internal and external stakeholders to achieve buy-in.¹

Policy goals and objectives, supported by performance goals and target levels of service, are fundamental to sound asset management. The target levels of service are the desired levels of performance for a given asset, and they “are expressions of management policy and priority, and play an important role in ... influencing the level of maintenance that is perceived by the public.” Existing conditions are reflected by current levels of service. Together they help provide a medium for communicating status and progress toward performance goals to stakeholders.²

Establishing service goals, or target levels of service, supports performance-based asset management. Performance goals can communicate to the public and stakeholders what is expected of the transportation agency. Identifying meaningful associated performance measures—and defining, finding, and manipulating the associated data—can be difficult.³

PEER STATE BEST PRACTICES

MDOT

In 2009, MDOT revamped its performance targets to include more than roads and bridges. All performance targets must be linked to MDOT’s four goals (stewardship, safety and security, system improvement, and efficient and effective operations). One cross-functional performance target and measurement team handles each of MDOT’s four objectives.

Performance is posted on MDOT’s external website to reinforce transparency with the public. Each target and measure is unique: activities differ too much to

¹ NCHRP, Report 551, *Performance Measures and Targets for Transportation Asset Management*, Volume II, “Guide for Performance Measure Identification and Target Setting” (Washington, DC: Transportation Research Board, 2006), www.ciatrans.net/nchrp_rpt_551.pdf.

² NCHRP, *Transportation Asset Management Guide*, NCHRP Project 20-24(11), November 2002.

³ See Note 13, Chapter 3.

use one standard measure for everything. Most targets and their measures feature three levels of data: a top (executive or summary) level; a second, detailed level for the practical use of the average citizen; and a third, more detailed level that includes information such as raw data and trend graphics. The current posted measures are expected to evolve and mature over time through experience and internal and external feedback and input.

MoDOT

MoDOT establishes acceptable levels of service by listening to and actively engaging customers. It uses “Road Rallies” to proactively involve customers, evaluate roads, and help establish reasonable levels of service. Each year, the department surveys customers statewide to get feedback in overall satisfaction, investment levels, project quality, and other areas, garnering statewide and regional customer satisfaction ratings. MoDOT correlates these ratings with Road Rally scores to identify specific customer satisfiers and dissatisfiers.

UDOT

Realizing it can’t be at 100 percent in everything, UDOT uses performance measures and targets to help set service-level expectations for its customers and stakeholders. Services are targeted below “perfect,” at a level considered acceptable and within budget realities.

From these measures and targets, work is normally prioritized at the region level or below. UDOT uses its Cognos reporting software to aggregate and pull data from the state’s financial system and UDOT’s eProject Management system for quarterly headquarters reviews of projects and issues. Photos are used to visually demonstrate the different target levels of service to help the legislature and the public understand what can be obtained for certain levels of funding.

WSDOT

WSDOT’s main objective for traffic congestion is to keep traffic moving at 45 mph or better on its main arteries and trunk lines. To do so, WSDOT uses computer simulations to communicate the effects projects will have on congestion by showing the legislature and other stakeholders quantitatively the impact taking or not taking a certain course of action (such as funding or not funding a project for widening a lane) will have on congestion in a particular area. WSDOT uses this modeling and other information when mapping its overall service levels. When showing the public and the legislature their measures, it shows “the good, the bad, and the ugly” to provide the whole story.

STUDY TEAM JUDGMENT

The level of service (output) must match the resources (input).

The necessity for establishing target levels of service is based on the reality that rarely are resources sufficient to do everything to the 100 percent level all the time. Methodical processes for establishing target levels of service (or ranges of service levels), based on established variables, provide credible service levels that the customer can understand and expect, and the provider can understand and deliver, depending on the variable inputs.

The effective communication of realistic service goals based on established and consistent methods or processes is just as important as establishing the service levels themselves: if the customers or providers do not know the standard, the standard cannot knowingly be achieved, and confusion, frustration, inefficiencies, and dissatisfaction can result on all sides.

Recommendations

We recommend that GDOT do the following in regard to levels of service and performance:

- ◆ *Establish specific levels of service for important operations.* Stakeholders, customers, and GDOT employees should contribute to the development, understanding, acceptance, and expectations of realistic levels of service. GDOT should use informed customer input in determining acceptable levels of service for use in making resource management decisions. It needs to determine the data needed to provide the measures and how to collect, process, and communicate these data to all affected parties.
- ◆ *Keep the legislature informed and engaged when making resource management decisions.* GDOT should demonstrate the objective impact and condition results of different levels of service.
- ◆ *Plan for recurring validation of levels of service.* For example, GDOT should assess whether it is over-maintaining roads that are no longer heavily used or under-maintaining roads near new industrial parks.
- ◆ *Define what is required and what is optional to better determine the best use of constrained resources.* GDOT has started, and needs to continue, asking, “What are the assets and activities for which we are legally responsible?” With resources diminishing, repairing everything “because we can” or “because we always did” cannot be sustained. For example, contractors won’t do more than the contract requires without authority, legal responsibility, and resources. GDOT should set a similar discipline for the in-house staff not to go beyond what is affordable and required, such as over-maintaining at the expense of other requirements.

POLICY DEVELOPMENT

Current State

Efforts are underway across GDOT to create and update policies that provide consistent, agency-wide approaches to key practices, requirements, and responsibilities. For example, GDOT is rewriting the construction manual, the Office of Program Delivery is developing a program delivery project management manual for all of GDOT to reference, and the Office of Design Policy and Support combined its development of policies, guidelines, and standards into one function to gain more consistency. We observed new policies were being developed, but review by cross-functional teams within the central office to ensure impacts of new policies were vetted, was not apparent in all instances.

The GDOT Utility office has developed continuity books for each position to minimize disruptions in times of change or unexpected events and to achieve operational consistency through established policies and procedures.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

The FHWA Office of Transportation Policy Studies, established in 2007, looks at current FHWA policies with respect to emerging transportation issues, including climate change, public-private partnerships (P3s), the aging population, and energy. By developing policies for emerging issues, FHWA is supporting the transportation community, enabling DOTs and other transportation entities to better prepare and respond to these issues through the application of common guidance.⁴

Other federal entities that have significant transportation interests, such as the Department of Defense, Office of the Assistant Secretary of Defense (Logistics and Material Readiness), develop transportation policy to help direct the department as a whole in the most efficient and effective use of transportation resources.⁵

PEER STATE BEST PRACTICES

MDOT

MDOT has cross-functional teams with executive and upper management chairs or leadership—with on-the-spot decision-making authority—to address problems, issues, and ideas to improve “how business is done.” The organization incorporates cross-functional team processes into its culture to obtain buy-in from all

⁴ FHWA, Office of Transportation Policy Studies, *Policy Analysis and Development Team*, www.fhwa.dot.gov/policy/otps/policyanalysis.cfm.

⁵ OASD(L&MR), *Transportation Policy*, www.acq.osd.mil/log/tp/.

levels and sustain continual improvement in the way things are done: this is a key to MDOT's success.

MDOT also established DOT-industry partnerships, led by the DOT director and senior staff members, to engage industry in discussing and defining mutually beneficial and agreed-upon changes to policy, procedures, and issues that will facilitate industry services (such as project execution and service delivery) to the DOT.

MoDOT

MoDOT has an *Engineering Policy Guide* on its external website, which provides access to MoDOT engineering policy and lists recent changes to policies, along with effective dates, to keep everyone informed in near real-time on current policy. The website registered around 400,000 hits as of April 2011.⁶

UDOT

UDOT has a *Policies and Procedures* section on its external website for use by UDOT employees and the general public, making policy easily and instantaneously accessible.⁷

STUDY TEAM JUDGMENT

Policies are strategic but also dynamic. As usage patterns, technological advancements, resource constraints, and other internal and external factors change and start to affect the transportation community, policy also needs to change to guide the organizational approach to, use of, and control of these influencing factors. Failing to adjust policy as influencing factors affect how business is done can restrict the agency, resulting in outdated or inappropriate guidance on the evolving nature and technology of transportation and inhibiting or preventing efficiencies, productivity, and success in meeting goals and objectives.

Other large organizations require thorough coordination in policy development. Developing good organizational policy in isolation is difficult. Not fully knowing how policy changes can impact those involved in carrying it out can lead to morale and productivity problems, as those who execute the policy feel they have no say in how they do their job.

⁶ MoDOT, *Engineering Policy Guide*, epg.modot.org/index.php?title=Main_Page.

⁷ UDOT, *Policies and Procedures*, www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:2662.

Recommendations

We recommend that GDOT do the following in regard to policy development:

- ◆ *Create a configuration control board.* The review and coordination process should include horizontal discussions and understandings as well as vertical. A configuration board would act as a clearinghouse for reviewing the effects of potential policy changes across GDOT to minimize or eliminate unclear, inconsistent, or contrary expectations among internal groups.
- ◆ *Include a coordination checklist of all stakeholders to a policy before final policy approval.* This checklist would identify and address any conflicts or inconsistencies between GDOT entities and obtain buy-in. GDOT should include organizational responsibilities during policy development.
- ◆ *Develop an ongoing process to compare performance with policies and identify opportunities for improvement or updating of the policies.* The internal audit function could assume this recurring responsibility, reporting results to top management for awareness and action.
- ◆ *Develop and continually update continuity books for important positions and functions.*

Chapter 5

Resource Management

This component of asset management involves knowing the asset inventory, making risk-based investment decisions on the basis of system-wide requirements, and having a holistic situational awareness of an asset to allow for coordination of improvement, maintenance, and intermodal decisions. Figure 5-1 shows resource management best practices.

Figure 5-1. Resource Management Best Practices

Resource Management
<ul style="list-style-type: none">• Know what is in the transportation system inventory and the condition• Make risk-based investment decisions based on system-wide requirements• Have a holistic “situational awareness” of an asset to allow for coordination of improvement, maintenance, and intermodal decisions

We address financial management, a critical component of resource management, in Chapter 6.

AWARENESS OF YOUR ASSETS

Current State

Program and project planning need to have a holistic situational awareness of the affected assets to ensure well coordinated efforts, take advantage of opportunities, and avoid pitfalls (such as a utility company cutting the road a month after it is paved).

Discussion

PEER STATE BEST PRACTICES

MDOT

MDOT implemented a cross-functional team approach to identifying issues and opportunities, including project and program development. It has a 2-year capital preventive maintenance program and a 5-year capital projects list, both updated annually.

UDOT

UDOT uses information and data from its asset management system to inform decision makers and to prioritize projects and spending.

WSDOT

WSDOT leverages knowledge from across the organization. It uses an intermodal trucking expert to identify areas for low-cost improvements (for example, prior to a hill it added a sign directing trucks to move to the right lane, instead of adding a climbing lane, eliminating the traffic bottleneck that resulted from truck drivers not knowing the hill was coming up).

STUDY TEAM JUDGMENT

Asset management involves resource allocation (management) by informed decision makers. To be informed, these leaders and managers must know what they have and its condition. To avoid duplication of effort or activities working at cross purposes, it also involves knowing what other components of the agency are doing and other decisions that are being made.

Recommendation

We recommend that GDOT institutionalize up-front consideration during project development of all major issues and opportunities (such as maintenance, intermodal opportunities, state-funded local projects, and environmental issues) for the affected assets.

NON-ROAD AND INTERMODAL ASSETS

Current State

GDOT has significant non-road assets, such as 500 miles of rail lines, which may present serious resource challenges.

Discussion

PEER STATE BEST PRACTICES

WSDOT's intermodal office is the critical piece that influences planning for economic vitality in all its planning efforts. As noted previously, in one case, the intermodal office recognized that heavy trucks were the cause of a congestion problem and added a sign, a low-cost solution.

STUDY TEAM JUDGMENT

Rail assets should be addressed with the same basic approach as highways. This is an example of the link between level of service and associated costs that should not be ignored and that could have elected officials' interest.

Recommendation

We recommend that GDOT do the following in regard to non-road assets:

- ◆ *Identify “outlier” assets and keep aware of their resource requirements.*
- ◆ *Study the costs and benefits of maintaining state ownership of the rail lines.* GDOT should partner with interested private entities (such as freight rail companies) to sustain assets (such as rail lines) through lease agreements or other tools.

VMT AND FUEL TAX REVENUE

Current State

Funding for both capital projects and O&M is down significantly, decreasing service to levels unfamiliar to GDOT and its stakeholders.

Discussion

GDOT is not alone in this issue, which is systemic in all the other states.

Oregon has conducted a pilot test of a mileage tax.¹ Minnesota DOT is also preparing to test a driver's mileage tax.² At the federal level, a recent Congressional Budget Office (CBO) report says that taxing people on the basis of miles driven is an option for raising new revenues.³

PEER STATE BEST PRACTICES

MDOT

MDOT has developed scenarios for service delivery based upon funding shortfalls. Revenue shortfalls and impacts (current and future) are well documented and routinely provided to stakeholders (commission, legislature, public, etc.) to keep them informed.

¹ Oregon Department of Transportation, *Oregon's Mileage Fee Concept and Road User Fee Pilot Program*, <http://www.oregon.gov/ODOT/HWY/RUFPP/mileage.shtml>.

² www.kare11.com/news/article/919754/396/MnDOT-to-test-drivers-mileage-tax.

³ CBO, *Alternative Approaches to Funding Highways*, March 2011, www.cbo.gov/ftpdocs/121xx/doc12101/03-23-HighwayFunding.pdf.

UDOT

Utah uses the state's general fund to fund part of the UDOT budget and relies little on federal funds.

Recommendation

We recommend that GDOT do the following in regard to VMT and fuel tax revenue:

- ◆ *Use the dedicated general sales tax Georgia is considering for capital projects.* Determining the use at the local and regional levels would allow local initiative but may result in disparate results and quality of service in the long term.
- ◆ *Explore nonstandard methods to resource needed capital improvements and maintenance.* These would include private-public ventures for all transportation assets.

CONSTRAINED ALLOCATION OF FUNDS

Current State

The GDOT budget expenditures require coordination of federal funding caps and state congressional district balancing.

Discussion

The current arrangement begs for oversight and micromanagement by others, so all can receive an ostensible fair share of the resourcing. This approach sub-optimizes the allocation of transportation funds at the local level, preventing statewide allocation based on statewide priorities for economic development and service levels.

This approach also complicates bookkeeping for the financial and accounting offices, and it may be at odds with funding source (such as FHWA) requirements.

Recommendation

We recommend that GDOT do the following in regard to constrained allocation of funds:

- ◆ *Inform the state legislators and other stakeholders as the new asset management approach succeeds in risk-based, prioritized resource allocation, and ask them to reconsider the current resourcing constraints.*
- ◆ *Request multiyear obligation authority for capital projects and large O&M projects. Balancing distribution over a reasonable time frame (such as 5 years) is more realistic and allows for better resource allocation.*

Chapter 6

Financial Management

This chapter focuses on financial management, addressing specific issues GDOT identified:

- ◆ Review and assess expenditures of FHWA funds by category for the last 2 years.
- ◆ Review the use of debt financing and associated levels of debt service.
- ◆ Provide guidance on advance construction, for example, the level of advance construction that is reasonable given the size of the federal program for Georgia.

USE OF FHWA FUNDS

Current State

SAFETEA-LU expired September 30, 2009. Since then, federal highway funds have been provided to the states in short-term extension acts as Congress discusses the nature and funding of a multiyear surface transportation authorization act. In 2009–10, states also received highway funding through the American Recovery and Reinvestment Act (ARRA), but they have had difficulty meeting the demands of the ARRA and developing multiyear programs with the uncertainty of long-term federal funding. For FY11, GDOT was apportioned \$1.3 billion of federal-aid highway funds and its obligation limit is \$1.2 billion for the fiscal year. GDOT has effectively managed its use of federal funds through this difficult period and continues to make full use of its available funds. GDOT advanced almost 400 projects using ARRA funding.

Discussion

The federal government apportions most highway funds to the states by statutory formulas in categories having specific eligibility requirements. These funds are available to the states for several years, and the states may request approval to transfer some of the funds between categories. Although the apportioned funds are available to the states, the amount that can be obligated in a given fiscal year is limited. The amount of obligation authority the state receives is generally less than that apportioned, and it must be used during the federal fiscal year. If a state or federal program office cannot use all of its obligation authority, it is required to release the excess amount in August. The amount released is given to states that

can obligate additional amounts before the end of the federal fiscal year (September 30).

A state's first objective is to use all of its available obligation authority; second, it wants to be in a position to receive any amounts redistributed in August. Assessing a state's performance on the basis of the amounts obligated in specific fund categories is not practical because these determinations are made in regard to the particular needs of the state and recognize that the eligibility criteria for one fund category may overlap that for another one. For example, an improvement on a major highway could be funded with National Highway System funds or with Surface Transportation Program funds.

Therefore, to assess GDOT's use of FHWA funds, we focused on its effective use of obligation authority. GDOT used all of its available authority in FY09 and FY10 and received additional authority (\$37.5 million in FY09 and \$48.2 million in FY10) through the August redistribution. However, in a couple of areas, GDOT has not taken advantage of processes that may result in a more efficient use of federal funds.

Federal law allows states to earn toll credits when toll revenues are used to make capital improvements. On most federal-aid highway projects, the federal funding is limited, generally to 80 to 90 percent of project costs, depending on the type of project. State or local funds are used to fund the remaining cost of the project. Toll credits can be used in lieu of state or local funds to meet the required non-federal match on the project. GDOT has \$75 million in available toll credits.

The use of toll credits does not provide additional funding. Applying toll credits to a project increases the amount of federal funding on the project up to 100 percent of project costs. The primary benefit is a more efficient use of federal funds and more flexibility in the use of state funds.

GDOT could realize similar benefits if it claimed indirect costs on federal-aid highway projects. Federal policy allows states to develop indirect cost plans reflecting the administrative and overhead expenses associated with managing the federal-aid program and claim those costs on federal projects. GDOT has considered claiming indirect costs but encountered obstacles with the statewide accounting system.

Among our benchmark states, Michigan started claiming indirect costs this year (an estimated \$20 million annually) because of declining state revenue.¹ Utah claims only a small amount of indirect costs, and Washington does not claim indirect costs.

¹ Michigan's federal highway program is about 80 percent of Georgia's program.

Recommendation

We recommend that GDOT do the following in regard to use of FHWA funds:

- ◆ *Use toll credits to achieve a more efficient use of federal highway funds and more flexible use of state funds.*
- ◆ *Consider claiming indirect costs (recognizing the accounting burden associated with developing and implementing an indirect cost plan and accounting system limitations).*

DEBT SERVICE

Current State

Georgia is one of the few state governments that holds an AAA credit rating from all three major rating agencies. The state's history of prudent financial management and maintenance of a conservative debt profile allows it to operate efficiently in the debt capital markets. Despite recent increases in outstanding bond debt, the state's debt burden and cost of funds remain low relative to comparable states.

TRANSPORTATION DEBT PROFILE

Table 6-1 shows outstanding Georgia transportation bonds as of the start of FY11.²

Table 6-1. Outstanding Bonds as of FY11

Bond	Amount (\$)
General obligation bonds for transportation	1,540,223,338
Guaranteed (motor fuel tax) revenue bonds	489,085,000
Federal highway grant anticipation and reimbursement revenue bonds	1,416,850,000
Total	3,446,158,338

Georgia issues tax supported general obligation (GO) and guaranteed revenue bonds for transportation purposes, all of which are rated AAA by all rating agencies. Since Georgia's motor fuel tax revenue bonds are backed by the state's full faith, credit, and taxing power, investors typically evaluate Georgia's transportation debt on the basis of its overall debt profile.

In addition to tax-supported debt for transportation, since 2006 Georgia has issued a total of \$1.7 billion grant anticipation revenue vehicle (GARVEE) bonds³ and

² Data provided by GDOT.

³ GARVEE bonds are authorized in section 122 of Title 23 U.S.C. and allow for federal funds to participate in the full cost of debt service.

reimbursement revenue bonds. All of these bonds are rated Aa2, AA-, and AA- by Moody's, Standard & Poor's, and Fitch Ratings, respectively. Table 6-2 shows Georgia's GARVEE and reimbursement revenue bonds.

Table 6-2. Georgia Federal Highway Bonds Program

Issue year	GARVEE bonds (\$ million)	Reimbursement revenue bonds (\$ million)	Final maturity
2009	480	120	2021
2008	480	120	2020
2006	360	90	2018
Total	1,320	330	

Pursuant to the indenture under which the GARVEEs were issued, no additional bonds can be issued unless sufficient federal obligation authority is available in the current federal fiscal year to provide coverage of three times the maximum annual debt service on all outstanding and proposed GARVEE debt. Despite adequate current and projected coverage for Georgia's bonds, GARVEE programs have become a point of concern for states in general, as rating agencies and investors question the future size of the federal Highway Trust Fund (HTF).

BUILD AMERICA BONDS

Debt issuance increased in FY10 as the state accelerated a portion of its planned FY11 borrowing to take advantage of the federal Build America Bond (BAB) program, which expired at the end of calendar year 2010. For the \$523,450,000 General Obligation Bonds Series 2009H, Georgia optimized the structure of the total issuance by combining BABs with \$179,925,000 in tax-exempt bonds, maturing in years 1–7. The BABs were structured to mature in years 8–20, where the cost benefit was greatest (an estimated \$50 million in savings, compared with a fully tax-exempt issuance). The transaction achieved a true interest cost of 2.998 percent for the 20-year borrowing. Georgia issued an additional series of BABs, the \$213,515,000 2010 C-2. Although these issues contributed to a sharp increase in debt in the near term, the state will reap the benefits of savings from lower interest rates for years to come.

TRANSPORTATION REVENUES

The majority of the state revenue available for transportation purposes is obtained from motor fuel taxes. Georgia levies a 7.5-cent-per-gallon tax, which has not been increased since 1971 and is not indexed for inflation, and a 4 percent sales tax on the average retail price of fuel, which is collected on a cent-per-gallon rate that is set using a weighted average indexed retail sales price for each type of fuel. Of this 4 percent sales tax, 3 percent goes to GDOT and the other 1 percent to the State Treasury. The combination of these two taxes creates a relatively stable revenue stream, insulating the state from volatility resulting from decreased

consumption when prices increase. The combined tax rate is still one of the lowest of all 50 states. Although many states levy only cent-per-gallon excise taxes and face a declining revenue stream from motor vehicle fuel taxes, Georgia's motor fuel tax revenue is forecast to remain relatively stable in real terms.

OVERALL DEBT PROFILE

Georgia's debt burden has risen in the past few years, relative to other states. This increase is predominantly the result of GO debt for capital projects (including more than \$500 million in BABs in 2009–10) and \$1.7 billion in GARVEE bond issuances since 2006.⁴ Despite this increase, Georgia's ratings have not been affected.

DEBT STRUCTURE AND COST

Georgia typically structures its bond issues conservatively with respect to amortization schedule and exposure to interest rate risk. As discussed with respect to the BAB issues, the state's conservative borrowing practices have resulted in lower interest costs.

Many states issue long-term bonds with a 30-year final maturity; Georgia has traditionally opted to pay down debt more quickly, issuing general obligation bonds with final maturities of 20 years.⁵ The State Road and Tollway Authority's revenue bonds have been issued using level debt service amortization, which has helped to minimize borrowing costs and results in total annual debt service that declines quickly over time. Overall, Georgia's debt is retired quickly compared with that of other states. In 10 years, nearly 70 percent of currently outstanding debt will be retired.

Georgia has minimal exposure to variable rate debt and no interest rate swaps. Currently, less than 4 percent of total outstanding debt is variable rate. The state has benefited from this minimal exposure to interest rate risk. Despite the disruption in the municipal variable rate market in 2008, the variable rate bonds have traded at an average interest rate approximately 210 basis points lower than had they been issued at a fixed rate. For fixed rate bonds, the weighted average of the initial true interest cost on all outstanding new money tax-exempt GO bonds is 4.34 percent as of October 2010.

DEBT RATIOS

In Moody's *2010 State Debt Medians* report, Georgia's debt per capita ranked 21st, at \$1,120, compared with the \$936 50-state median. Its 3.3 percent debt-to-income ratio was 19th, compared with the 2.5 percent median (Table 6-3).

⁴ GARVEEs are technically not general obligations of the state, but due to recent concerns about the solvency of the federal HTF, two of three major rating agencies now include GARVEE debt in a state's total tax-supported debt for the purposes of calculating debt ratios.

⁵ *State of Georgia Debt Management Plan FY2011–2015*, dated October 6, 2010.

Table 6-3. Debt Ratios (as of October 13, 2010)

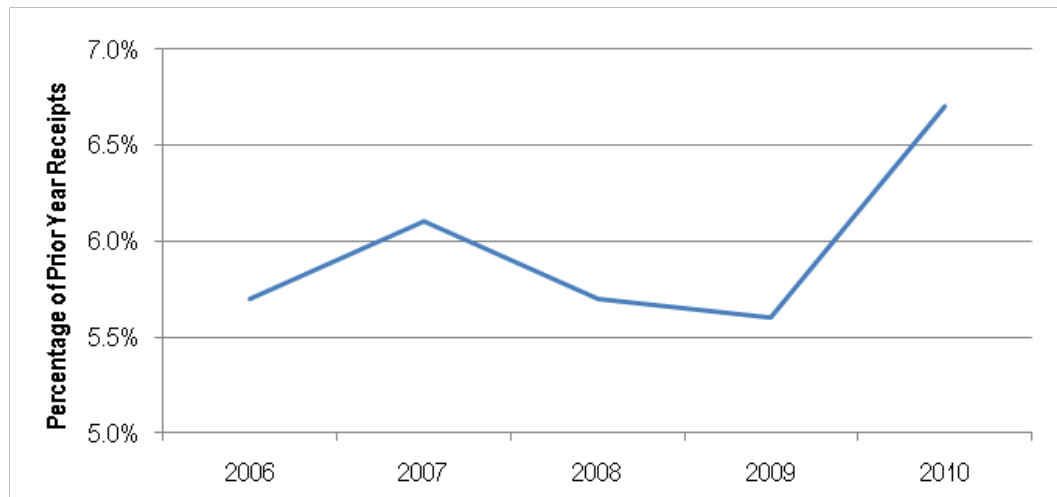
State	Per capita (\$)	% of personal income	Service as a % of expenditures	% of gross state product	Total net tax supported debt (\$ million)
Georgia	1,120	3.30	5.30	2.77	11,011
Michigan	748	2.10	N/A	1.95	7,462
Missouri	780	2.20	3.00	1.96	4,672
Utah	957	3.20	3.90	2.43	2,665
Washington	2,226	5.30	6.00	4.60	14,832
National median	936	2.50	3.00	2.22	4,274

Sources: Moody's U.S. Public Finance, *2010 State Debt Medians* report, May 2010; Standard & Poor's. U.S. Public Finance, *U.S. Public Finance Report Card*, December 16, 2009.

Note: Tax-supported debt only.

Georgia's constitutional debt limit for GO and guaranteed revenue debt mandates that the highest aggregate annual debt service requirement, including proposed debt, for the current year or any subsequent year, cannot exceed 10 percent of the prior year's total treasury receipts. Although still well below the debt limit, Georgia's debt burden and debt as a percentage of prior year receipts have risen recently (Figure 6-1).

Figure 6-1. Total Georgia Tax-Supported Debt as Percentage of Prior Year Receipts (Including GARVEEs)



This increase in the ratio of debt to receipts is predominantly the result of accelerated GO borrowing to take advantage of BABs and the \$1.7 billion in GARVEE bond issuances since 2006, combined with the impact of the economic downturn on revenues (state treasury receipts decreased 18 percent from 2008 to 2010). Increases in other debt ratios have been more modest, and Georgia remains close to peer states. Given that Georgia continues to experience above-average

population and personal income growth, an increase in outstanding debt is not a negative indicator.

Options

Georgia has been committed to maintaining its AAA credit rating through prudent financial management and conservative borrowing practices. Rating agencies and investors have conveyed confidence that the state as a whole will respond appropriately to and recover from the recent economic downturn. However, the state faces new challenges in maintaining its tradition of conservative debt management with respect to its transportation borrowing.

Recently, rating agencies and other market participants have expressed a negative outlook regarding standalone GARVEE programs like Georgia's. Citing uncertainty in federal transportation policy, less predictable funding levels, and the pending expiration of a majority of federal motor fuel taxes, GARVEEs are now regularly being considered as part of a state's net tax-supported debt for the purposes of calculating debt ratios. Recent increases in debt issuance, combined with the change in the treatment of the state's GARVEE program, results in increasing debt ratios. Although current and forecast debt service coverage remains adequate for all outstanding bonds, Georgia will need to monitor these metrics to ensure future increases in debt are justified by continued economic growth. For market participants and rating agencies to maintain their favorable view of the state, Georgia will need to keep up its record of prudent management.

As Georgia's population and economy continue to grow, infrastructure needs will grow as well. However, federal funding levels remain uncertain and state motor fuel tax revenues are not forecast to grow in real terms. Maintaining prudent debt management practices with a focus on the longer term will also be essential, as the state's funding situation may become more constrained in the future.

Recommendation

We recommend that Georgia do the following in regard to future transportation debt:

- ◆ *Continue to manage debt metrics to maintain the state's AAA credit rating, particularly with respect to the impact of the GARVEE program on debt ratios.*
- ◆ *Develop a strategy for meeting its current infrastructure needs in an environment where motor fuel tax revenues are not growing and federal funding is uncertain.*

ADVANCE CONSTRUCTION

Current State

Advance construction is a federal funds management technique that allows a state to advance a project without obligating federal funds. Under normal procedures, a federal agency must obligate the full amount of federal funds at the time it approves a project for funding. When the project is approved as advance construction, the federal agency approves the project as being eligible for federal funds but does not commit to providing the funds. The state advances the project using state funds, but in accordance with federal requirements. It may request that federal funds be obligated for the full federal share or for a portion of the federal share at any time, provided that federal funds are available for obligation. This process allows the state to advance projects even though federal funds are not available for obligation or as a means to better manage its limited annual obligation authority.

Advance construction is particularly useful for states that issue GARVEE bonds. By using advance construction, the state is not required to obligate at the beginning of the project the full amount of federal funds required to pay the debt service that would be required over a number of years, perhaps ten or more. Instead, the state would obligate each year's debt service payment from that year's obligation authority, a more efficient use of its federal funds.

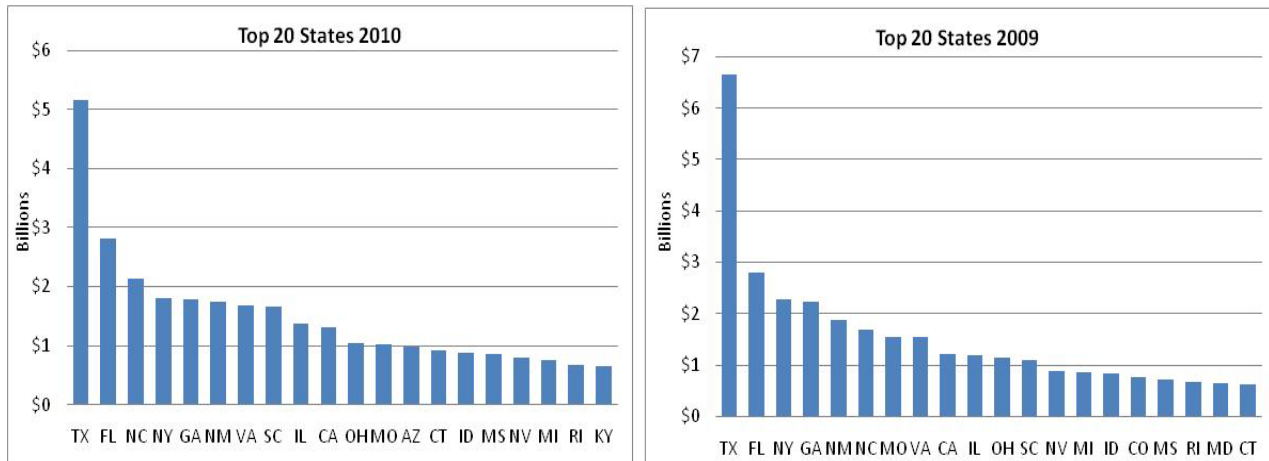
Options

On September 30, 2010, GDOT's advance construction amount was almost \$1.8 billion. This represents the federal share of highway projects approved by the FHWA but not funded with federal funds. Most of this amount, about \$1.3 billion, relates to future GARVEE bond debt service. The remaining \$0.5 billion relates to the normal pay-as-you-go projects.

GDOT's advance construction amount, compared with its federal highway apportionments, was higher than the benchmark states because the latter have much smaller GARVEE bond programs (Utah has no GARVEE bonds). Nationally, GDOT's advance construction amount ranked fifth in FY10 (Figure 6-2).

GDOT monitors advance construction amounts closely to ensure that minimum fund balances are maintained in its state motor fuel accounts. Nationally, advance construction balances saw only a small (1 percent) decrease from FY09 to FY10, while GDOT's balance declined by 20 percent.

Figure 6-2. Advance Construction



GDOT's use of advance construction can be very effective in advancing its highway program and managing its federal funds. We caution that GDOT should only use advance construction for projects that it intends to prioritize for federal funding in future years. If advance construction projects are never converted to regular federal-aid projects, the additional processes required to satisfy federal requirements would have been unnecessary.

Recommendation

We recommend that GDOT ensure that projects authorized as advance construction are ones it intends to convert to regular federal-aid projects.

PROJECT FINANCE STRATEGIES

Current State

GDOT's primary objective is to support Georgia's economic growth and competitiveness. This objective recognizes the importance of a quality transportation system in attracting industry and jobs. Success depends on the state's ability to implement effective strategies and identify sufficient and sustainable funding sources.

Georgia, along with the rest of the states, is facing challenging and uncertain times in meeting its transportation needs. Support from the federal government is uncertain. Federal policymakers have been unable to reauthorize the surface transportation program that expired on September 30, 2009, and the reauthorization date is undetermined. Federal funds have been authorized in short-term extension acts limiting the amounts that are apportioned to the states. As a result, states are not able to effectively make long-range plans.

The shadow that hangs over the federal program is the federal HTF which increasingly is under-funded relative to demands and expectations. HTF revenues in 2010 were \$35 billion, almost \$14 billion less than the annual amounts authorized in SAFETEA-LU. The willingness of the federal government to raise revenues in this era of fiscal restraint is unclear, but without additional revenues, funding support from the federal government will diminish and more of the investment burden will fall to the states.

The primary source of revenue for the highway program is fuel taxes. The federal fuel taxes were last increased in 1993. Georgia's fuel tax is based on a combination of cents per gallon and a percentage of the cost of fuel. This combination tends to soften the impacts of periodic fuel price surges, which result in a reduction of fuel sales. However, Georgia has not raised its fuel tax in decades and ranks close to the bottom of the 50 states in regard to the tax per gallon of fuel.

Current trends also call into question the long-term reliability of fuel taxes as a revenue source for transportation programs. As the nation looks to decrease its reliance on oil, as vehicles operate on alternative fuels and get better mileage, and as VMT levels off (or possibly declines), the states are likely to need to look for other sources of revenue.

Options

GDOT has used other approaches for funding or financing highways, such as tolling and public-private ventures, and the State Road and Tollway Authority maintains a transportation infrastructure bank. However, activity in these approaches has been limited.

States, including some of Georgia's neighbors, have begun to use more innovative methods in delivering transportation projects. As they compete for industry and jobs, time may be of the essence. For example, South Carolina conducted a "27 in 7" program with the goal of completing 27 years of highway and bridge projects in 7 years through bonding and the assistance of private engineering firms to help manage the additional workload. Florida has an extensive toll road system and has been active in the use of P3s. Florida's Port of Miami Tunnel project is using a design-built-finance-operate-maintain concession agreement with a 35-year term. Having the private entity assume responsibility for all aspects of the project allows state personnel to focus on other facilities. Florida DOT will make milestone payments during construction and availability payments after construction on the basis of the private entity's ability to meet performance objectives. Availability payments provide an alternative to the use of GO debt.

Both South Carolina and Florida have taken advantage of the U.S. DOT's loan program authorized by the Transportation Infrastructure Finance and Innovation Act (TIFIA). This program is a very flexible source of subordinate financing. While historically Georgia's AAA tax-exempt borrowing rate has been lower than

the U.S. Treasury yield at which TIFIA lends funds, that differential has narrowed dramatically in recent years.

States are considering tolling existing facilities to obtain additional revenue and more effectively use state personnel in cases where the operation of the tolled facility is transferred to a private entity. Federal policy allows non-interstate highways to be tolled provided the facility is reconstructed. Toll revenues can exceed the amount needed for reconstruction and can be used for other federally eligible projects. A pilot program allows for the reconstruction and tolling of three interstate highways with restrictions on the use of toll revenues.

A seldom used federal process authorized under section 129 of Title 23 U.S.C. allows states to loan federal highway funds to a project sponsor that can provide a dedicated repayment source. When the loan is repaid, the state can use the funds for other highway projects. Of course, funding the loan initially consumes federal funding in the same manner as a grant, until repayments are made.

GDOT's use of any of these financing strategies depends on many factors, including investment needs, legislative authority, and public support.

Recommendation

We recommend that GDOT continue to evaluate the effective application of innovative finance and project delivery approaches as it carries out its mission to support Georgia's economic growth and competitiveness.

Chapter 7

Program Execution

This component of asset management identifies how effective the organization executes or carries out its mission in support of the citizens of Georgia and numerous stakeholders. Figure 7-1 shows program execution best practices.

Figure 7-1. Program Execution Best Practices

Program Execution
<ul style="list-style-type: none">• Effective communications within DOT and with external stakeholders• Alternative methods for delivering DOT products and services are evaluated• There is a robust project portfolio management system

PROJECT MANAGEMENT

GDOT is implementing the best practice of assigning project managers to oversee all phases of construction projects.

Current State

GDOT is executing a major shift in its approach to construction project management. The agency has hired full-time project managers, assigned them to a centralized project management office (the Office of Program Delivery), and is transitioning these project managers into oversight duties for all phases of construction projects.

Assigning full-time project managers has the immediate benefit of relieving designers from project management responsibilities, allowing them to concentrate on their designs and quality control of design efforts. The use of full-time project managers also improves relations with cities and counties for locally contracted projects.

This change requires communication with interested parties and “tools” to help the new project managers succeed. In Chapter 9, we discuss aspects of change management.

The perception by multiple managers is that project management is currently limited to preconstruction activities and that the districts have not felt the impact of

creating project managers. We were told that “everyone needs a better understanding of the PM process.”

The organizational and information technology (IT) tools needed by the project managers are in varying stages of development. The Office of Program Delivery prepared responsible-accountable-consulted-informed (RACI) charts, or responsibility assignment matrixes, for preconstruction project management activities and is developing RACI charts to cover specific construction activities of project management; the office is also developing a project management manual. The Office of Program Delivery currently uses an old department-wide system for tracking the status of projects, which covers the preconstruction phase and construction progress. Some project managers are using Microsoft Project to manage projects to integrate with consultants’ schedules. The Department is also exploring the use of Critical Path Methodology for management of the more complex design-build and P3 projects.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

Numerous industries recognize the use of full-time project managers for construction projects and the creation of a project management office as key components of consistent project success. Skilled, full-time project managers reporting to and supported by a project management office are a value-adding investment. For instance, NCHRP’s Document 137 states that slips in project schedules and budget targets “can be mitigated through the use of effective project management protocols and procedures.”¹ Project manager involvement in all phases of a project is important: FHWA’s project management guidance states that “in order to insure major project success, it is imperative that good project management principles are used beginning early in the planning stage of a project.”²

PEER STATE BEST PRACTICES

MDOT

The Michigan Transportation Commission, which oversees MDOT, established a 5 percent tolerance level for project overruns during construction. Overruns require detailed explanation and discussion with the commission. Complying with the commission’s requirement, MDOT sustains its total overruns at or below 2 to 3 percent, in part by defining the full scope early and sticking with it. Once a project is awarded, senior management approval is required for any changes or additions.

¹ See Note 16, Chapter 3.

² FHWA, Office of Innovative Program Delivery, *Guidance: Project Management Plan Guidance*, January 2009, www.fhwa.dot.gov/ipd/project_delivery/tools_programs/project_management_plans/guidance.htm.

MDOT's proprietary program/project management system helps it provide the project delivery and oversight required to deliver projects on time and within budget and significantly contributes to MDOT success. The system automates baselines and milestones for all projects and is used for monthly reports and reviews between project managers and senior management, where project managers and team members are held accountable for project progress.

MDOT's well coordinated project management capability and oversight positions it to have good choices if additional funding becomes available: it purposely does project development (up to contract award) beyond currently available funding.

UDOT

Utah uses its project management skills and systems to showcase its ability to deliver on schedule. Its communications plans keep stakeholders involved and informed, helping to obtain buy-in. Utah has a communications consultant on every project.

WSDOT

WSDOT has a very detailed capital construction project management online guide,³ which provides tools, templates, examples, and guidance to help the project manager succeed.

STUDY TEAM JUDGMENT

Having full-time project managers assigned to a centralized project management office is a best practice proven to help state DOTs meet project requirements and mitigate schedule and cost overruns. The transition to full-time project managers for all phases of major projects is a good investment on the part of GDOT.

GDOT has addressed two key requirements for project management: the hiring of people with the skills needed for project management and to fully support the Office of Program Delivery as GDOT's project management office. The office is heading in the right direction with the development of RACI charts to cover the construction phase, writing a project management manual, instituting Microsoft Project to manage projects, and planning to replace its older scheduling system for tracking project status with a new web-based system.

Additional actions are needed for the transition to and implementation of the new project management program (see "Recommendations").

³ WSDOT, *Project Management—Delivering the Capital Construction Programs at the Project Level*, www.wsdot.wa.gov/Projects/ProjectMgmt/default.htm.

Recommendations

We recommend that GDOT do the following in regard to project management:

- ◆ *Clearly communicate the new approach to project delivery (using full-time project managers) GDOT-wide and to affected external stakeholders.* The introduction of full-time project managers is a major change, and GDOT needs to devise and execute a change management and communications strategy to maximize internal buy-in and promote a smooth transition.
- ◆ *Treat the implementation of the new project management approach as a project itself.* Create a project plan that identifies a baseline for deliverables, resource requirements, schedule, risk management, and other project planning requirements and then execute, monitor, and control it on the basis of the plan.
- ◆ *Continue to invest in organizational and IT tools essential for project managers to do their job well.* MDOT's project management system and WSDOT's capital construction project management online guide are good examples of the tools required.

SERVICE DELIVERY

The GDOT Efficiency Committee is reviewing functions within GDOT to determine the efficiency of contracting out some functions instead of performing them in-house.

Current State

The GDOT Efficiency Committee is systematically identifying functions where there are gaps and then identifying resources or outside expertise that fill those gaps. From information gained during interviews and from data in the project management system, we found that design work is approximately a 30/70 split between in-house and consulting. Similarly, contractors perform around 50 percent of construction project inspections. GDOT is pursuing innovative maintenance outsourcing, such as the comprehensive maintenance contract for Interstate-95 (which begins July 1, 2011) and a performance-based payment structure for Intelligent Transportation System (ITS) devices in the Atlanta area. The requirement to examine outsourcing opportunities so that specified levels of service can be maintained is getting more critical due to the decline in staffing throughout GDOT and external interest in reducing the GDOT staff even further.

A major outsourcing consideration is work conducted in rural areas that may need to stay in-house because of the lack of available qualified local contractors. Also, any decision to contract out maintenance work needs to consider the requirement that GDOT employees make up the emergency response base. Among the Design

Branch, we found a desire to keep enough designs in-house to maintain the necessary technical proficiency to address emergencies and be “smart buyers” when design services are contracted out.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

NCHRP Report 636 says that it is necessary to merge

planning for direct hires with acquisition of talent from all other sources [and that] organizations that choose to acquire needed goods and services from other providers will need to assure that they have the talent within their organization to exercise the proper due diligence and oversight of the contracts and other arrangements of acquiring good and services from external sources.⁴

PEER STATE BEST PRACTICES

One question we asked was, “What is your agency’s philosophy toward contracting out work (e.g., design, maintenance, support services), and roughly how much do you do as a percentage of total work, and what drives the percent?”

MDOT

Each region (comparable to a GDOT district) has several transportation service centers (TSCs), where the “rubber meets the road” for most MDOT field work. Each TSC has the flexibility to meet service needs in-house, contract out, or a mixture, depending on the local economy, labor availability, and other factors. Except for bridge design and a few other specialties, each region and its TSCs are more or less self-sufficient (for example, each region designs its roads, issues its own permits, and provides its own traffic safety). Consultants (contractors) are used for more complex project designs. About 50 percent of design is contracted out, and consulting services are used on about 50–60 percent of the construction (primarily technical services).

MoDOT

For the past few years, MoDOT has outsourced approximately 25 percent of design work and about 5 percent of project administration. A few “on-call” maintenance activities have been contracted out, not a large percentage of the total work. Leadership is aggressively looking for other work that makes sense to outsource in its efforts to develop a smaller, more efficient department.

⁴ NCHRP, *Tools to Aid State DOTs in Responding to Workforce Challenges*, Report 636 (Washington, DC: 2009). p. 48.

UDOT

The UDOT workforce has had a relatively consistent size, and it staffs to the minimum level of core competencies necessary to run the department and contracts out everything else. Using contractors allows UDOT to ramp up to act on time-sensitive projects without a long-term investment in equivalent full-time staff members.

WSDOT

WSDOT is defining and developing a core workforce. Overall, it has an 80:20 in-house-to-contractor/consultant ratio; for large capital projects, it has a 20:80 in-house-to-contractor/consultant ratio. O&M work is done 90 percent in-house.

STUDY TEAM JUDGMENT

GDOT is on the right track with the Efficiency Committee's systematic approach to identifying functions that can be outsourced. The requirement to examine outsourcing opportunities will continue as staffing declines throughout GDOT and external interest in reducing the size of the GDOT staff continues.

Deciding whether to outsource a function or keep it in-house involves many considerations:

- ◆ The in-house staff has flexibility and responsiveness not always available via contracted services. It also has long-term stability and institutional knowledge.
- ◆ An agency needs to maintain a core capability to be an "informed buyer" for contracted work and to respond to requirements where contracted services may not be available.
- ◆ Contracted work provides flexibility (in resourcing) for some surge requirements and can cost-effectively provide technical expertise that is only needed on occasion.
- ◆ Replacing the in-house staff with contract work does not necessarily save time or money for the same level of service. Also, increasing the amount of contracted work requires an increase in contract administration and oversight capability by the agency.

In the case of inter-government agreements, other government agencies may give DOT work a lower priority than their own work. A government agency may defer the work it is doing for other agencies when priorities change in their own work requirements. This is a word of caution. It is not an evaluation of any current agreements with other government agencies/entities.

Rules of thumb for the right balance between in-house and outsourced work are hard to come by. No standard solution covers every situation. Consider the following guidelines in outsourcing:

- ◆ The decision to use either in-house, contracted, or inter-government agreement sources to meet a service requirement needs to be made in a structured manner, resulting in a business case that ensures all resource implications are considered (such as the requirement for certification, training, equipment, vehicles, tools, spares, consumables, and storage and shop space) as well as effects and risks (such as the effect on emergency response capability).
- ◆ An outsourcing decision must consider the potential effect of any expected changes to service-level standards and a realistic range of funds that will be available to support the functions under review.
- ◆ A decision on whether to outsource a specific function should be baselined against the agency's definition of the core workforce. Workload has peaks and valleys. The core workforce is for the valley work level, and the peak work is contracted out in general. This applies both to the amount and type of work (you don't maintain a specialty in-house if it's infrequently used and readily available via contract).

Recommendations

We recommend that GDOT do the following in regard to service delivery:

- ◆ *Continue to use the Efficiency Committee to systematically review potential opportunities for outsourcing.* The committee could also track actual costs of functions once outsourced to improve the assumptions used when deciding on future outsourcing.
- ◆ *Develop GDOT-wide guidance for preparing the business case for using agency personnel, inter-government agreements, or contracts to provide DOT services.*
- ◆ *Review and update GDOT's strategic HR plan and staffing model to reflect any expected changes in service-level standards and a realistic range of funds that will be available to GDOT over the next 1 to 3 years.*

COMMUNICATIONS

GDOT's interactions with key stakeholders could be more effective and mutually beneficial with an expanded, focused approach to communications.

Current State

GDOT has many initiatives for communicating with internal and external stakeholders:

- ◆ Communications tools, including its website, Twitter, Facebook, and YouTube
- ◆ Regular surveys of its stakeholder groups
- ◆ A public relations firm is used on specialized projects as the need arises
- ◆ Quarterly district status meetings are held to discuss projects and includes internal and external stakeholders. In addition, regular teleconferences or meetings between central office staffs and their counterparts in the districts.

Even with all of these initiatives, we found a common theme that GDOT could communicate better with its internal and external customers. The implementation of asset management and full-time project managers were cited numerous times as needing to be better communicated. Employee surveys show that common knowledge and understanding of GDOT's mission and goals are lacking.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

AASHTO's *Transportation Asset Management Guide* says that effective communications on asset management between an agency and its governing bodies, stakeholders, and customers is critical to success.⁵ This includes regularly communicating an agency's accomplishments on meeting policy objectives and effectively working with political leaders and others to present funding options and associated consequences.⁶

FHWA's *Asset Management Overview* states, "Communications is of singular importance in developing and implementing an asset management program."⁷

PEER STATE BEST PRACTICES

MDOT

MDOT has had success with the use of cross-functional teams, with broad participation in MDOT and with external stakeholders such as FHWA, to gain buy-in during development of policies, guidelines, and accountability measures.

⁵ See Note 1, Chapter 2, p. 1-2.

⁶ See Note 1, Chapter 2, p. 3-3.

⁷ See Note 13, Chapter 3, p. 15.

Under its industry partnership program, MDOT and industry representatives meet to address issues, policies, etc., to improve project delivery.

MDOT developed *A Citizen's Guide to MDOT* to help inform the general public on how it is organized and its responsibilities (available via the MDOT website). MDOT also developed a short-version pamphlet of its strategic plan and distributed it to its employees.

MDOT makes considerable use of new media, e.g. video news releases, twitter, facebook, media alerts, to communicate its message.

MoDOT

MoDOT's project planning and extensive public and stakeholder involvement processes help identify potential environmental issues as early as possible in the development of a project.

MoDOT leadership holds "listening sessions" with district and division employees for face-to-face communication and feedback.

MoDOT's monthly publication, "Connections," keeps employees up to date on issues and events. MoDOT also makes extensive use of its intranet and website to communicate and disseminate information.

UDOT

UDOT spends much effort on public involvement—a person on every project is dedicated to interact with the public. It uses one set of goals and measures with consistent messaging for key stakeholders.

WSDOT

WSDOT began implementing its current communications plan in 2007. It has a dedicated communications coordinator for each "megaproject." WSDOT has had success communicating with travelers using Twitter and Facebook. Truckers actively use Twitter to get the latest congestion news. The WSDOT website has a large user base and is well leveraged by WSDOT.

STUDY TEAM JUDGMENT

Despite GDOT's significant outreach efforts, the perception remains that communications management needs to be improved with internal and external stakeholders. The necessity for effective communications is at a critical stage, given that GDOT is implementing major initiatives such as asset management and full-time project managers.

A key success factor when implementing major initiatives is how well communications are managed. At the start of new initiatives or when existing

communication efforts aren't perceived as effective, the tools and techniques for best communicating with each key stakeholder group should be analyzed and identified. This analysis provides vital input for planning communications and deciding the level of outreach capability to resource. For example, investing as MDOT did in a short-version pamphlet of the strategic plan may be just the right tool to help employees understand GDOT's mission and goals.

Recommendations

We recommend that GDOT do the following in regard to communications:

- ◆ *Expand the outreach capability with focused, continual communications with all key stakeholders (including employees).* Identify and utilize interactive, push, or pull communications technologies to improve the effectiveness of communications. Also, regularly review the effectiveness of communications initiatives.
- ◆ *Analyze communications requirements agency-wide.* From this analysis, create a "one-voice" GDOT communications plan. The plan should identify key stakeholder groups such as GDOT employees, Georgia citizens, and state legislature and have a strategy for interacting with each group. Establish a common understanding of the meaning of critical terms to minimize misunderstanding and clarify communication.
- ◆ *Consider preparing communications plans for each new major initiative.* These plans would be part of change management for instituting asset management and implementing full-time project managers.

USE OF INNOVATIVE PRACTICES

GDOT is developing new tools such as design-build contracts, workload sharing among the districts, and P3s to provide GDOT services more efficiently.

Current State

The Office of Innovative Program Delivery is GDOT's lead in instituting alternative delivery methods for its regular program and supports the delivery of P3 projects. Most of the focus has been on the use of design-build contracts for construction projects. During interviews, we learned that the procurement approach for design-build projects has not totally shifted from design-bid-build practices and could be more efficient. Georgia law limits design-build projects to 30 percent of the total construction value of the previous year's projects, and emphasizes low bid.

GDOT's Division of Public-Private Partnerships is pursuing potential P3 "mega-projects" such as the West-by-Northwest project. P3 efforts will likely involve the

collection of tolls. The State Road and Tollway Authority (SRTA) will need to be involved in P3 initiatives involving tolling. GDOT developed performance specifications and standards for use in P3 contracts.

We learned during interviews that GDOT is initiating workload sharing for designs among the districts to fully exploit the design capacity of the districts and balance the efforts of their design staffs. Many questions have arisen on how this workload sharing will work. One suggestion was to limit workload sharing to districts that have similar terrains.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

AASHTO's *Transportation Asset Management Guide* highlights the value of the periodic evaluation of alternatives for delivering programs and services such as design-build, design-build-maintain, and similar options.⁸ For example, periodically reviewing new technologies, such as the use of satellites, could lead to a more cost-effective and efficient means for collecting data in support of asset management.⁹

PEER STATE BEST PRACTICES

MDOT

MDOT does not have P3 authority. It sees the potential value in using P3 innovation and is in the process of seeking permission from the legislature.

MDOT established a DOT-industry partnership about 10 years ago. Led by the DOT director and senior staff, it engages industry in discussing and defining mutually beneficial and agreed-upon changes to policy, procedures, and issues that will facilitate industry services (such as project execution) for MDOT, making industry more responsive to DOT requirements and enabling it to be more efficient and effective.

MDOT leadership has a history of engagement and involvement with industry associations, organizations, and other entities (such as AASHTO and FHWA) that develop guidance, rules, and oversight for DOTs and transportation in general. Its involvement as an interested player and end user helps influence the future shape of the transportation industry so it can better prepare as a DOT for the future.

MoDOT

Until recently, Missouri was not allowed by law to use design-build as a contracting method. MoDOT's first two design-build projects, Interstate 64 in St. Louis

⁸ See Note 1, Chapter 2, p. 3-5.

⁹ See Note 14, Chapter 3, p. 6-3.

and the Christopher S. Bond Bridge in Kansas City, both completed early, are nationally recognized successes.

MoDOT's new Safe & Sound Bridge Improvement Program is a two-pronged program to improve 802 of the state's lowest-rated bridges in 5 years. Some 248 bridges are being put out for bid in groups according to location, type, or size to expedite the design and construction process. The other 554 bridges are scheduled for full replacement and have been packaged in a single design-build contract. Progress on the contracts is at or ahead of schedule.

MoDOT uses an alternative bid approach for paving contracts, where it provides performance expectations and specifications and then allows bidders to propose the type of material, as material costs fluctuate. This approach is resulting in more bids and cost savings. MoDOT also has a business section on its website for contractors, suppliers, and other vendors.

UDOT

UDOT received authority for innovative contracting in 1996, and since that time has used both Design Build and Construction Manager/General Contractor (CMGC) on projects of all sizes and complexity. Most recently they developed Manuals of Instructions for Contractor Team Selection for both methods which outline value based selection processes. Innovative Contracting is a key component in delivery projects quickly and maximizing innovation in both construction techniques as well as facilities constructed.

WSDOT

WSDOT practices innovative approaches requiring approval from the legislature. A case would need to be made to show the costs and benefits of innovative approaches, and then WSDOT starts with small projects and works up to larger ones.

STUDY TEAM JUDGMENT

Because of the many issues associated with implementing new, innovative contracting and alternative-funding methods to deliver projects, GDOT has taken the right step by creating staff elements dedicated to spearheading innovative ways to deliver GDOT services. The questions of when and how to apply innovative practices, particularly for contracting and financing alternatives, are challenges other DOTs are facing. In a recent *ENR.com* article, the AASHTO president, addressing alternative procurement methods, said, "No single method works better than another; they are each useful, depending on the project. States are learning from each other, together with the Federal Highway Administration."¹⁰

¹⁰ Tony Illia, "Q&A With Susan Martinovich, First Woman To Lead AASHTO," *ENR.com*, November 22, 2010.

Implementing innovations poses the communications challenges associated with any new initiative. One is to make sure that GDOT employees and stakeholders are aware of potential innovations available for accomplishing their work. A second is helping GDOT employees and stakeholders understand the parameters that must be considered when determining whether an innovation is the best approach for a particular project or function. Focusing the task of housing the institutional knowledge of innovative delivery within a unit makes this challenge more manageable.

To take full advantage of innovative approaches, standard practices should be reviewed to see the changes required. If standard practices don't keep pace with innovations, the potential advantages for originally pursuing an innovation can be quickly neutralized. For instance, business practices well suited to the design-bid-build environment may not work well for design-build projects.

Workload sharing of design work among the districts is a positive step in resource management, but it also introduces complexities. A critical success factor in workload sharing will be consistent formats and the ability to easily share information as one district designs and another manages construction. Also, clear guidance is needed on how design workload sharing will work.

Recommendations

We recommend that GDOT do the following in regard to the use of innovative practices:

- ◆ *Continue to identify new practices other states and transportation-related agencies are pursuing and where they could benefit GDOT.*
- ◆ *Continue to build the necessary partnerships, such as with the SRTA and other state agencies, to pursue P3 initiatives.*
- ◆ *Develop and implement a communications strategy to raise awareness of available innovative practices. Part of this strategy should be the creation of general guidance on when to consider different approaches such as design-build and P3.*
- ◆ *Identify and update old business practices that may hinder innovative ways of doing business.*
- ◆ *Develop an implementation plan for the workload sharing of design work among the districts. This implementation plan should be well communicated in the districts and central office.*

Chapter 8

Monitoring and Control

This component of asset management is the means by which agency leadership ensures that the vision and direction of the organization, as well as its mission, are carried out in accordance with leadership guidance. Figure 8-1 shows monitoring and control best practices.

Figure 8-1. Monitoring and Control Best Practices

Monitor and Control
<ul style="list-style-type: none">• Develop a suite of measures for awareness, analysis, decision making, and quality control• Performance oversight of products and services against established baselines• Internal checks for policy compliance and to find opportunities for improvement

PERFORMANCE METRICS

GDOT has identified 19 agency-level performance measures and will use these measures to inform decisions and gauge how well they are moving towards meeting their strategic goals.

Current State

GDOT's Division of Organizational Performance Management previously tracked approximately 400 performance measures throughout the organization. This number of measures was reduced to 40 in 2010 with the implementation of the current strategic goals. Recently, the senior leadership team has agreed on 18 measures that will serve as a manageable agency executive level dashboard or scorecard. These measures will inform decisions and provide a "pulse" for how well the Department is achieving its strategic goals.

GDOT surveys its stakeholder groups (local governments, the General Assembly and State Transportation Board, the general public, and GDOT internal employees) to get their sense of GDOT's performance and then acts on the survey results to improve services and products.

GDOT is establishing the use of performance metrics agency-wide. For instance, it has created time baselines for the preconstruction phase of capital projects and it is basing payments for ITS maintenance contracts on performance targets.

Discussion

REPRESENTATIVE INDUSTRY RESEARCH

AASHTO's *CFO's Handbook on Performance Management* presents the importance of performance measures as "information [to help] guide decisions about priorities and resource allocation for capital project delivery and internal agency management and operations."¹ Noting that DOTs differ, the handbook points out the following best practices in leading performance-based systems:

- ◆ Application of integrated performance measures throughout the agency
- ◆ Systematic, documented application of performance measures
- ◆ Strong executive and managerial support and involvement
- ◆ Recognizing and planning for the culture change caused by implementing performance measures
- ◆ Transparency of performance measures to internal and external stakeholders
- ◆ Linking organizational performance with transportation system performance.

NCHRP Project 20-60, *Performance Measures and Targets for Transportation Asset Management*, states, "A technically sound, defensible, resource allocation process depends on the effective use of performance measures. Most importantly, performance measures provide the most effective means to demonstrate accountability for the use of public funds."²

PEER STATE BEST PRACTICES

MDOT

MDOT revamped its performance measure approach in 2009 to better support strategic goals. The current version is posted on the MDOT website. Each measure is presented at three levels—executive/summary, expanded summary, and detailed—to meet the needs of a wide array of viewers and users. It's also used to

¹ AASHTO, *A CFO's Handbook on Performance Management* (Washington, DC: AASHTO, 2010), www.transportation-finance.org/pdf/0211_performance_management_briefing_paper.pdf.

² NCHRP, *Project 20-60: Performance Measures and Targets for Transportation Asset Management*, onlinepubs.trb.org/onlinepubs/archive/NotesDocs/FR1_NCHRP%202060_Summary.pdf.

help support MDOT financial decisions. Overall, measures are easy to read and use and very informative.

Basic premises behind developing new measures included linking measures to MDOT's four goals (stewardship, safety and security, system improvement, and efficient and effective operations) to use existing or readily available data and to use in-house resources to develop and manage the measures until the new measures stabilize. After stabilization, MDOT will examine investment in IT resources to support the measure system.

MDOT uses the Center for Geographic Information of the Michigan Department of Information Technology as the honest broker of its asset information. It has in-place a web-based data entry for each entity that owns or is responsible for roads and bridges for more accurate and timely data collection.

MDOT employees participate on teams in developing or using the measures. Each objective has a cross-functional performance measurement team.

MoDOT

MoDOT's motto is "what gets measured gets done." It has rolled up more than 1,000 performance measures to 18 "tangible results," and each measure directly relates to or supports one of the results.³

When making the change from the status quo to performance management/asset management, work-level trackers were very instrumental in changing the culture of the organization.

In addition, MoDOT contracts for random sampling and phone surveys to gauge statewide response levels and then tracks progress over time with follow-up surveys. Each year, MoDOT uses this approach in a statistically valid statewide survey of all of its customer groups. This survey also breaks down results on customer satisfaction items for each of the department's regions. The survey and subsequent report, *A Report Card From Missourians*, give customers direct input in determining acceptable service levels in areas such as smooth roads, brightness and visibility of striping and signs, work zones, mowing, and litter control.⁴

UDOT

UDOT has several hundred measures that have been reduced to the Final Four used in making decisions. The UDOT director uses this Final Four as his sales pitch—a succinct, understandable, and comprehensive picture of UDOT performance—when he communicates with stakeholders (including the legislature).

³ MoDOT, MoDOT Tracker, *About MoDOT*, www.modot.mo.gov/about/general_info/Tracker.htm.

⁴ ETC Institute and MoDOT, *A Report Card From Missourians—2010*, July 2010, library.modot.mo.gov/RDT/reports/Rd08018/or11001main.pdf.

WSDOT

WSDOT found that too many measures can be confusing to decision makers and difficult to track. WSDOT scaled back the measures it communicates to external stakeholders, but it still tracks additional measures throughout WSDOT when they support accountability.⁵

STUDY TEAM JUDGMENT

GDOT is moving to what appears to be an appropriate number of agency-level measures.

Performance measures are a key part of asset management because they are the means by which an agency is held accountable for its decisions and for getting results. Because of this, performance measures must align with agency goals and established levels of service. GDOT intends for a critical few performance measures to reside at the agency level. These high-level measures will then cascade throughout the organization. For example, division chiefs, office heads and even individual work groups will have their own performance measures that support GDOT's overall performance measures and are appropriate for holding the division accountable for achieving results.

Recommendations

We recommend that GDOT do the following in regard to performance metrics:

- ◆ *Continue efforts to have the districts, divisions, and offices identify additional measures at their levels that clearly link to the 19 agency-level performance measures being developed.* Linking performance measures throughout the organization will promote buy-in and understanding as employees participate in the process. It will also serve to validate the activities GDOT performs.
- ◆ *Manage the configuration of GDOT's performance measures by periodically validating their appropriateness in achieving the agency's goals.* Necessary changes to performance measures should be reviewed for their effect on other performance measures and on data collection requirements.
- ◆ *Tie performance measures to accountability.* Communicate with GDOT employees and external stakeholders that the performance measures will serve as benchmarks by which employees, and GDOT as a whole, can determine the progress they have made towards achieving the overall goals of the organization.

⁵ WSDOT, "Gray Notebook," *WSDOT Accountability & Performance Information*, www.wsdot.wa.gov/accountability/.

AUDIT FUNCTION

The organizational placement of the Office of Audits within GDOT may hurt its potential effectiveness.

Current State

The internal GDOT audit function reports to the Chief of Administration, submerging it enough within the organization to impair its objectivity and ability to report.

GDOT conducts internal auditing to help provide high-quality, efficient, and effective services and products. For example, the Office of Design Policy and Support performs policy conformance reviews at a project's concept stage to identify and correct inconsistencies and noncompliance issues before they escalate into costly changes and delays during design or construction. In another example, the Office of Construction uses 12 contract liaisons to audit every GDOT construction project every month. Just last year, these audits identified \$19 million in erroneous charges.

Discussion

INDUSTRY RESEARCH

AASHTO's *Internal Audit Guide* reinforces the importance of stewardship and oversight of public expenditures. Good internal auditing processes for transportation agencies are important in establishing and sustaining credibility and accountability. The guide also emphasizes the importance of ongoing monitoring to sustain "the quality of performance over time" and "to ensure that the components of the system are operating as designed."⁶

Institute of Internal Auditors guidance says the independence and objectivity of the internal auditor is essential to credible audit results. This can be achieved by ensuring the internal auditor has "direct and unrestricted access to senior management and the board." This can be in the form of a dual-reporting responsibility by the internal auditor.

NCHRP Report 632 states that continuous fine-tuning of a replicable process, particularly related to asset management, can improve its efficiency and

⁶ AASHTO, *Internal Audit Guide: A Guide for Performing Department of Transportation Internal Audits* (Washington, DC: FHWA, July 2004).

effectiveness.⁷ AASHTO's *Transportation Asset Management Guide* highlights the need for appropriate management methods to deliver the program.⁸

PEER STATE BEST PRACTICES

MDOT

MDOT's internal Audit Office reports directly to the State Commission, which oversees MDOT and its director. The state auditor general performs outside audits of MDOT. Together, the internal and external audit functions give leadership credible and objective views on compliance and issues at all MDOT levels, maximizing opportunities for correction and improvement.

MoDOT

MoDOT's Audit Office reports directly to the state director of transportation.

UDOT

UDOT's internal audit function reports directly to the UDOT director.

WSDOT

WSDOT's internal audit function reports directly to the WSDOT secretary.

STUDY TEAM JUDGMENT

General management principles support the independence of audit functions from the entities being audited to avoid compromising situations, remove partiality, and provide objectivity. These principles also support the concept that the audit function should report to top management so the decision maker can maintain an objective picture of the health of the organization's compliance and direct appropriate resources to improve the organization.

A policy on planning and conducting regular internal audits to determine whether the organization is complying with policies is a best practice. In addition to monitoring policy compliance, audit reviews are an opportunity to check the suitability and effectiveness of policies. The audit policy should describe the process for analysis and review of audit results and the process for instituting corrective actions when necessary; these corrective actions should be centrally tracked to closure. The results of previous audits should be used to analyze trends. Best practices observed during audits should be documented and shared enterprise-wide.

⁷ NCHRP, *An Asset-Management Framework for the Interstate Highway System*, Report 632 (Washington, DC: 2009). p. 51.

⁸ See Note 1, Chapter 2, p. 2-3.

Recommendations

We recommend that GDOT do the following in regard to the audit function:

- ◆ *Have the internal auditing office report directly to either the GDOT commissioner or deputy commissioner. This alignment mirrors generally accepted industry and management practices and streamlines bringing findings and issues quickly to the attention of senior leadership for direction and resolution. This recommendation is not a reflection on the Office of Administration but aligns GDOT with management best practices.*
- ◆ *Use audits of policies and procedures as a standardized way to review the effectiveness of current policies and help identify and share best practices internally.*
- ◆ *Define and communicate the purpose of the audit function to GDOT employees. Relate that they are a positive opportunity to improve rather than a negative event. This communication can improve cooperation between auditing and other GDOT functions toward the common purpose of improving how it does business.*

Chapter 9

Organizational Attributes

This component of asset management includes coordination within the central office and between the central office and the field offices, HR, IT, organizational structure, and leadership. Figure 9-1 shows examples of organizational attributes that would constitute best practices.

Figure 9-1. Organizational Attributes Best Practices

Organizational Attributes
<ul style="list-style-type: none">• DOT's size and organizational structure effectively supports its service needs and resource management responsibilities• Enabling technology systems and analytic capabilities• Strategic approach to human resource management

CENTRALIZATION OR DECENTRALIZATION

Current State

GDOT has a matrix approach for providing some services in the field and where appropriate intends to move further in that direction as staffing is reduced. District laboratories report to the central office laboratory, helping ensure districts are following consistent and established policy, procedures, and standards. The central office is attempting to balance workloads among the districts by centrally managing program management and resource allocation. However, a number of other management functions are decentralized. One state-aid coordinator is positioned in each district, administering state aid grants and contracts in that district. There is an engineer in the general office that coordinates on a statewide level, but without duplication of effort of those in the field.

Discussion

Although a matrix approach to management can be effective for many services, other services could be more efficient in a semicentralized, regional model, which would further enhance workload balancing in the field.

PEER STATE BEST PRACTICES

UDOT

UDOT centralizes project planning, core services, and oversight and decentralizes project delivery.

WSDOT

WSDOT uses a highly matrixed organization, where regions and core services are combined under the chief engineer. This is valuable for projects that involve multimodal transportation and those that require many disciplines.

STUDY-TEAM JUDGMENT

Changing between the efficiency of centralized management and the local control of decentralized management involves tradeoffs. The decision to centralize, decentralize, or execute some combination requires judgment and depends on the type of service provided. Each function must be evaluated on its own merits.

Recommendation

We recommend that GDOT do the following in regard to centralization or decentralization:

- ◆ *Communicate and coordinate continuously between the central office and districts to improve field support provided by the various central office divisions. Make every effort to “drill down” and distribute information among all employees.*
- ◆ *Consider a regional, rather than individual district, model for delivering some services such as state aid administration.*

INFORMATION TECHNOLOGY

Current State

IT is an in-house division that develops and maintains several applications. It has embarked on a long-term initiative to reduce and integrate systems and data collection, which will ultimately result in one source of valid data on each asset. This consolidation will support an IT architecture of applications and systems that supply (provide) data to a data warehouse and those that demand (use) data from the data warehouse.

A new Data Governance Council, with representation from all operating divisions, reviews and approves all data and system changes. IT is moving most applications to the web.

IT does not maintain PeopleSoft that is used for many important applications (HR, accounting, inventory tracking, etc.). PeopleSoft is maintained by the State Accounting Office and provides an accounting service to all state agencies. GDOT has the majority of data residing in PeopleSoft and a large percentage of its processing, however GDOT does not always receive the system enhancements it requires.

Discussion

PEER STATE BEST PRACTICES

MDOT

MDOT has its own MI Project Management System that works very well as a primary management tool. It has had relative freedom in the past to buy or develop its own systems though state standardization initiatives are restricting IT choices. IT is an internal department in MDOT.

UDOT

UDOT leverages technology in its approach to asset management by capturing and tracking road conditions over time. That information is shared with decision makers so they can make informed decisions regarding budgets and project prioritization.

WSDOT

WSDOT uses technology to support one of its strategic goals, “keeping Washington moving.” Technology is used to determine the impact projects will have on reaching its goals related to congestion and the average rate of travel.

STUDY TEAM JUDGMENT

IT is critical in asset and project management. GDOT benefits from having an internal IT staff that is on board and focused on the move to asset management.

Recommendation

We recommend that GDOT monitor progress in managing data and systems in support of asset management. It should continue to seek a solution to the lack of timely and effective systems enhancements from the all-state agencies and work on the PeopleSoft issue, looking at posting dedicated PeopleSoft staff members at GDOT, having more voice in and taking more control of needed enhancements.

HUMAN RESOURCES STRATEGIC PLAN

Current State

GDOT submits an annual workforce plan (general analysis of trends and skill gaps in the workforce) to the State Accounting Office. They have also conducted efficiency planning which resulted in the development of staffing models by office and district. Due to attrition, staffing has been reduced for a number of years in a row. Requests for external hires are submitted to the State Personnel Administration and the Office of Planning and Budget for final approval.

Discussion

Often, the focus of resources in asset management is on the financial side, but the staff is the other key resource that impacts service levels.

PEER STATE BEST PRACTICES

MDOT

MDOT conducted a long-term workforce planning exercise to take a holistic perspective on designing the department on the basis of a range of projected funding and in-house or contracted work.

UDOT

UDOT has been careful to staff its organization to the level and skills necessary to run UDOT. All other work is contracted out to maintain flexibility in the size of its organization during peak times (large projects).

STUDY TEAM JUDGMENT

Large and continued reductions hurt morale, reduce the organization's capabilities, and increase the risk to effective transportation asset management. Good asset management implementation should allow for informed staffing decisions.

Recommendation

We recommend that GDOT hold a planning exercise focused on future workforce requirements, obtaining buy-in on assumptions from key stakeholders and using the exercise and output as part of a GDOT HR strategic plan to build for the future. It should not allow large capital projects to drive major staffing decisions because it may result in overstaffing.

STAFF REDUCTIONS

Staff reductions hurt morale and pose a threat to peak performance.

Current State

GDOT has managed staff reductions while maintaining high levels of service, but it is limited in its monetary flexibility and restricted by state obstacles to new hires. It risks the loss of skilled staff members, particularly once the economy recovers.

Discussion

PEER STATE BEST PRACTICES

UDOT

The size of the UDOT workforce has remained relatively consistent, and it staffs to the minimum level of core competencies necessary to run the department, contracting out everything else.

WSDOT

WSDOT is about to reduce its workforce and is struggling with trying to keep the best qualified rather than those with the longest tenure (union rules).

STUDY TEAM JUDGMENT

The staff is GDOT's most important resource. High unemployment and a slow economy have limited options for state workers, but short-term financial constraints can harm GDOT in the long term. Although outsiders would like to believe that large organizations can do more with less, most often an organization does less (output) with less (input).

Recommendation

We recommend GDOT do the following in regard to staff reductions:

- ◆ *Seek Office of Personnel and Budget (OPB) authority to manage the GDOT staff to a personnel budget. Ask for delegated authority rather than having to go through the mandated "critical hire" process.*
- ◆ *Look for alternative means of rewarding employee performance. Recognition and increased responsibility will motivate some high performers.*
- ◆ *Encourage flexibility and telework to motivate all levels of the workforce.*

PAY RAISES

Prolonged lack of pay raises hurts morale and has the potential to impede performance.

Current State

For the last several years, the state government has been very limited in its monetary flexibility regarding wages and salaries, especially the ability to give annual pay raises.

Discussion

None of the other states we visited has this monetary constraint on salaries and pay raises.

The pay raise issue is similar in origin, scope, and potential consequences to the previous issue of staff reductions.

Recommendation

Although not a thoroughly satisfying result for long-time staff members who have gone without pay raises for several years, we recommend that GDOT management look for alternative means of reward:

- ◆ *Non-monetary recognition will motivate many and is a low-cost investment for managers and leaders.*
- ◆ *Increased responsibility and more challenging duties will motivate some high performers.*
- ◆ *Flexibility and work-life programs such as telework and alternate work weeks or compressed work weeks can motivate all levels of the workforce and should be encouraged.*

SUCCESSION PLANNING

Succession planning for future leaders is critical. Even the best organizations have turnover. Preparing for the future is the mark of a well-run organization.

Current State

GDOT recognizes that grooming leaders is important and has identified 18 potential new leaders through an application review process, who will be given enhanced leadership training and opportunities, and who will participate in a

planned informal mentoring program. A second round of candidate pool review is underway for Succession Planning.

Discussion

To meet strategic challenges, MoDOT has adopted a training policy that sets forth requirements for mandatory technical training, supervisory and management training, and development of individual training plans.

MDOT plans 40–80 hours of training per employee and partners with other state agencies for training economies of scale.

WSDOT, similar to GDOT (which is about to cut 800 full time equivalents), is losing some of its more experienced staff members due to retirement and is concerned with the loss of knowledge. It conducts 8-hour exit interviews but recognizes this is not enough to capture the loss of knowledge. As a result, it is exploring the development of a knowledge management system to house its departmental knowledge base.

Recommendation

We recommend GDOT do the following in regard to succession planning:

- ◆ *Expand elements of the succession program so that managers and supervisors are responsible for developing their potential replacements, the next generation of leaders. “In a well-run organization, no one individual is indispensable.”*
- ◆ *Do not short-change training and development; it has negative long-term consequences.*
- ◆ *The Department should continue to offer cross-training opportunities.*

ORGANIZATIONAL STRUCTURE

Current State

The GDOT structure is dictated by the Georgia legislature, which removes management discretion and conflicts with the requirements of efficient planning and a focus on asset management. Major organizational components, such as IT, are not reflected in the organizational structure and divisions determined by the legislature.

Discussion

The “divisions” in GDOT do not match levels of responsibility. The organizational chart provided to the study team doesn’t show some large offices, such as IT. Additionally, “Technical executive staff” conceals significant organizational elements.

MoDOT is divided into three teams—system delivery, system facilitation, and organizational support—organized around the tangible results, which are at the heart of everything MoDOT does. MoDOT’s structure is designed to focus on its core competencies, reinforce a customer and business focus, and achieve the agility to address changing business needs and strategic challenges.

Recommendation

We recommend allowing GDOT management to determine the organizational structure that best suits its mission and serves the citizens of Georgia. This will give GDOT the flexibility to meet changing requirements and demands, optimizing its levels of service.

DEPUTY COMMISSIONER CHIEF ENGINEER

The deputy commissioner and chief engineer positions are filled by a single individual.

Current State

These positions involve two sets of responsibilities which have effectively been filled by one person with a unique set of skills. The deputy commissioner oversees the field districts. The chief engineer, however, focuses on the technical aspects of engineering and design.

Discussion

The arrangement works (now) because of the capabilities and talents of GDOT leadership.

MoDOT is divided into three teams—system delivery, system facilitation, and organizational support, organized around the tangible results, which are at the heart of everything MoDOT does. MoDOT’s structure is designed to focus on its core competencies, reinforce a customer and business focus, and achieve the agility to address changing business needs and strategic challenges.

Recommendation

We recommend filling the position with a second individual, when permitted by the state OPB.

CHANGE MANAGEMENT

Changing the organization's goals, resource allocation criteria, and operational focus requires planning and time.

Current State

The GDOT central office has embraced the change from a worst-first model to the transportation asset management philosophy. Central office leadership understands the nature of the change underway, but below the central office leadership level—especially in the field—the change isn't well understood or underway.

Discussion

GDOT lacks a comprehensive plan to communicate and implement the asset management approach throughout the organization. The Department, however, is in the midst of an active procurement whose scope will include a detailed development of an implementation plan for asset management.

PEER STATE BEST PRACTICES

UDOT

UDOT notes, "Asset Management is a journey, not a one-time event." Asset management would not have happened in Utah without top management's support and commitment. Senior leaders are heavily involved in the development and communication of asset management.

WSDOT

It took WSDOT 12 to 15 years to fully implement asset management. It didn't try to implement the approach all at once, taking a prioritized approach.

MoDOT

As MoDOT notes,

organizational change elicits many responses—skepticism, rebellion, predictions of failure—in addition to the perceived impact on employees. In the 5 years since MoDOT began [its] performance [and asset] management journey, the doubters have become believers. ... Asset management incorporated into an organizational performance management system is an effective management tool at MoDOT. The success of the business model is well documented through significantly improved performance.

MoDOT uses multiple methods of communication with employees in addition to the performance management system. One is senior leadership's "listening sessions," face-to-face visits at district and field offices by the director and his staff. It also uses webcasts with question and answer sessions and a monthly publication that communicates and provides information to employees. MoDOT holds hundreds of public outreach and involvement meetings each year as part of the planning and project delivery process; they are now available to the public as online meetings.

Recommendation

We recommend that GDOT do the following in regard to change management:

- ◆ *Arrange teleconferences or site visits with several other asset management states* (such as MoDOT, UDOT, or WSDOT) for central and district office leaders who are focused on the "how to" of developing an implementation plan and a communications plan.
- ◆ *Develop a comprehensive change management program.* Based on the information gathering process, this program would include a multifaceted communications plan for all parts of the organization as well as other key stakeholders.

LEADERSHIP

Current State

GDOT has good leaders throughout the organization, who have helped weather all the economic, political, and public relations issues facing the organization over the past several years. Challenging times require more from managers: "You manage things, you lead people."

Discussion

PEER STATE BEST PRACTICES

UDOT

Asset management would not have happened in Utah without top management's support and commitment. Its senior leaders are heavily involved in the development and communication of asset management.

WSDOT

WSDOT's senior leaders are heavily involved in the development and communication of asset management within its organization.

STUDY TEAM JUDGMENT

Good leadership has allowed GDOT to overcome many of the potential challenges we describe in this report. Senior leadership at GDOT understands the concepts and accepts the premises of asset management. As a group, they work well together. However, in a well run organization no one individual is indispensable. GDOT and Georgia have been taking a risk by relying so heavily on the attributes of strong leadership. The loss of key leaders could have a serious impact on asset management implementation. Institutionalizing the policies and practices will lessen this risk.

A visit to the field by the commissioner, deputy commissioner, or the chief engineer demonstrates a level of interest that memos never can.

Recommendation

We recommend GDOT do the following in regard to leadership:

- ◆ *Continue on the path to identify, cultivate, and retain leaders and to implement asset management to make informed, prioritized resource allocation decisions.*
- ◆ *Continue to be a team leader, individually and as an organization. Adopt nonfinancial incentives and motivation for the staff. Be seen and accessible and engage people, communicate and listen, and work to avoid any indication of factional attitudes.*

Chapter 10

Recommendations

In previous chapters, we discuss our observations, findings, and recommendations using asset management as a framework. In this chapter, we consolidate our recommendations.

Our primary objective is recommending improvements with an impact in the near term, 1 to 3 years, but as one state DOT director explained, “asset management is a journey” that takes years to implement. The states with which we compared GDOT have been implementing asset management for a decade or more, so our recommendations extend beyond the near term, including some actions that will take longer to adopt.

In addition, we recognize that as an organization, GDOT is not entirely its own master: it must follow the direction and guidance of the elected officials in the state of Georgia and the requirements of federal agencies. These outside influences constrain GDOT, sometimes impeding effective and efficient operations. GDOT may not be able to change these constraints, even in the long term. However, we include recommendations that involve these outside stakeholders if the results would lead to a more effective transportation program for Georgia.

GOALS AND PLANNING

Strategic Planning

We recommend that GDOT do the following in regard to strategic planning:

- ◆ *Continue to implement asset management.* GDOT’s decision to focus its strategic plan on transportation asset management is moving in the right direction. GDOT is determining whether its use of resources is explicitly tied to and supports one or more of its strategic goals or objectives, which in turn are tied to state goals and objectives. Any activity or effort that does not clearly support a GDOT goal or objective should be scrutinized for validity and value and either modified or discontinued to maximize the effectiveness of GDOT resources in support of its goals and objectives.

-
- ◆ *Make strategic asset management part of the GDOT culture. It must be fully, proactively, and continuously communicated, practiced internally, and advocated externally by strong, sustained, and visible senior management and leadership.*
 - ◆ *Comprehensively review progress in asset management after 3 years to verify that the implementation plan is on track and moving forward.*

Asset Management Approach

We recommend that GDOT do the following in regard to resource decisions:

- ◆ *Continue with its efforts in transportation asset management.*
- ◆ *Develop and employ a detailed asset management implementation plan. Include associated communications and change management plans, facilitating the transition from business as usual to the risk-based asset management strategy. The plan should*
 - *formally map out goals, milestones, and responsibilities for its implementation;*
 - *define tools and investments needed to achieve the goals, objectives, and milestones;*
 - *prioritize how transportation assets will be included into asset management;*
 - *include as few constraints as possible regarding political, organizational, or geographic boundaries to enhance the objectivity and effectiveness of asset management on Georgia's overall transportation network;*
 - *address the completion of accurate inventories and accompanying condition assessments for all assets under GDOT's responsibility; and*
 - *address the development and sustainment of user-friendly asset management databases and protocol.*

Stakeholder Involvement

We recommend that GDOT do the following in regard to stakeholder involvement:

- ◆ *Develop a charter at the start of each capital project. Involve all team members and key players to establish agreed-upon milestones, schedules, accountability, responsibilities, and performance measures.*

- ◆ *Have project managers host and lead initial and recurring team meetings.* Involve all stakeholders, monitor progress against the charter, and address issues from project conception to handoff of the completed project.
- ◆ *Coordinate with other state agencies for project overlaps.* Capture potential economies of scale and reduce duplication of effort.
- ◆ *Conduct a lean analysis of the process flow and value stream of the current project planning process.*

POLICIES AND PROCEDURES

Setting Levels of Service

We recommend that GDOT do the following in regard to levels of service and performance:

- ◆ *Establish specific levels of service for important operations.* Stakeholders, customers, and GDOT employees should contribute to the development, understanding, acceptance, and expectations of realistic levels of service. GDOT should use informed customer input in determining acceptable levels of service for use in making resource management decisions. It needs to determine the data needed to provide the measures and how to collect, process, and communicate these data to all affected parties.
- ◆ *Keep the legislature informed and engaged when making resource management decisions.* GDOT should demonstrate the objective impact and condition results of different levels of service.
- ◆ *Plan for recurring validation of levels of service.* For example, GDOT should assess whether it is over-maintaining roads that are no longer heavily used or under-maintaining roads near new industrial parks.
- ◆ *Define what is required and what is optional to better determine the best use of constrained resources.* GDOT has started, and needs to continue, asking, “What are the assets and activities for which we are legally responsible?” With resources diminishing, repairing everything “because we can” or “because we always did” cannot be sustained. For example, contractors won’t do more than the contract requires without authority, legal responsibility, and resources. GDOT should set a similar discipline for the in-house staff not to go beyond what is affordable and required, such as over-maintaining at the expense of other requirements.

Policy Development

We recommend that GDOT do the following in regard to policy development:

- ◆ *Create a configuration control board.* This body would act as a clearing-house for reviewing the effects of potential policy changes across GDOT to minimize or eliminate unclear, inconsistent, or contrary expectations among internal groups.
- ◆ *Include a coordination checklist of all stakeholders to a policy before final policy approval.* This checklist would identify and address any conflicts or inconsistencies between GDOT entities and obtain buy-in. GDOT should include organizational responsibilities during policy development.
- ◆ *Develop an ongoing process to compare performance with policies and identify opportunities for improvement or updating of the policies.* The internal audit function could assume this recurring responsibility, reporting results to top management for awareness and action.
- ◆ *Develop and continually update continuity books for important positions and functions.*

RESOURCE MANAGEMENT

Asset and Inventory Awareness

We recommend that GDOT institutionalize up-front consideration during project development of all major issues and opportunities (such as maintenance, intermodal opportunities, state-funded local projects, and environmental issues) for the affected assets.

Non-Road Assets and Intermodal Operations

We recommend that GDOT do the following in regard to non-road assets:

- ◆ *Identify “outlier” assets and keep aware of their resource requirements.*
- ◆ *Study the costs and benefits of maintaining state ownership of the rail lines.* GDOT should partner with interested private entities (such as freight rail companies) to sustain assets (such as rail lines) through lease agreements or other tools.

VMT and Fuel Tax Revenue

We recommend that GDOT do the following in regard to VMT and fuel tax revenue:

- ◆ *Use the dedicated general sales tax Georgia is considering for capital projects.* Determining the use at the local and regional levels would allow local initiative but may result in disparate results and quality of service in the long term.
- ◆ *Explore nonstandard methods to resource needed capital improvements and maintenance.* These would include private-public ventures for all transportation assets.

Constrained Allocation of Funds

We recommend that GDOT do the following in regard to constrained allocation of funds:

- ◆ *Inform the state legislators and other stakeholders as the new asset management approach succeeds in risk-based, prioritized resource allocation, and ask them to reconsider the current resourcing constraints.*
- ◆ *Request multiyear obligation authority for capital projects and large O&M projects.* Balancing distribution over a reasonable time frame (such as 5 years) is more realistic and allows for better resource allocation.

FINANCIAL MANAGEMENT

Expenditure of FHWA Funds

We recommend that GDOT do the following in regard to use of FHWA funds:

- ◆ *Use toll credits to achieve a more efficient use of federal highway funds and more flexible use of state funds.*
- ◆ *Consider claiming indirect costs* (recognizing the accounting burden associated with developing and implementing an indirect cost plan and accounting system limitations).

Debt Service

We recommend that Georgia do the following in regard to future transportation debt:

- ◆ *Continue to manage debt metrics to maintain the state's AAA credit rating, particularly with respect to the impact of the GARVEE program on debt ratios.*
- ◆ *Develop a strategy for meeting its current infrastructure needs in an environment where motor fuel tax revenues are not growing and federal funding is uncertain.*

Advance Construction

We recommend that GDOT ensure that projects authorized as advance construction are ones it intends to convert to regular federal-aid projects.

Project Financing

We recommend that GDOT continue to evaluate the effective application of innovative finance and project delivery approaches as it carries out its mission to support Georgia's economic growth and competitiveness.

PROGRAM EXECUTION

Project Management

We recommend that GDOT do the following in regard to project management:

- ◆ *Clearly communicate the new approach to project delivery (using full-time project managers) GDOT-wide and to affected external stakeholders. The introduction of full-time project managers is a major change, and GDOT needs to devise and execute a change management and communications strategy to maximize internal buy-in and promote a smooth transition.*
- ◆ *Treat the implementation of the new project management approach as a project itself. Create a project plan that identifies a baseline for deliverables, resource requirements, schedule, risk management, and other project planning requirements and then execute, monitor, and control it on the basis of the plan.*
- ◆ *Continue to invest in organizational and IT tools essential for project managers to do their job well. MDOT's project management system and WSDOT's capital construction project management online guide are good examples of the tools required.*

Service Delivery

We recommend that GDOT do the following in regard to service delivery:

- ◆ *Continue to use the Efficiency Committee to systematically review potential opportunities for outsourcing.* The committee could also track actual costs of functions once outsourced to improve the assumptions used when deciding on future outsourcing.
- ◆ *Develop GDOT-wide guidance for preparing the business case for using agency personnel, inter-government agreements, or contracts to provide DOT services.*
- ◆ *Review and update GDOT's strategic HR plan and staffing model to reflect any expected changes in service-level standards and a realistic range of funds that will be available to GDOT over the next 1 to 3 years.*

Communications

We recommend that GDOT do the following in regard to communications:

- ◆ *Expand the outreach capability with focused, continual communications with all key stakeholders (including employees).* Identify and utilize interactive, push, or pull communications technologies to improve the effectiveness of communications. Also, regularly review the effectiveness of communications initiatives.
- ◆ *Analyze communications requirements agency-wide.* From this analysis, create a “one-voice” GDOT communications plan. The plan should identify key stakeholder groups such as GDOT employees, Georgia citizens, and state legislature and have a strategy for interacting with each group. Establish a common understanding of the meaning of critical terms to minimize misunderstanding and clarify communication.
- ◆ *Consider preparing communications plans for each new major initiative.* These plans would be part of change management for instituting asset management and implementing full-time project managers.

Innovative Practices

We recommend that GDOT do the following in regard to the use of innovative practices:

- ◆ *Continue to identify new practices other states and transportation-related agencies are pursuing and where they could benefit GDOT.*
- ◆ *Form the necessary partnerships, such as with the SRTA, to pursue P3 initiatives.*
- ◆ *Develop and implement a communications strategy to raise awareness of available innovative practices. Part of this strategy should be the creation of general guidance on when to consider different approaches such as design-build and P3.*
- ◆ *Identify and update old business practices that may hinder innovative ways of doing business.*
- ◆ *Develop an implementation plan for the workload sharing of design work among the districts. This implementation plan should be well communicated in the districts and central office.*

MONITORING AND CONTROL

Performance Metrics

We recommend that GDOT do the following in regard to performance metrics:

- ◆ *Continue efforts to have the districts, divisions, and offices identify additional measures at their levels that clearly link to the 19 agency-level performance measures being developed. Linking performance measures throughout the organization will promote buy-in and understanding as employees participate in the process. It will also serve to validate the activities GDOT performs.*
- ◆ *Manage the configuration of GDOT's performance measures by periodically validating their appropriateness in achieving the agency's goals. Necessary changes to performance measures should be reviewed for their effect on other performance measures and on data collection requirements.*
- ◆ *Tie performance measures to accountability. Communicate with GDOT employees and external stakeholders that the performance measures will be the means by which employees, and GDOT as a whole, will be held accountable for achieving the goals of the organization.*

Audit Office

We recommend that GDOT do the following in regard to the audit function:

- ◆ *Have the internal auditing office report directly to either the GDOT commissioner or deputy commissioner. This alignment mirrors generally accepted industry and management practices and streamlines bringing findings and issues quickly to the attention of senior leadership for direction and resolution. This recommendation is not a reflection on the Office of Administration but aligns GDOT with management best practices.*
- ◆ *Use audits of policies and procedures as a standardized way to review the effectiveness of current policies and help identify and share best practices internally.*
- ◆ *Define and communicate the purpose of the audit function to GDOT employees. Relate that they are a positive opportunity to improve rather than a negative event. This communication can improve cooperation between auditing and other GDOT functions toward the common purpose of improving how it does business.*

ORGANIZATIONAL ATTRIBUTES

Centralization

We recommend that GDOT do the following in regard to centralization or decentralization:

- ◆ *Increase and improve communications and coordination between the central office and districts to improve field support provided by the various central office divisions.*
- ◆ *Consider a regional, rather than individual district, model for delivering some services such as state aid administration.*

Information Technology

We recommend that GDOT monitor progress in managing data and systems in support of asset management. It should continue to seek a solution to the lack of timely and effective systems enhancements from the all-state agencies and work on the PeopleSoft issue, looking at posting dedicated PeopleSoft staff members at GDOT, having more voice in and taking more control of needed enhancements.

Human Resources

We recommend that GDOT hold a planning exercise focused on future workforce requirements, obtaining buy-in on assumptions from key stakeholders and using the exercise and output as part of a GDOT HR strategic plan to build for the future. It should not allow large capital projects to drive major staffing decisions because it may result in overstaffing.

We recommend GDOT do the following in regard to divisiveness issues:

- ◆ *Develop a strong communications plan to implement in the central office and reach out to the field to combat divisive attitudes at all levels and between all skill groups.*
- ◆ *Encourage and reward those who move between the district and central office, facilitating a one-team identification and cross-fertilizing ideas and approaches.* Although it is a personal choice, willingness to move or relocate should be rewarded with increased advancement opportunities.

We recommend GDOT do the following in regard to staff reductions:

- ◆ *Seek OPB authority to manage the GDOT staff to a personnel budget.* Ask for delegated authority rather than having to go through the mandated “critical hire” process.
- ◆ *Look for alternative means of rewarding employee performance.* Recognition and increased responsibility will motivate some high performers.
- ◆ *Encourage flexibility and telework to motivate all levels of the workforce.*

Although not a thoroughly satisfying result for long-time staff members who have gone without pay raises for several years, we recommend that GDOT management look for alternative means of reward:

- ◆ Non-monetary recognition will motivate many and is a low-cost investment for managers and leaders.
- ◆ Increased responsibility will motivate some high performers.
- ◆ Flexibility and telework can motivate all levels of the workforce and should be encouraged.

We recommend GDOT do the following in regard to succession planning:

- ◆ *Expand elements of the succession program so that managers and supervisors are responsible for developing their potential replacements, the next generation of leaders. “In a well-run organization, no one individual is indispensable.”*
- ◆ *Do not short-change training and development; it has negative long-term consequences.*

Organizational Structure

We recommend allowing GDOT management to determine the organizational structure that best suits its mission and serves the citizens of Georgia. This will give GDOT the flexibility to meet changing requirements and demands, optimizing its levels of service.

Deputy Commissioner and Chief Engineer

We recommend filling one or the other position with a second individual, when permitted by the state OPB, allowing for better succession planning.

Change Management

We recommend that GDOT do the following in regard to change management:

- ◆ *Arrange teleconferences or site visits with several other asset management states (such as MoDOT, UDOT, or WSDOT) for central and district office leaders who are focused on the “how to” of developing an implementation plan and a communications plan.*
- ◆ *Develop a comprehensive change management program. Based on the information gathering process, this program would include a multifaceted communications plan for all parts of the organization as well as other key stakeholders.*

Leadership

We recommend GDOT do the following in regard to leadership:

- ◆ *Continue on the path to identify, cultivate, and retain leaders and to implement asset management to make informed, prioritized resource allocation decisions.*
- ◆ *Continue to be a team leader, individually and as an organization. Adopt nonfinancial incentives and motivation for the staff. Be seen and accessible and engage people, communicate and listen, and work to avoid any indication of factional attitudes.*

Appendix

Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ARRA	American Recovery and Reinvestment Act
BAB	Build America Bond
CBO	Congressional Budget Office
CMGC	Construction Manager/General Contractor
DOT	departments of transportation
FHWA	Federal Highway Administration
FY2011 SPU	FY2011 Strategic Plan Update
GARVEE	grant anticipation revenue vehicle
GDOT	Georgia Department of Transportation
GO	general obligation
HR	human resources
HTF	Highway Trust Fund
IT	information technology
ITS	Intelligent Transportation System
MDOT	Michigan Department of Transportation
MoDOT	Missouri Department of Transportation
NCHRP	National Cooperative Highway Research Program
O&M	operations and maintenance
OPB	Office of Personnel and Budget
P3s	public-private partnerships
RACI	responsible-accountable-consulted-informed
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Act for Legacy Users
SRTA	State Road and Tollway Authority
TAMC	Transportation Asset Management Council
TAMM	Transportation Agency Management Model

TIFIA	Transportation Infrastructure Finance and Innovation Act
TSC	transportation service center
UDOT	Utah Department of Transportation
VMT	vehicle miles traveled
WSDOT	Washington State Department of Transportation

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

No. 066-15-002

Project Specifications and Instructions
for Submitting a Proposal to Furnish

Statewide NDOT Operational Audit

Due: March 17, 2015



Rudy Malfabon, P.E., Director
Department of Transportation

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SECTION I - INSTRUCTIONS TO PROPOSER

The enclosed Request for Proposal (RFP) is being advertised for use in submitting information that will be used to select a firm with whom the Nevada Department of Transportation (DEPARTMENT) hopes to negotiate an agreement for the described services.

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statement of Qualifications (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

The proposer shall submit one (1) CD containing one (1) typewritten, legible proposal as instructed above as well as in Section X (B), contained within one (1) Portable Document Format (PDF) file. The proposer shall also submit one (1) Cost Proposal in a separate envelope included with their proposal package. In addition, the DEPARTMENT is testing new functionality with the DEPARTMENT's electronic portal/website, located at www.nevadadot.com/Doing_Business/Vendors/Vendor_Portal_Login.aspx. Proposers are encouraged also submit the proposal electronically through the portal to assist with our testing, however, this is NOT required.

If the proposer chooses to submit proposals electronically through the above link, Vendor registration is required. If you are not a registered vendor with the DEPARTMENT, please register online using the [vendor registration](#) form and follow the instructions. After submitting the online application, you will receive an email with your registration number. Once you receive the registration number, you will be able to submit your proposal electronically.

Proposals must be received **NO LATER THAN 3:00 P.M. PST, on Tuesday March 17, 2015**, and the proposal package containing the CDs must be addressed **exactly** as follows:

Agreement Services
Nevada Department of Transportation
Attn: RFP 498-14-002
1263 South Stewart Street, Room 101A
Carson City, NV 89712

Proposals received after the specified deadline or submitted to the wrong location **will not** be considered and will be disposed of in an appropriate manner suitable to the DEPARTMENT.

Proposals and Statements of Qualification will first be reviewed to determine if minimum qualification requirements are met. Any proposals submitted that do not meet the minimum qualification requirements, as outlined below, will be disposed of in an appropriate manner, at the sole discretion of the DEPARTMENT, and without further review.

Qualification Requirements:

- The firm must be well versed with at least three (3) years' experience performing similar audits.
- The firm must have knowledge and demonstrated experience in evaluating internal controls, policies and procedures, construction contracts, procurement processes, facility and shop operations.

Any proposal received prior to the date and time specified above for receipt of proposals may be withdrawn or modified; electronically submitted proposals can be modified through the Vendor Portal Login webpage, while proposals submitted on CDs can be modified through a written request from the proposer. To be considered, however, a written request to withdraw the proposal or the modified proposal must be received before the time and date specified above for receipt of proposals. Oral interviews may be conducted for each firm that submits a written proposal. The DEPARTMENT has the sole discretion as to whether it will or will not conduct oral interviews. In the event that the DEPARTMENT elects to conduct oral interviews, each proposer in the competitive range will be advised of the format for such interview, and will be provided with a schedule for such interview. Competitive range refers to a list of the most highly rated proposals based on the initial ranking of the proposals; it is based on the initial rating of each proposal measured against all evaluation criteria set forth in this RFP.

Confidential Information, Trade Secrets, and/or Proprietary Information must be uploaded into the Confidential/Proprietary folder provided on the Vendor Proposal webpage if submitted electronically, or sealed in a separate package with each page clearly marked "Confidential" if submitted on CD. The failure to separate and mark this information as per NRS 333.020 and 333.333 shall constitute a complete waiver of any and all claims for damages caused by release of the information by the DEPARTMENT. If the DEPARTMENT reviews the confidential information and determines that the information is not considered confidential pursuant to NRS Chapter 333, the DEPARTMENT will contact the proposer. The proposer must advise the DEPARTMENT as to whether it either accepts the DEPARTMENT's determination that the information is not confidential, or withdraws the information. The proposer will not be allowed to alter the proposal after the date and time set for receipt of proposals shown above. Notwithstanding the provisions in NRS Chapter 333, the DEPARTMENT retains its immunity pursuant to the provisions of NRS 239.012 for any "good faith" release of information, and the immunities from liability provided to it pursuant to NRS Chapter 41.

Issuance of this RFP shall in no way constitute a commitment by the DEPARTMENT to execute an agreement. The DEPARTMENT reserves the right to reject any or all proposals received in response to this RFP, or to cancel this RFP if it is deemed in the best interest of the DEPARTMENT to do so.

The DEPARTMENT reserves the right to issue supplemental notices to this RFP prior to the closing date. If a firm chooses to download this procurement from the www.nevadadot.com website, it is the firm's responsibility to check for any supplemental notices to this procurement from the www.nevadadot.com website.

The DEPARTMENT assumes no financial responsibility in connection with the proposers' costs incurred in the preparation and submission of the proposal packets, or by attending the oral interviews, if such interviews are conducted by the DEPARTMENT in its sole discretion.

Proposers should provide a minimum of three (3) references from similar projects performed for the state and/or large local government clients within the last three (3) years. Proposers are required to submit a Reference Questionnaire to the business references listed within the proposal. The business

references must submit the Reference Questionnaire directly to the DEPARTMENT's Agreement Services Section. It is the proposer's responsibility to ensure the completed forms are received by the DEPARTMENT on or before the proposal submission deadline for inclusion in the evaluation process. The DEPARTMENT may contact any or all business references for validation of information submitted. With this RFP, the proposer is furnished a copy of an Agreement sample (see Attachment F - Agreement Sample). To maintain consistency between the DEPARTMENT and its SERVICE PROVIDERS, only those portions of the Agreement sample which are open for negotiation shall be blank.

A pre-negotiation audit may be required by the DEPARTMENT's Internal Audit Division. All DEPARTMENT audits will be conducted in accordance with the AASHTO Uniform Audit and Accounting Guide 2012, which can be found at www.transportation.org. The Specific Rates of Compensation method of compensation shall be used for the proposer's services, as set forth in 48 CFR Chapter 1.

The following rules of contact shall apply during this procurement for the project:

A. After release of the RFP and through the Notice of Intent to the Notice of Award of the agreement, the proposers shall **ONLY** correspond with the DEPARTMENT regarding this RFP through the DEPARTMENT's designated representative as per NAC 333.155. The designated representative's contact information is:

Agreement Services
Nevada Department of Transportation
1263 South Stewart Street, Room 101A
Carson City, Nevada 89712
Phone: 775-888-7070, Option 1
Fax: 775-888-7101
agreeservices@dot.state.nv.us

B. The proposers shall not contact the DEPARTMENT's employees, including department heads, members of the review committee and/or any official who will participate in the decision to award the agreement regarding the project, except through the process identified above;

C. Any communications determined to be improper may result in disqualification, at the sole discretion of the DEPARTMENT;

D. Any official information regarding the RFP will be disseminated by the DEPARTMENT. Specific information necessary for the preparation of proposals will be disclosed to all proposers;

E. The DEPARTMENT will not be responsible for any oral exchange or any other information or exchange that occurs outside the official process specified herein.

SECTION II - PROPOSER QUESTIONS

The DEPARTMENT will respond to questions regarding the RFP, including requests for clarification and requests to correct errors, submitted in writing by proposers. Only **written** requests as described above will be considered. No oral requests will be considered. No requests for additional information or clarification to any other DEPARTMENT office, consultant, employee or the FHWA will be considered.

Any questions raised by proposers must be submitted in writing to Agreement Services, 1263 South Stewart Street, Room 101A, Carson City, Nevada, 89712, faxed to (775) 888-7101, submitted electronically on the Open Procurements section of www.nevadadot.com, or emailed to agreeservices@dot.state.nv.us and **received by 3:00 P.M. PST, on February 20, 2015**. Written responses will be distributed by the DEPARTMENT on or before **February 26, 2015**.

SECTION III - RFP SCHEDULE

Task	Date
Advertised	02/04/2015, 02/11/2015, and 02/18/2015
Proposers' Questions Due	02/20/2015
DEPARTMENT's Response to Proposers' Questions Distributed	02/26/2015
Proposal Due	03/17/2015

SECTION IV - DBE REQUIREMENTS

There are no Disadvantaged Business Enterprise (DBE) requirements for the project.

SECTION V - NEVADA BUSINESS LICENSE REQUIREMENT

The selected firm, prior to doing business in the State of Nevada, must be appropriately licensed by the Office of the Secretary of State pursuant to NRS 76.100. Information regarding the Nevada State Business License can be located at www.nvsos.gov.

Firms must provide the following:

A. Nevada State Business License Number, and

B. Business Entity's Legal Name (affirm that it is the same name under which the proposer is doing business)

Additionally, if the firm is a corporation, LLC, LP, LLP, or LLLP, or non-profit corporation based out of state, it must be registered as a foreign business entity equivalent in Nevada, in active status, and in good standing with the Nevada Secretary of State.

Each proposer shall clearly state, at the time of proposal, its willingness to adhere to this requirement by providing a copy of its Nevada State Business License, a copy of its application from the Secretary of State Office, or a print out of the entity status, which can be obtained from the Nevada Business Search found on the homepage of the Nevada Secretary of State's website at www.nvsos.gov.

Award of any RFP is contingent on a proposer having and holding an active and valid Nevada State Business License. The successful proposer must satisfy this requirement within five (5) business days of issuance of the Notice of Intent. If a proposer is unable or unwilling to adhere to this requirement, the DEPARTMENT will deem the proposer to be non-responsive, and the DEPARTMENT shall proceed to negotiate with the next most qualified firm, and so on, until an agreement, that is acceptable to the DEPARTMENT, is negotiated.

To apply for a Nevada State Business License or to file appropriate formation documents with the Nevada Secretary of State's office, please visit www.nvsos.gov. Business licenses can be obtained immediately by applying on-line; however, paper applications may take several weeks to process.

SECTION VI - SELECTION PROCESS

Selection will be based on the factors listed in the Evaluation Criteria Items section (see Section X (A)), which will be used by a Review Committee to evaluate the proposals. If the committee elects, in its sole discretion, to conduct oral interviews, each proposer in the competitive range shall be notified of the interview schedule, and will be required to confirm their willingness to attend the oral interview. Failure of a proposer to appear at the oral interview, if the committee elects to conduct such interviews, will be considered non-responsive, and that proposer will be eliminated from any further consideration. The committee tasked with ranking the proposals will be comprised of DEPARTMENT staff and other

members representing local entities, who shall remain anonymous to protect the integrity of the procurement process.

The committee may use the information submitted in the proposer's proposal package, the information referencing this RFP, and the information presented at the interview, if applicable, to arrive at the final ranking. The proposals will be ranked and an agreement shall be negotiated following the selection of a firm. If an acceptable agreement cannot be reached with the highest ranked firm, the DEPARTMENT shall proceed to negotiate with the next highest ranked firm, and so on, until an acceptable agreement is negotiated, or the DEPARTMENT, in its sole discretion, elects to terminate the solicitation.

SECTION VII - BACKGROUND

The DEPARTMENT's Director's Office has the need for a firm with the ability to perform financial and operational audits, and other related audit work of various operational areas within the DEPARTMENT.

SECTION VIII - SCOPE OF SERVICES

The Scope of Services consists of operational audits of various areas of the DEPARTMENT to identify opportunities for improving internal controls and to evaluate effectiveness and efficiency. The objectives of each audit include an initial assessment and a detailed assessment. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks.

The objectives of said audits are:

1. PROCUREMENT CARDS

- a. Initial assessment
 - i. Review current policies and procedures related to Procurement Cards;
 - ii. Review segregation of duties;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed;
 - ii. Determine if the proper accounting records and other documentation is available to support charges;
 - iii. Determine if the segregation of duties is adequate;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improvements to the policies and procedures and internal controls.

2. PURCHASING SUPPLIES AND EQUIPMENT

- a. Initial assessment
 - i. Review current policies and procedures related to Purchasing Supplies and Equipment;
 - ii. Review established policies and procedures for purchasing non-rental equipment;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed by HQ Divisions, and Districts;
 - ii. Determine if the appropriate controls are being followed consistently in the stockrooms located statewide for supplies and equipment;
 - iii. Determine if the established policies and procedures for purchasing vehicles (light fleet) and heavy equipment estimated to cost over \$50,000.00 are being followed (proper justification, approvals, procurement and reporting);
 - iv. Determine if the proper accounting records and other documentation is available to support charges;
 - v. Report on exceptions;

- vi. Recommend opportunities for improvements to the policies and procedures and internal controls

3. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Review established policies and procedures for coding productive labor and overhead activities appropriately on time sheets;
 - iii. Recommend opportunities for improvements to the policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the equipment mechanics are coding productive labor and overhead activities appropriately on time sheets;
 - ii. Determine if activities that should be coded as overhead are appropriately identified by equipment mechanics on time sheets;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improvements to the policies and procedures and internal controls.

4. OVERTIME

- a. Initial assessment
 - i. Review current policies and procedures related to Overtime;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if overtime is pre-approved per adopted policies and procedures (HQ Divisions, and Districts statewide);
 - ii. Determine if maintenance call-out procedures have been adopted in each District and are being followed for emergency maintenance activities;
 - iii. Determine if furlough restrictions on overtime are being followed;
 - iv. Report on exceptions;
 - v. Recommend opportunities for reducing the amount of overtime accrued at the District and Division level.
 - vi. Recommend opportunities for improvements to the policies and procedures and internal controls.

5. STATE VEHICLE USAGE

- a. Initial assessment
 - i. Review current policies and procedures related to State Vehicle Usage;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if prior approvals are obtained for home storage;
 - ii. Determine if home storage is properly reported to Accounting Division;
 - iii. Determine if reported improper use of state vehicles is investigated, and appropriate corrective measures are taken, if necessary;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

6. PROPER MAINTENANCE OF DEPARTMENT FACILITIES

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance of Department Facilities;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment

- i. Determine if maintenance schedules are kept for various building control systems (for example, HVAC) for each DEPARTMENT facility;
 - ii. Determine if facility maintenance is managed at each DEPARTMENT facility;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
7. **COST EFFECTIVENESS OF EQUIPMENT REBUILD PROGRAM** – For the last six years, the DEPARTMENT Equipment Division has rebuilt drive trains for selected heavy fleet such as trucks, loaders, and paint strippers. Some rebuild work is contracted out and some is performed in-house. The equipment mechanics working on the rebuild program are less available for day-to-day equipment maintenance functions. The DEPARTMENT has also had major maintenance on agency aircraft, such as new engines. The DEPARTMENT would like to assess the cost effectiveness of the major equipment rebuild program in the equipment division and the major maintenance program of agency aircraft and determine if it is an efficient use of DEPARTMENT resources.
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. Investigate and determine the cost effectiveness of the equipment rebuild program and major maintenance on agency aircraft;
 - ii. Recommend improvements to increase cost effectiveness or;
 - iii. Recommend other alternatives that would be more cost effective than the current program;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
8. **PROPER MANAGEMENT AND ADMINISTRATION OF MAINTENANCE CONTRACTS** – The DEPARTMENT contracts out various maintenance services. This can be outsourced work normally performed by maintenance forces (street sweeping, contracted surface treatments on pavements, janitorial services, facilities maintenance) and unique work that the DEPARTMENT does not have resources to perform (certain facilities maintenance activities, maintenance of elevators and escalators at pedestrian bridges). The DEPARTMENT would like to assess if the managers of maintenance contracts have the proper skills and training to monitor performance by contracted service providers and training for proper administration. For example, does a DEPARTMENT maintenance contractor manager receive training on proper review of invoices for work performed? How is performance monitored on maintenance contracts?
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. For outsourced maintenance contracts, determine who administers the contracts and assess whether the administration of contracts is delegated to the appropriate level;
 - ii. Assess whether the administrators of maintenance contracts receive appropriate training;
 - iii. In general, make recommendations to improve the effectiveness of administering and monitoring maintenance contracts;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls
9. **INTERLOCAL AGREEMENTS** – An agreement between public agencies to obtain a service from a public agency is known as an Interlocal Agreement. The DEPARTMENT also can enter into a Cooperative Agreement, which is an agreement between two or more public agencies for the

joint exercise of powers, privileges and authority. Authority is granted under NRS 277.045 and 277.180. An example of an Interlocal agreement is the DEPARTMENT distributing federal funds to a metropolitan planning organization (MPO) for their use on programs and projects.

- a. Initial assessment
 - i. Review current policies and procedures related to Interlocal Agreements;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - ii. Review amendments to Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - iii. Review the reported Interlocal Agreements and amendments for compliance with the reporting matrix approved by the Board of Transportation (as appropriate for the execution date of the agreement/amendment; the reporting matrix has been amended periodically);
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

10. PROFESSIONAL SERVICES CONTRACTS – The DEPARTMENT uses professional services contracts when it has insufficient resources to perform the work in-house, when it does not have in-house expertise, or to meet delivery schedule requirements in a timely manner. The DEPARTMENT would like to assess and improve how its technical Divisions determine when to outsource professional services. The following technical Divisions which use professional services contracts shall be considered under this item: Project Management; Roadway Design; Structures; Hydraulics; Landscape & Aesthetics; Right-of-Way; Environmental; Maintenance & Asset Management; Architectural; Traffic Operations; Construction; Materials; Roadway Systems; Multimodal Planning; Program Development; Safety; Locations. This task shall be limited to a review of state fiscal years 2011-2014.

- a. Initial assessment
 - i. Review current policies and procedures related to Professional Services Contracts;
 - ii. Interview the technical divisions listed above to assess how they determine the need to outsource professional services;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review sample scopes of work to determine if all or a portion of work should be considered to be eliminated from outsourcing in the future;
 - ii. Review amendments to professional services contracts to assess if they were anticipated in the original agreement or unanticipated. (For instance, that the original agreement allowed for the addition of future phases of work that was substantially more effort than the original scope of work, as with preliminary engineering proceeding after environmental clearance on design projects);
 - iii. Make recommendations to improve how the assessment to determine the need to outsource professional services is conducted;
 - iv. Make recommendations on reducing the number and cost of amendments to professional services contracts;
 - v. Make recommendations regarding where current staff may be better utilized before hiring outside professional services.

11. CONSTRUCTION CONTRACT CHANGE ORDERS – Construction contracts can be revised by change order. The contracts closed out in state fiscal years 2011 – 2014 shall be reviewed.

- a. Initial assessment

- i. Review current policies and procedures related to Construction Contract Change Orders;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Work with the Construction Division, and confirm the percentage of cost overruns/underruns due to change orders;
 - ii. Review the cause of change orders (design error; unforeseen conditions; added scope; etc.) and report on the distribution of change orders;
 - iii. Identify areas that commonly resulted in change orders that could be avoided through improved design review and other measures;
 - iv. Make recommendations on reducing the number of Construction Contract Change Orders.

12. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review the productivity of the Equipment Division and District equipment shops;
 - ii. Review equipment maintenance and repair that is outsourced and make recommendations on whether the work should continue to be outsourced or performed in-house;
 - iii. Review equipment maintenance and repair that is performed in-house and make recommendations on whether the work should continue to be performed in-house or outsourced;
 - iv. Report on observed discrepancies of productivity statistics between the equipment shops;
 - v. Make recommendations on how to improve the overall productivity of equipment shops.

SECTION IX - PROJECT SCHEDULE

It is anticipated that the project schedule will be twelve (12) to fifteen (15) months from the execution date of the agreement.

SECTION X - PROPOSAL CONTENT

A section of the proposal shall be devoted to each Evaluation Criteria Item. The proposal must be signed by the individual(s) legally authorized to bind the firm as per NRS 333.337.

A. EVALUATION CRITERIA ITEMS

1. Project Approach:

- a. Describe your firm's understanding of project requirements contained in the Scope of Services.
- b. Identify specific methods to be used to complete each project requirement.
- c. Identify potential complications or difficulties that might be encountered in the implementation of required services along with suggested resolutions for each.

2. Project Team:

- a. Provide a summary of the education including CPE Hours & Course Listing, and experience of each member of the Project Team who will be assigned to this project, including resumes for the project manager and the key principals.

- b. Include a current organizational chart of the project team, including sub-consultant(s) with responsibilities of team members identified therein.
- c. Identify the location(s) where actual work will be completed.
- d. Provide a percentage of work to be completed at each location.
- e. Identify the location of the office which will provide primary project control for this project.

3. Past Performance:

- a. Describe your firm's competence in the services to be provided contained in the Scope of Services.
- b. Provide the details of the audits completed, including Attestation Engagements, in accordance with Generally Accepted Government Auditing Standards in the past three (3) years.
- c. Provide information that your firm is free from personal, external, and organizational impairments to independence and avoid the appearance of such impairments to independence for the project contained in the Scope of Services.
- d. Provide a copy of the most recent Peer Review Report of the firm and Letter of Comments, if any.

4. Availability and Capacity:

- a. Provide a listing of your firm's technical equipment which will support this effort.
- b. Provide a matrix or chart which lists all current projects of the Project Team, the number of hours remaining for completion of each project and the estimated completion date for each project.
- c. In view of this data, describe your firm's ability to meet time lines established for this project.
- d. Identify the availability of Project Team to attend meetings and interact with DEPARTMENT staff on short notice.

5. Proximity of Project Team:

- a. Describe your firm's location in the geographical area.
- b. Describe your knowledge of the locality of the project.

6. Cost: Submitted in a separate sealed envelope.

Proposals shall be submitted in two (2) distinct parts - the **Technical Proposal** and the **Cost Proposal**. The Technical Proposal **must not** include any cost information. Electronic Cost Proposal submissions must be uploaded in the Cost Proposal file. While Technical Proposals submitted on CD and the hardcopy Cost Proposal may be shipped together in the same shipping container, the Technical Proposals and the Cost Proposal must be placed in separate envelopes within the shipping container and clearly marked with the proposer's name and the RFP number; each respective envelope must be marked "Technical Proposal" or "Cost Proposal," as appropriate.

B. PROPOSAL LIMITATIONS

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statements of Qualification (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

C. DISCLOSURE OF CURRENT AND FORMER STATE EMPLOYEES

Proposals from firms employing current employees or former employees of the State of Nevada will be considered pursuant to the requirements and limitations set forth in the NRS Chapter 333.705, and the State Administrative Manual, Sections 322 and 323.

If the apparent top-ranked firm proposes any current state employees or former state employees who left state service within the preceding two (2) years, the DEPARTMENT must request approval from the State Board of Examiners (BOE) prior to entering into an agreement with such firm. The proposer shall submit, as part of their proposal, the "Authorization Current Employee, Authorization Former Employee Form" to assist the DEPARTMENT in requesting approval from the BOE.

The forms are located at http://purchasing.state.nv.us/contracting/current_and_former.htm. In the event of a denial by the BOE, the proposer will be allowed one (1) opportunity to replace the disapproved employee with another employee who possesses substantially equivalent capabilities. The DEPARTMENT has the authority to approve or deny the equivalent employee.

SECTION XI - AWARD PROCESS

The DEPARTMENT shall issue its Notice of Intent in accordance with NAC §333.170. Any award is contingent upon the successful negotiation of final contract terms and upon approval of the Transportation Board, when required. Negotiations shall be confidential and not subject to disclosure to competing firms. The terms agreed to by the parties shall be confidential until an agreement is executed. If contract negotiations cannot be concluded successfully, the DEPARTMENT, at its sole discretion and upon written notice to all firms, may negotiate a contract with the next highest ranking firm or withdraw the RFP and cancel this procurement.

The DEPARTMENT shall issue a Notice of Award in accordance with NAC §333.170, at which time proposals are no longer confidential and can be requested by the public from the DEPARTMENT via a Public Records Request, which can be located at: www.nevadadot.com/Contact Us/Public Records Requests.aspx.

SECTION XII - TERMS, CONDITIONS AND EXCEPTIONS

This procurement is being conducted in accordance with NRS Chapters 333 and 408 and NAC Chapter 333.

The DEPARTMENT reserves the right to alter, amend, or modify any provisions of this RFP, or to withdraw this RFP, at any time prior to the award of a contract pursuant hereto, if, in the sole discretion of the DEPARTMENT, it is in the best interest of the state to do so.

The DEPARTMENT reserves the right to waive informalities and minor irregularities in proposals received.

The DEPARTMENT reserves the right to reject any or all proposals received prior to contract award (NRS §333.350).

The DEPARTMENT shall not be obligated to accept the lowest priced proposal, but will make an award in the best interests of the State of Nevada after all factors have been evaluated (NRS §333.335).

Any irregularities or lack of clarity in the RFP must be brought to Agreement Service's attention as soon as possible, so that corrective addenda may be furnished to all proposers.

Alterations, modifications or variations to a proposal may not be considered unless authorized by the RFP, or by an addendum or an amendment to the RFP.

Proposals which appear unrealistic in the terms of technical commitments, lack of technical competence, or are indicative of failure to comprehend the complexity and risk of this contract, may be rejected.

All materials submitted in accordance with the prescribed deadline become the property of the DEPARTMENT and will not be returned. The DEPARTMENT's selection or rejection of a proposal does not affect this right. The master copy of each proposal shall be retained for official files and will become public record after execution of a contract. Only specific parts of the proposal may be labeled a "trade secret," provided that the proposer agrees to defend and indemnify the DEPARTMENT for honoring such a designation (NRS §333.333); unsuccessful proposals containing "trade secrets" will be returned pursuant to NRS 293.010. The failure to so label any information shall constitute a complete waiver of any and all claims for damages caused by any release of such information by the DEPARTMENT. The DEPARTMENT shall not be liable for disclosure or release of information when authorized or required by law to do so pursuant to NRS 239.012.

A proposal submitted in response to this RFP must identify any sub-consultants, and outline the contractual relationship between the awarded proposer and each such sub-consultant. An official of each proposed sub-consultant must sign, and include as part of the proposal submitted in response to this RFP, a statement to the effect that the sub-consultant has read this RFP, and agrees to abide by the awarded proposer's obligations. A sub-consultant's compliance with these requirements does not create a contractual relationship between the sub-consultant and the DEPARTMENT.

The awarded proposer will be the sole point of contract responsibility. The DEPARTMENT will look solely to the awarded proposer for the performance of all contractual obligations, which may result from an award based on this RFP, and the awarded proposer shall not be relieved for the non-performance of any or all of its sub-consultants.

The awarded proposer must maintain, for the duration of its contract, insurance coverage as set forth in the agreement executed in response to this RFP. Work on the contract shall not begin until after the awarded proposer has submitted to the DEPARTMENT acceptable evidence of the required insurance coverage. Failure to maintain any required insurance coverage or alternative method of insurance acceptable to the DEPARTMENT in its sole discretion will be deemed a breach of contract.

Each proposer must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict must be disclosed. By submitting a proposal in response to this RFP, proposers affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a proposer's proposal. An award will not be made where a conflict of interest exists. The DEPARTMENT, in its sole discretion, will determine whether a conflict of interest exists and whether it may reflect negatively on the DEPARTMENT's selection of a proposer. The DEPARTMENT reserves the right in its sole discretion to impose additional requirements upon the proposer to mitigate

such conflict of interest or to disqualify any proposer on the grounds of an actual or an apparent conflict of interest.

The DEPARTMENT will not be liable for Federal, State, or Local excise taxes.

The DEPARTMENT reserves the right to negotiate final contract terms with any proposer selected in accordance with NAC §333.170. The contract between the parties will consist of the final executed contract, the RFP with any modifications thereto, and the awarded proposer's proposal with any modifications and clarifications thereto that are incorporated at the request of the DEPARTMENT during the evaluation and negotiation process. In the event of any conflict or contradiction between or among these documents, the documents shall control in the following order of precedence: the final executed contract, addenda to the RFP, the RFP, any modifications and clarifications to the awarded proposer's proposal, and the awarded proposer's proposal. Specific exceptions to this general rule may be noted in the final executed contract.

The proposer understands and acknowledges that the representations above are material and important, and will be relied on by the DEPARTMENT in its evaluation of a proposal. Any misrepresentation by a proposer shall be treated as fraudulent concealment from the DEPARTMENT of the true facts relating to the proposal.

No announcement concerning the award of a contract as a result of this RFP can be made without the prior written approval of the DEPARTMENT.

The Nevada Attorney General will not render any type of legal opinion regarding this transaction.

SECTION XIII - PROTEST PROCEDURE

Protests may be filed only with respect to:

1. Allegations that the terms of the RFP are wholly ambiguous, are contrary to legal requirements applicable to the procurement, or exceed the DEPARTMENT's authority, and/or
2. A determination as to whether a proposal is responsive to the requirements of the RFP, or failed any Pass/Fail criteria, as applicable, and/or
3. The award of an Agreement.

A. DEADLINES FOR PROTESTS

Protests concerning the issues described in Section XIII (1) and contained in the RFP must be filed no later than ten (10) calendar days prior to the proposal due date, and those contained in any amendment to the RFP must be filed no later than three (3) business days after the DEPARTMENT distributes the related addenda.

Protests concerning the issues described in Section XIII (2) must be filed within ten (10) calendar days after the DEPARTMENT issues to the proposer a notice regarding the failure of any pass/fail criteria, or a notice regarding the non-responsiveness of the proposal.

Protests concerning the issue described in Section XIII (3) must be filed within ten (10) calendar days after the DEPARTMENT issues the Notice of Award.

The DEPARTMENT will not accept any protests received after the above-stated deadlines for receipt of such protests.

B. PROTEST CONTENTS

Protests shall include information about the protesting firm, including the firm's name, mailing address, and phone number, as well as the name of the individual responsible for the submission of the protest. Protests shall completely and succinctly state the grounds for the protest, its legal authority, and its factual basis; protests shall include all factual and legal documentation in sufficient detail to establish the merits of the protest. Statements shall be sworn and submitted under penalty of perjury.

C. FILING OF PROTEST

Protests shall be in writing, and filed by hand delivery on or before the applicable deadline to:

Nevada Department of Transportation
ATTN: Administrative Services/Dispute Resolution Office
1263 South Stewart Street, Room 101A
Carson City, NV 89712

The proposer filing the protest shall concurrently submit a copy of the protest to the other proposers; the other proposers' addresses may be obtained from the DEPARTMENT.

D. COMMENTS FROM OTHER PROPOSERS

Other proposers may file statements in support of or in opposition to the protest within seven (7) calendar days of the filing of the protest. The DEPARTMENT shall promptly forward copies of all such statements to the protester. Any statements shall be sworn and submitted under penalty of perjury.

E. BURDEN OF PROOF

The protester shall have the burden of proving the basis of its protest. The DEPARTMENT may, in its sole discretion, discuss the protest with the protester and other proposers. No hearing will be held on the protest. The protest shall be decided on the basis of written submissions.

F. DECISION ON PROTEST

The DEPARTMENT's Director or designee shall issue a written decision regarding the protest within thirty (30) calendar days after the filing of the detailed statement of protest. If it is necessary to address the issues raised in a protest, the DEPARTMENT may, in its sole discretion, make appropriate revisions to the RFP by issuing addenda.

G. PROTESTER'S PAYMENT OF COSTS

If a protest is denied, the proposer filing the protest shall be liable for the DEPARTMENT's costs reasonably incurred to defend against or resolve the protest, including attorney's fees, consultant fees and costs, and any reasonably unavoidable damages sustained by the DEPARTMENT as a consequence of the protest.

H. RIGHTS AND OBLIGATIONS OF PROPOSERS

Each proposer, by submitting its proposal, expressly recognizes the limitation on its rights to protest provided in this Section XIII and expressly waives all other rights and remedies, and agrees that the decision on the protest is final and conclusive. If a proposer disregards, disputes, or does not follow the exclusive protest remedies provided in this section, it shall indemnify and hold harmless the DEPARTMENT and its officers, employees, agents, and consultants from and against all liabilities, fees and costs, including legal and consultant fees and costs, and damages incurred or suffered as a result

of such proposer's actions. **Each proposer, by submitting a proposal, shall be deemed to have irrevocably and unconditionally agreed to this indemnity obligation.**

No Stay Pending Final Determination: Agreement negotiations with the selected proposer shall not be stayed during the pendency of any protest. Any agreement with the selected proposer shall be made contingent upon the outcome of any pending protest.

ATTACHMENTS

- Attachment A - Statement of Qualification
- Attachment B - Reference Questionnaire
- Attachment C - Cost Proposal
- Attachment D - Checklist
- Attachment E - Title VI Compliance Questionnaire
- Attachment F - Agreement Sample

Attachment A
Statement of Qualification

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Statement_of_Qualification_Form.pdf

The Statement of Qualification Form must be completed in full, and submitted as part of the proposal package per Request for Proposal instructions.

1. Date prepared: _____
2. Firm's name: _____
3. Firm's address: _____
Phone: _____ FAX: _____
4. Is your local office the main office? _____ or branch office? _____ or sole office? _____
5. Year your firm was established: _____
6. Year your local office was established: _____
7. Location of:
 - a. Main office: _____
 - b. Local office: _____
 - c. Invoice remit-to office: _____
8. Year former firm(s) were established:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
9. Name, title, telephone number, address and e-mail address of one principal in firm who may be contacted:

10. List locations of other offices (no more than five):

	<u>Address</u>	<u>Telephone</u>	<u>No. of Personnel</u>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____

11. Total employees presently employed:
- a. At your local Northern Nevada office: _____
 At your local Southern Nevada office: _____
- b. Total in your firm: _____
12. By category, give the number of projects your firm is working on / has worked:
- | | <u>Current/Active</u> | <u>Last Five (5) Years</u> |
|------------------------|-----------------------|----------------------------|
| a. Public/Governmental | _____ | _____ |
| b. Commercial | _____ | _____ |
| c. Residential | _____ | _____ |
| d. Other | _____ | _____ |
13. Nevada Department of Transportation encourages the participation and utilization of minority and women-owned businesses.
- a. Is your firm certified as a minority-owned, women-owned or disabled veteran-owned business?
 Yes ___ No ___ Specify _____
- b. If yes, by what governmental agency? _____
14. Specialty: _____ (i.e.: Project Management, etc.)

The DEPARTMENT periodically engages consultants to perform work of a specialized nature including (but not limited to) such areas as DBE Supportive Services, Claims Review, etc.

I. Briefly describe your specialty as it applies to this Project's discipline, and the scope of the services that your firm provides.

II. Select three recent projects that have applicability to this Project, and list a reference that the DEPARTMENT may contact for each.

PROJECT NAME	REFERENCE	TELEPHONE
		()
		()
		()



**Attachment B
Reference Questionnaire
State of Nevada
Department of Transportation**

RFP No. 066-15-002 REFERENCE QUESTIONNAIRE
FOR:

_____ (Name of company requesting reference)

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Reference_Questionnaire_070-028_Jan2014.pdf

This form is being submitted to your company for completion as a business reference for the company listed above. Please return this form to the Nevada Department of Transportation (NDOT) via email to agreeservices@dot.state.nv.us, or fax to (775) 888-7101 no later than **March 17, 2015, at 3:00pm**. Do not remit this document to the company requesting the reference.

The information contained in this questionnaire will be confidential and will not be accessible to the referenced company. For questions or concerns regarding this form, please contact the Agreement Services Division by phone (775) 888-7070 or email agreeservices@dot.state.nv.us and refer to the RFP number.

CONFIDENTIAL INFORMATION

Company providing reference: _____
 Contact name and title/position: _____
 Contact telephone number: _____
 Contact email address: _____

Questions:

1. In what capacity have you worked with this company in the past? Please explain the company's responsibilities.
 COMMENTS:

2. How would you rate this company's knowledge and expertise?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

3. How would you rate the company's flexibility relative to changes in the project scope and timelines?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

4. What was your level of satisfaction with hard-copy materials/products developed by the company?
_____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

5. Was the work done by this company completed on time and within budget?
COMMENTS on Time:

COMMENTS on Budget:

6. Who were the company's principal representatives involved in your project and how would you rate them individually? Please comment on the skills, knowledge, behaviors or other factors on which you base your rating.
(3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

COMMENTS:

7. With which aspect(s) of this company were you:
Most satisfied with
COMMENTS:

Least satisfied with
COMMENTS:

8. Would you recommend this company's service to your organization again?
COMMENTS:

**Attachment C
Cost Proposal**

RFP No.: 066-15-002 Statewide NDOT Operational Audit

INSTRUCTIONS: The Cost Proposal shall be itemized by task, and then added up for the Total Proposed Cost. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks. Each task is described in Section VIII - Scope of Services.

The DEPARTMENT has established an initial budget for the Statewide NDOT Operational Audit of \$650,000.00.

Task	Cost Per Task
1a. Procurement Cards-Initial assessment	
1b. Procurement Cards-Detailed assessment	
2a. Purchasing Supplies And Equipment-Initial assessment	
2b. Purchasing Supplies And Equipment-Detailed assessment	
3a. Maintenance And Equipment Shops-Initial assessment	
3b. Maintenance And Equipment Shops-Detailed assessment	
4a. Overtime-Initial assessment	
4b. Overtime-Detailed assessment	
5a. State Vehicle Usage-Initial assessment	
5b. State Vehicle Usage-Detailed assessment	
6a. Proper Maintenance of Department Facilities-Initial assessment	
6b. Proper Maintenance of Department Facilities-Detailed assessment	
7a. Cost Effectiveness of Equipment Rebuild Program-Initial assessment	
7b. Cost Effectiveness of Equipment Rebuild Program-Detailed assessment	
8a. Proper Management and Administration of Maintenance Contracts-Initial assessment	
8b. Proper Management and Administration of Maintenance Contracts-Detailed assessment	
9a. Interlocal Agreements-Initial assessment	
9b. Interlocal Agreements-Detailed assessment	
10a. Professional Services Contracts-Initial assessment	
10b. Professional Services Contracts-Detailed assessment	

11a. Construction Contract Change Orders-Initial assessment	
11b. Construction Contract Change Orders- Detailed assessment	
12a. Maintenance and Equipment Shops-Initial assessment	
12b. Maintenance and Equipment Shops-Detailed assessment	
Total Proposed Cost:	

Name

Signature

Firm Name

Attachment D Checklist

This checklist is provided for the proposer's convenience only, and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite items in the number and form set forth in the proposal instructions, may in the sole discretion of the DEPARTMENT, be deemed non-responsive and not considered for contract award.

1. Number of Pages within Page Range (see Section X (B))
2. Sections match Evaluation Criteria Items (see Section X (A))
3. Technical Proposal
4. Cost Proposal in a separate sealed envelope
5. Statement of Qualification (see Section X (B))
6. Nevada State Business License (see Section V)

Attachment E
Title VI Compliance Questionnaire

Title VI is a statute provision of the Civil Rights Act of 1964:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 U.S.C. Sec 2000d)

The following information will be used by the Nevada Department of Transportation (DEPARTMENT) and the Federal Highway Administration (FHWA) for statistical purposes only. This information will be stored confidentially, and will not affect any decisions made by the DEPARTMENT.

Your participation is voluntary, but would be greatly appreciated.

Choose one ethnic group with which the principal owner(s) most identify:

- Black** (Not of Hispanic origin: All persons having origins in any of the Black racial groups.)
- Asian/Pacific Islander** (All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.)
- Hispanic** (All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)
- Native American** (All persons having origins in any of the original peoples of North America and who maintain cultural identification through a tribal affiliation or community recognition.)
- White** (Not of Hispanic origin: All persons having origins in any of the original peoples of Europe, North Africa, or Middle East.)
- Other** (All persons not matching one of the other choices.)

Sex: Male Female

- I understand my participation is voluntary and decline to provide the requested information

Firm Name: _____

Owner Name (Print): _____

Owner Name (Sign): _____

Date: _____

Attachment F
Agreement Sample
SERVICE AGREEMENT

This Agreement, made and entered into the _____ day of _____, _____ by and between the STATE OF NEVADA, acting by and through its DEPARTMENT OF TRANSPORTATION (hereinafter "DEPARTMENT") and **NAME AND ADDRESS** (hereinafter "SERVICE PROVIDER"). Individually they are each a "Party" and collectively they are the "Parties."

WITNESSETH:

WHEREAS, the Director of the DEPARTMENT may, pursuant to Nevada Revised Statutes (hereinafter "NRS") Chapter 333 & Chapter 408, contract for technical services that may be required; and

WHEREAS, NRS Chapter 333 authorizes heads of state departments to contract for the services of independent contractors; and

WHEREAS, **PROJECT IDENTIFICATION**, is necessary for **PROJECT EXPLANATION** (hereinafter "PROJECT"); and

WHEREAS, SERVICE PROVIDER's services will be of great benefit to the DEPARTMENT and to the people of the State of Nevada.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is agreed by and between the Parties as follows:

ARTICLE I - SCOPE OF SERVICES

1. The SERVICE PROVIDER agrees to **SUMMARIZE PROJECT DESCRIPTION OR INSERT:** perform services listed in Attachment A - Scope of Services attached hereto and incorporated herein.
2. The SERVICE PROVIDER agrees to furnish all labor, materials, services, equipment, tools and other expenses necessary to perform the professional services required under the terms of this Agreement, except as specifically provided otherwise herein.
3. The SERVICE PROVIDER agrees to comply with all requirements contained in the underlying Request for Proposal which is incorporated into this Agreement by reference. **ONLY USE PARAGRAPH IF APPLICABLE**

ARTICLE II - PERFORMANCE

1. The term of this Agreement shall be from the date first written above through and including **DATE**, unless a change extending the term is further agreed to by written amendment signed by all parties to this Agreement and approved by appropriate official action of the governing body of the DEPARTMENT prior to such term expiration date.

OR

1. The term of this Agreement shall be from the date first written above through and including **DATE**, thereby terminating **NUMBER (#)** years from the above date or upon completion of the case, including any appeal, whichever comes first. **ONLY USE PARAGRAPH FOR EXPERT WITNESS OR LEGAL**

2. In the event that the SERVICE PROVIDER performs or causes to be performed any work after: (a) the Agreement's expiration date as set forth within this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date; or (b) termination of this Agreement prior to the expiration date set forth within this Agreement; then the DEPARTMENT shall make no payment for work performed following the expiration or termination dates, and the SERVICE PROVIDER shall forfeit any and all right to payment for such work.

3. The SERVICE PROVIDER, on behalf of itself, its spouses, heirs, executors, administrators, successors, subrogees, servants, insurers, attorneys, independent representatives, personal representatives, agents, and assigns, does hereby waive, release, and forever discharge the State of Nevada, the DEPARTMENT, and each and every of their departments, divisions, agencies, officers, directors, agents, contractors, and

employees, from any and all claims, demands, liens, liability, actions, causes of action, and suits for damages, at law and in equity, in any way connected with or arising from the SERVICE PROVIDER's provision of services and work performed following termination of this Agreement, and/or following the expiration date of this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date.

4. Neither the State of Nevada, the DEPARTMENT, nor any of their departments, divisions, agencies, officers, directors, agents, contractors, and employees, shall have authority to extend this Agreement beyond the expiration date set forth within this Agreement, unless such extension is set forth within a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date. The SERVICE PROVIDER shall not rely upon any oral or written representations expressed extrinsic to a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date, purporting to alter or amend this Agreement, including but not limited representations relating to the extension of the Agreement's expiration date.

5. Paragraphs 1 through 4 of this Article II - Performance, shall survive the termination and expiration of this Agreement.

6. The SERVICE PROVIDER shall not proceed with said work until a copy of this Agreement is fully executed, signed by all individuals on the signatory lines below (hereinafter the "Final Execution Date"), and the Agreement is received by the SERVICE PROVIDER, which shall then constitute the written "Notice to Proceed" from the DEPARTMENT. The SERVICE PROVIDER shall notify the DEPARTMENT in writing of the exact date of commencement. If the SERVICE PROVIDER does commence said work prior to receiving said "Notice to Proceed" or prior to the Final Execution Date, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Final Execution Date and/or Notice to Proceed. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

OR

6. The SERVICE PROVIDER shall not proceed with work until the SERVICE PROVIDER receives a written "Notice to Proceed" from the DEPARTMENT. If the SERVICE PROVIDER does commence said work prior to receiving said Notice to Proceed, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Notice to Proceed and/or Final Execution Date. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR PARTIALLY OR FULLY FEDERALLY FUNDED PROJECTS**

7. The SERVICE PROVIDER agrees to complete the PROJECT within **NUMBER (#)** calendar **OR** working days of the commencement day of the PROJECT and agrees to pay to the DEPARTMENT, the sum of **NUMBER** and **#/100 Dollars (\$#)** for each and every calendar day past said date when the delay is caused by negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's direct control. These damages are not intended as a penalty. Damages are difficult to ascertain and the Parties agree that this amount is a reasonable estimate of presumed actual damages. **ONLY USE PARAGRAPH IF APPLICABLE**

8. In the event the DEPARTMENT discovers a SERVICE PROVIDER's error or omission before its discovery by the SERVICE PROVIDER, the DEPARTMENT shall not unreasonably delay in notifying SERVICE PROVIDER of such error or omission. DEPARTMENT's notice to SERVICE PROVIDER shall specify the maximum time period SERVICE PROVIDER will be allowed for correction. The SERVICE PROVIDER shall make all necessary corrections resulting from its errors and omissions, and shall without delay make any corrections necessitated by the negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's control, and shall make such corrections without additional compensation. SERVICE PROVIDER shall track all related costs for the correction. Acceptance of the professional services by the DEPARTMENT will not relieve the

SERVICE PROVIDER of the responsibility for any subsequent correction of any such errors and omissions, and the clarification of any ambiguities. The SERVICE PROVIDER will be responsible for additional costs in subsequent related construction resulting from its errors or omissions. Should the DEPARTMENT use its own personnel, supplies or equipment to remedy the deficiency, all such costs incurred by the DEPARTMENT shall be deducted from the sum due or which may become due to the SERVICE PROVIDER. In the event all such costs and charges incurred by the DEPARTMENT exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall reimburse the DEPARTMENT the amount of said excess.

9. The SERVICE PROVIDER shall assign one individual throughout the life of this Agreement who shall have overall PROJECT responsibility unless illness or termination requires replacement. **IF APPLICABLE ADD:** This individual shall be registered in accordance with NRS Chapter 625, Professional Engineers and Land Surveyors. This individual shall ensure that each sheet of the final submittal, including the title sheet, is stamped (electronic or wet stamp acceptable), signed and dated (original signature and date required) in accordance with NRS Chapter 625 and Nevada Administrative Code, Chapter 625.

10. A key person is defined as any individual identified by the SERVICE PROVIDER in its proposal as being part of the team to be assigned to the PROJECT. The SERVICE PROVIDER acknowledges and agrees, that the award of this Agreement was based, in part, on its ability to manage the PROJECT, and the qualifications, experience, and capacity of the SERVICE PROVIDER's aforementioned key persons and team. The SERVICE PROVIDER represents, warrants and covenants that such key persons are and will continue to be available to undertake and perform all services identified herein and fulfill the roles identified in its proposal. The SERVICE PROVIDER shall notify the DEPARTMENT in writing within ten (10) calendar days when a key person leaves the PROJECT team. **ONLY USE PARAGRAPH IF APPLICABLE**

a. If a key person leaves the PROJECT team, the SERVICE PROVIDER shall promptly propose a replacement within thirty (30) calendar days to and for the DEPARTMENT's review and written consent.

b. The DEPARTMENT shall have the unilateral right to terminate this Agreement:

(1) If a key person leaves the PROJECT team for a reason other than death, retirement, incapacitation or leaving SERVICE PROVIDER's employment (including the employment with SERVICE PROVIDER's affiliates, subsidiaries and parent companies/organizations);

(2) If a key person listed by the SERVICE PROVIDER in its proposal to perform or supervise various aspects of design is changed or leaves the PROJECT team; or

(3) If the DEPARTMENT does not accept the SERVICE PROVIDER's proposed key person replacement.

c. If this Agreement is terminated pursuant to the above, the SERVICE PROVIDER shall be paid for actual costs incurred for all services rendered and accepted by the DEPARTMENT and an amount of fee proportional to the work completed as of the date of termination. Additionally, the SERVICE PROVIDER shall not be entitled to any settlement costs, if any. Such termination will not occur if the SERVICE PROVIDER provides a replacement that is acceptable to the DEPARTMENT within thirty (30) calendar days of the date when the key person is changed or has left the PROJECT team.

11. The SERVICE PROVIDER shall at all times maintain control over and have complete responsibility for all services performed pursuant to this Agreement by the SERVICE PROVIDER and any of its subcontractors.

12. The SERVICE PROVIDER warrants that all deliverables and professional services produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry. The standard of care applicable to SERVICE PROVIDER's services will be of the degree of skill and diligence normally employed by professional engineers **OR** SERVICE PROVIDERS performing the same or similar services at the time said services are performed.

13. This Agreement, and any amendments, may be suspended temporarily, either wholly or in part, by the DEPARTMENT upon oral notice confirmed in writing within ten (10) calendar days, when the DEPARTMENT determines that conditions beyond the control of the SERVICE PROVIDER are unfavorable to its satisfactory continuation of work. Should such conditions be encountered, the time for completion may be extended in an amount determined by the DEPARTMENT to be equivalent to the delay. Requests for suspension of time by the SERVICE PROVIDER must have the written approval of the DEPARTMENT. No allowance shall be made for delay or suspension of the services solely due to the fault of the SERVICE PROVIDER.

14. An alteration ordered by the DEPARTMENT which substantially changes the services provided for by the expressed intent of this Agreement will be considered extra professional services and shall be specified in a written amendment signed by all Parties, which will set forth the nature and scope thereof. The method of payment for extra professional services shall be specified at the time the amendment is written.

15. The SERVICE PROVIDER shall not assign or subcontract, any of the professional services performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER will, subsequent to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the contract or agreement for professional services. The SERVICE PROVIDER shall require any subcontractor to comply with all provisions of 48 CFR Chapter 1, Part 31, in its agreement with the subcontractor, if the SERVICE PROVIDER subcontracts any professional services contemplated by this Agreement. The SERVICE PROVIDER will be responsible for any costs or deficiencies resulting from noncompliance if the subcontractors fail to comply with 48 CFR Chapter 1, Part 31.

16. The SERVICE PROVIDER agrees to complete and sign Attachment B - "AFFIDAVIT REQUIRED UNDER SECTION 112(c) of Title 23 United States Code, Act of August 27, 1958 and Part 29 of Title 49, Code of Federal Regulations, November 17, 1987," Attachment C - "CERTIFICATION REQUIRED BY SECTION 1352 of TITLE 31, UNITED STATES CODE, RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS," and "INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES," attached hereto and incorporated herein. **ONLY USE PARAGRAPH IF PROJECT IS FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

17. The SERVICE PROVIDER acknowledges that the DEPARTMENT has established a Disadvantaged Business Enterprise (DBE) participation requirement of **NUMBER** percent (#%) of the total dollar value of the Agreement costs. A DBE must be a small business concern as defined by the U.S. Small Business Act, 15 U.S.C. § 632 or by 49 CFR Subtitle A, Part 26. **ONLY USE PARAGRAPH IF APPLICABLE**

18. Failure by the Service Provider to fulfill the DBE Agreement requirements and to demonstrate good faith efforts, either in the Service Provider's proposal or during the performance period, constitutes a breach of this Agreement. In event of such a breach, the DEPARTMENT may:

(a) Withhold progress payments or a portion thereof;

(b) Deduct, as damages, an amount equal to the unmet portion of the DBE commitment not achieved. This amount will be determined by multiplying the percentage of DBE participation proposed by the total cost set forth in the agreement and then multiplying the actual percentage of DBE participation used during the agreement by the total cost set forth in the agreement. In the event the actual percentage of DBE participation is less than the proposed percentage of DBE participation, the difference in these two figures shall be the amount of damages due to the DEPARTMENT;

(c) Remove the SERVICE PROVIDER from the prequalified list for repeated violations, falsifications, or misrepresentations; and/or

(d) Terminate the Agreement.

19. This Agreement shall not become effective until and unless approved by the State Board of Examiners. **ONLY USE PARAGRAPH IF APPLICABLE**

20. This Agreement is contingent upon the verification that the SERVICE PROVIDER has a valid and active Nevada Business License and is in good standing in all areas of the Secretary of State's business requirements. If the SERVICE PROVIDER is an out of state provider, the SERVICE PROVIDER must be registered as a foreign business entity equivalent in Nevada, in active status and in good standing.

ARTICLE III - TERMINATION

1. The DEPARTMENT may terminate this Agreement without cause **NUMBER** (#) calendar **OR** working days after service of a termination letter to the SERVICE PROVIDER. In the event this Agreement is terminated in this manner, the SERVICE PROVIDER shall be paid for the cost of the professional services which have been completed and accepted by the DEPARTMENT up to the date of termination.

2. The continuation of this Agreement beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Nevada State Legislature and/or federal sources. The DEPARTMENT may terminate this Agreement, and the SERVICE PROVIDER waives any and all claims for damages, effective immediately upon receipt of written notice, or any date specified therein, if for any reason the DEPARTMENT's funding from state and/or federal sources is not appropriated or is withdrawn, limited or impaired.

3. A default or breach may be declared with or without termination. This Agreement may be terminated by either Party upon written notice of default or breach to the other Party as follows:

a. If the SERVICE PROVIDER fails to provide or satisfactorily perform any of the professional services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or

b. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law or regulation to be held by the SERVICE PROVIDER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed or not renewed; or

c. If the SERVICE PROVIDER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of a bankruptcy court; or

d. If DEPARTMENT materially breaches any material duty under this Agreement and any such breach impairs the SERVICE PROVIDER's ability to perform; or

e. If it is found by the DEPARTMENT that any quid pro quo or gratuities in the form of money, services, entertainment, gifts or otherwise were offered or given by the SERVICE PROVIDER, or any agent or representative of the SERVICE PROVIDER, to any officer or employee of the State of Nevada with a view toward securing an agreement or securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performing of such agreement.

4. Termination upon a declared default or breach may be exercised after service of written notice and the subsequent failure of the defaulting Party, within fifteen (15) calendar days of service of that notice, to provide evidence, satisfactory to the aggrieved Party, showing the declared default or breach has been corrected. Such correspondence shall be deemed to have been served on the date of postmark.

5. In the event of the SERVICE PROVIDER's breach of this Agreement, all costs and charges incurred by the DEPARTMENT, together with the cost of completing the work under this Agreement, shall be deducted from any money due or which may become due to said SERVICE PROVIDER. If expenses exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall be liable and shall pay to the DEPARTMENT the amount of said excess.

6. This Agreement shall be terminated when the professional services contemplated and covered by this Agreement have been completely performed by the SERVICE PROVIDER, and all items of professional services have been approved and accepted by the DEPARTMENT.

ARTICLE IV - COST

1. The "specific rates of compensation" method of compensation shall be used for the SERVICE PROVIDER's services.

2. The total cost of the services by the SERVICE PROVIDER shall not exceed the sum of **NUMBER** and **#/100 Dollars (\$#)**, which includes the fixed fee.

3. The rate will be reimbursed at **NUMBER** and **#/100 Dollars (\$#)** per **DESCRIPTION** and shall include direct salary costs, indirect costs, other direct costs and fixed fee. **IF APPLICABLE, INCLUDE SCHEDULE AS AN ATTACHMENT**

4. The DEPARTMENT will pay the SERVICE PROVIDER in monthly installments based upon progress and final payment reports submitted by the SERVICE PROVIDER and as approved by the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

5. The SERVICE PROVIDER is required to submit a monthly progress report in the DEPARTMENT's format showing the status of the professional services and the degree of completion thereof.

6. The SERVICE PROVIDER agrees to complete and sign Attachment D - Service Provider Cost Certification of Final Indirect Costs, attached hereto and incorporated herein. **ONLY USE FOR PROJECTS PARTIALLY OR FULLY FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

IF APPLICABLE, INSERT THE FOLLOWING THREE PARAGRAPHS AT THE END OF THE METHOD OF COMPENSATION CHOSEN AND RENUMBER THEM ACCORDINGLY, EXCEPT WHEN THE LUMP SUM METHOD OF PAYMENT IS USED, IN WHICH CASE THEY ARE NOT TO BE INSERTED.

X. Travel costs will be reimbursed at the current rates allotted to state employees. Travel costs will be reimbursed based on actual costs limited by Federal Travel Regulations (FTR) and the CONUS rate for Nevada. The FTR breaks down meals and incidental expenses at its website: www.gsa.gov/mie. The first and last travel days are calculated at seventy-five percent (75%). The lodging rate excludes taxes and fees. Taxes and fees are reimbursable. See this website for lodging in Nevada: <http://www.gsa.gov/portal/category/100120>. The SERVICE PROVIDER shall provide lodging receipts.

X. The SERVICE PROVIDER shall be reimbursed for the use of company vehicles as agreed upon with the Project Manager. Cost shall include a direct expense that includes anticipated mileage, insurance, maintenance and a lease fee, if applicable.

X. When requested by the DEPARTMENT, the SERVICE PROVIDER shall schedule its own airline and rental car reservations by the most economical means for reimbursement. Original receipts for airfare and rental cars must be submitted with the "Claim for Travel Expense." The DEPARTMENT is not responsible for payment of any premium, deductible or assessments on insurance policies purchased by the SERVICE PROVIDER for a rental vehicle.

ARTICLE V - SCHEDULE OF PAYMENTS

1. The SERVICE PROVIDER shall submit a signed invoice monthly **OR** bi-weekly **OR** quarterly **OR** semi-annually **OR** yearly **OR** upon completion for all services rendered along with one copy of substantiating documentation. The invoice must be submitted on the SERVICE PROVIDER's stationery using the DEPARTMENT's format or submitted on the DEPARTMENT's standard invoice form. The DEPARTMENT will utilize its normal accounting procedure in the payment of the invoices submitted. **IF APPLICABLE ADD:** The Fixed Fee shall be paid monthly and shall be calculated as a percentage of the direct salary plus overhead costs of that month's invoice until the full agreed fee is paid.

2. Payment will be made for one hundred percent (100%) of the amount of each invoice, until a maximum of ninety percent (90%) of the total Agreement costs have been billed by the SERVICE PROVIDER. Thereafter, payment for the remaining ten percent (10%) of the total Agreement costs shall be withheld by the DEPARTMENT, until such time as the professional services delivered by the SERVICE PROVIDER have been completely accepted by the DEPARTMENT. The final audit shall be performed after the release of the retained amount, and may cause an adjustment of payments to the DEPARTMENT or to the SERVICE PROVIDER. No interest shall be paid to the SERVICE PROVIDER on this retained amount or any adjustment of payments. **ONLY USE PARAGRAPH IF APPLICABLE**

3. The DEPARTMENT reserves the right to inspect and approve the professional services performed before payment is made to the SERVICE PROVIDER. Payment will be withheld for deliverables and professional services the DEPARTMENT determines to be unsatisfactory in that they have not been provided in a workmanlike manner consistent with standards in the trade, profession or industry. Payment shall remain unpaid until the professional services are completed in accordance with the standards and work requirements defined in this Agreement. In such an event, the DEPARTMENT will provide the SERVICE PROVIDER with a written explanation as to why payment has been withheld.

4. The total cost of services for this Agreement, is the negotiated amount identified in Article IV, Paragraph 2. This amount was based upon the SERVICE PROVIDER's costs and fixed fee as well as the costs and fixed fees, if any, of all of its subcontractors. If a subcontractor does not expend all funds allocated to it for services identified in its agreement with the SERVICE PROVIDER, a copy of which shall be provided to the DEPARTMENT prior to issuance of the Notice to Proceed, the SERVICE PROVIDER shall not redistribute or expend such funds without the prior written approval of the DEPARTMENT. Failure to notify the DEPARTMENT prior to the use of such funds will constitute grounds for denial of reimbursement for such expenditures.

5. Payment of invoices, interest penalties, and discounts shall be paid as follows:

a. The SERVICE PROVIDER shall be paid within sixty (60) calendar days of a postmarked invoice which is complete, correct, and undisputed by the DEPARTMENT.

b. The DEPARTMENT shall have twenty (20) calendar days after postmark of an invoice to dispute any or all of the charges on that invoice. The undisputed amount shall be paid to the SERVICE PROVIDER within sixty (60) calendar days of the date of postmark. The disputed amount shall be negotiated and resolved in good faith by both Parties and paid within forty (40) calendar days after the date the corrected invoice is received by the DEPARTMENT or is approved by both Parties for payment.

c. If the DEPARTMENT fails to pay the SERVICE PROVIDER the undisputed amount within sixty (60) calendar days after the postmark date of the invoice, the interest penalty assessed to the DEPARTMENT shall be one percent (1%) of the undisputed amount per month, not to exceed a total of One Thousand and No/100 Dollars (\$1,000.00).

d. Payment of penalties shall not apply to the final payment or bill pertaining to this Agreement as determined by the post audit.

6. The prevailing party in an action to enforce this Agreement is entitled to reasonable attorney's fees and costs.

ARTICLE VI - MISCELLANEOUS PROVISIONS

1. The SERVICE PROVIDER shall be responsible for and shall comply with all applicable federal, state, and local government obligations and DEPARTMENT policies and procedures. The SERVICE PROVIDER will be responsible for and shall pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are SERVICE PROVIDER's responsibility in accordance with NRS Chapter 361. The SERVICE PROVIDER warrants that it has a valid business license. The SERVICE PROVIDER agrees to be responsible for and shall pay any such government obligations not paid by its subcontractors during performance of this Agreement. The DEPARTMENT may set-off any consideration due against any delinquent government obligation.

2. It is expressly understood that the SERVICE PROVIDER is an independent contractor, and is subject to all statutes and laws, including NRS 333.700 relating to independent contractors. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the DEPARTMENT whatsoever with respect to the indebtedness, liabilities, and obligations of the SERVICE PROVIDER or any other party. Neither the SERVICE PROVIDER nor its employees, agents or representatives shall be considered employees, agents or representatives of the DEPARTMENT.

3. The SERVICE PROVIDER shall be solely responsible for its own employees, and the DEPARTMENT shall have no obligation with respect to:

- a. Withholding of income taxes, FICA or any other taxes or fees;
- b. Industrial insurance coverage;
- c. Participation in any group insurance plans available to employees of the DEPARTMENT;
- d. Participation or contributions by either the SERVICE PROVIDER or the DEPARTMENT to the Public Employees Retirement System;
- e. Accumulation of vacation leave or sick leave; or
- f. Unemployment compensation coverage provided by the DEPARTMENT.

4. The SERVICE PROVIDER shall indemnify and hold the DEPARTMENT harmless from, and defend the DEPARTMENT against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes, fees, insurance, contributions, leave or coverage.

5. Unless expressly provided in this Agreement, the SERVICE PROVIDER shall not engage or use the devices and/or services of the DEPARTMENT's personnel without the prior written consent of the DEPARTMENT.

6. The SERVICE PROVIDER shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT proof of worker's compensation insurance as required by the NRS.

OR

6. The SERVICE PROVIDER, as a sole proprietor who does not use the services of his employees, if any, shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT Attachment E - "Worker's Compensation Insurance Affidavit." **ONLY USE PARAGRAPH IF APPLICABLE; RE-LETTER ATTACHMENTS IF NECESSARY**

7. The SERVICE PROVIDER shall furnish a Certificate of Errors and Omissions Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00). **INCREASE FROM \$1,000,000.00 UP TO \$3,000,000.00 DEPENDING UPON THE SIZE OF THE PROJECT**

8. The SERVICE PROVIDER shall furnish a Certificate, Declarations Page and an Endorsement designating the DEPARTMENT as an additional insured evidencing Commercial General Liability Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00) per occurrence. These policies shall be maintained for the entire period of this Agreement. The policies shall include a 30-day advance written notice of any cancellation of said policies. The SERVICE PROVIDER shall furnish the DEPARTMENT with certificates of such insurance prior to commencement of professional services.

9. All insurance required by this Agreement shall be placed with insurers with a rating from the current issue of Best's Key Rating Guide of no less than A-: VII.

10. The DEPARTMENT has the option of requesting, at any time, a meeting with the SERVICE PROVIDER or its authorized representative to discuss and review PROJECT status and the SERVICE PROVIDER shall furnish thereafter a copy of the minutes of such meetings to the DEPARTMENT.

11. The SERVICE PROVIDER has total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement, and shall check all such material accordingly for completeness, missing items, correct multipliers and consistency. The deliverables shall be reviewed by the DEPARTMENT for conformity with the DEPARTMENT's procedures and contract terms. The SERVICE PROVIDER acknowledges that review by the DEPARTMENT does not include detailed review or checking of major components and related details or the accuracy of such deliverables, and the DEPARTMENT's review shall not relieve the SERVICE PROVIDER of its total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement.

12. The SERVICE PROVIDER shall appear as an expert witness on behalf of the DEPARTMENT in any subsequent court action which involves any of the services required by this Agreement. Compensation for services rendered in this regard will be paid at a rate to be negotiated at the time such services are necessary.

13. Upon completion, termination or cancellation of the services embraced under this Agreement, all professional services inclusive of research, investigation and analysis data, reports (including files stored on mobile media), computations, tabulations, original drawings and design files (including CAD information stored on mobile media), correspondence input from external sources (including subcontractors), etc., shall be delivered to and become the property of the DEPARTMENT, without limitation. Reuse of said materials, information or data, during performance or following termination of this Agreement, on any other project or for any other purpose except as provided for herein, shall be at the DEPARTMENT's discretion and the DEPARTMENT's sole decision. The SERVICE PROVIDER shall not utilize any materials, information or data obtained as a result of performing the services called for in this Agreement in any commercial or academic publication or presentation without the express written permission of the DEPARTMENT. The SERVICE PROVIDER shall not reference an opinion of an employee or agent of the DEPARTMENT obtained as a result of performing the services called for in this Agreement, in any publication or presentation, without the written permission of the employee or agent to whom the opinion is attributed, in addition to the permission of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

14. All design drawings must be created and delivered to the DEPARTMENT in Microstation "dgn" format. Drawing files converted to Microstation format from other formats will not be accepted by the DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

15. All roadway design engineering files must be created and delivered to the DEPARTMENT in InRoads format. Design files converted to InRoads format from other formats will not be accepted by the

DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

16. All reports and notes for special provisions shall be delivered to the DEPARTMENT via FTP or email using the most current version of Microsoft Word. **ONLY USE PARAGRAPH IF APPLICABLE**

17. The SERVICE PROVIDER agrees that any reports, materials, studies, photographs, negatives, drawings or other documents prepared by the SERVICE PROVIDER in the performance of its obligations under this Agreement shall be the exclusive property of the DEPARTMENT. The SERVICE PROVIDER shall remit all such documents to the DEPARTMENT upon completion, termination or cancellation of this Agreement or upon written request of the DEPARTMENT. The SERVICE PROVIDER shall not use, willingly allow or cause to have such documents used for any purpose other than performance of the SERVICE PROVIDER's obligation under this Agreement, without the prior written consent of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

18. The SERVICE PROVIDER and successors, executors, administrators, and assigns of the SERVICE PROVIDER's interest in the professional services or the compensation herein provided shall be bound to the DEPARTMENT to the full legal extent to which the SERVICE PROVIDER is bound with respect to each of the terms of this Agreement.

19. The SERVICE PROVIDER warrants that it has not employed or retained any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) to solicit or secure this Agreement and that the SERVICE PROVIDER has not paid or agreed to pay any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) any fee, commission, percentage, brokerage fee, or any other gifts contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the DEPARTMENT shall have the right to annul this Agreement without liability, or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

20. It is the intent of the Parties to avoid and resolve disputes at the lowest level possible. Accordingly, the DEPARTMENT and the SERVICE PROVIDER will enter into a partnering relationship, pursuant to the provisions set forth in Attachment **LETTER**. Any unresolved disputes will be referred to a nonbinding dispute resolution process pursuant to the terms outlined in Attachment **LETTER**. Nothing herein contained shall impair the Parties' right to file suit in the state district courts of the State of Nevada in the event the dispute resolution process is unsuccessful. **ONLY USE PARAGRAPH IF APPLICABLE**

OR

20. Any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement shall be decided by the DEPARTMENT. It is the intent of the DEPARTMENT to resolve disputes at the lowest level possible. Nothing herein contained shall impair either of the Parties' right to file suit in the state district courts of the State of Nevada.

21. During the performance of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Compliance with Regulations: The SERVICE PROVIDER shall comply with all of the regulations relative to nondiscrimination in federally-assisted programs of 49 CFR Part 21 as they may be amended from time to time (hereinafter "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

b. Nondiscrimination: The SERVICE PROVIDER, with regard to the professional services performed by it during the Agreement, shall not discriminate on the grounds of race, color, age, religion, sex, creed, handicap, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The SERVICE PROVIDER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5. of the Regulations, including employment practices, when the Agreement covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, Including Procurement of Materials, and Equipment: In all solicitations either by competitive bidding or negotiation made by the SERVICE PROVIDER for professional services to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the SERVICE PROVIDER of the SERVICE PROVIDER's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, age, religion, sex, creed, handicap or national origin.

d. Information and Reports: The SERVICE PROVIDER shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a SERVICE PROVIDER is in the exclusive possession of another who fails or refuses to furnish this information, the SERVICE PROVIDER shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the SERVICE PROVIDER's noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding of payments to the SERVICE PROVIDER under the Agreement until the SERVICE PROVIDER complies, and/or

2. Cancellation, termination or suspension of the Agreement, in whole or in part.

f. Agreements with subcontractors will include provisions making all subcontractor records available for audit by the DEPARTMENT or the FHWA.

g. Incorporation of Provisions: The SERVICE PROVIDER will include the provisions of Paragraphs (a) through (f) above in every subcontract including procurement of materials and leases of equipment, unless exempt by Regulations, order, or instructions issued pursuant thereto. The SERVICE PROVIDER will take such action with respect to any subcontract or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. In the event SERVICE PROVIDER becomes involved in, or is threatened with litigation by a subcontractor or supplier as a result of such direction, the SERVICE PROVIDER may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and the SERVICE PROVIDER may request the United States to enter into such litigation to protect the interests of the United States.

22. In the event federal funds are used for payment of all or part of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Debarment and/or Suspension: The SERVICE PROVIDER certifies that neither it nor its subcontractors, nor their principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

b. ADA: The SERVICE PROVIDER and subcontractor shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1980, as amended, and regulations adopted thereunder contained in 49 CFR, Part 27, and any relevant program-specific regulations.

c. Civil Rights: The SERVICE PROVIDER and subcontractor shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or person offered employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition, including AIDS and AIDS-related conditions.

23. Each party agrees to keep and maintain under generally accepted accounting principles full, true and complete records and documents pertaining to this Agreement and present, at any reasonable time, such information for inspection, examination, review, audit and copying at any office where such records and documentation are maintained. It is expressly understood that the duly authorized representatives of the DEPARTMENT and the FHWA shall have the right to inspect/audit the professional services and charges of the SERVICE PROVIDER whenever such representatives may deem such inspection to be desirable or necessary. Such records and documentation shall be maintained for three (3) years after final payment is made.

24. To the fullest extent permitted by law, the SERVICE PROVIDER shall defend, indemnify and hold harmless the State of Nevada, and the employees, officers and agents of the State of Nevada from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorney's fees, that are caused by the negligence, errors, omissions, reckless or intentional misconduct of the SERVICE PROVIDER or the employees or agents of the SERVICE PROVIDER in the performance of this Agreement.

25. The SERVICE PROVIDER shall use its own vehicles and the DEPARTMENT is not responsible for the payment of any premiums, deductible or assessments on any insurance policies purchased by the SERVICE PROVIDER.

26. The SERVICE PROVIDER warrants that all deliverables and work produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry.

27. The SERVICE PROVIDER is required to register as a vendor with the Nevada State Controller's office. The Registration Substitute IRS Form W-9 can be accessed at http://controller.nv.gov/VendorServices/Vendor_Services.html. The SERVICE PROVIDER will follow the Registration Instructions, complete the Registration Substitute IRS Form W-9 and submit it to the State Controller's Office.

28. The SERVICE PROVIDER agrees that, prior to any sale, transfer, business name change, change in principals or any other occurrence that alters or this Agreement in any way, the SERVICE PROVIDER shall notify the DEPARTMENT of such intent at least seven (7) calendar days prior to making said change.

29. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other Party at the address set forth below:

FOR DEPARTMENT: Rudy Malfabon, P.E., Director
Attn: **DIVISION CHIEF**
Nevada Department of Transportation
Division:
1263 South Stewart Street
Carson City, NV 89712
Phone:
Fax:
E-mail:

FOR SERVICE PROVIDER: **NAME**
FIRM
MAILING ADDRESS, CITY, STATE, ZIP CODE
PHYSICAL ADDRESS, CITY, STATE, ZIP CODE
Phone:
Fax:
E-mail:

30. This Agreement and the rights and obligations of the Parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The Parties consent to the exclusive jurisdiction of the Nevada state district courts for enforcement of this Agreement.

31. As used herein the term "SERVICE PROVIDER" shall include the plural as well as the singular, and the feminine as well as the masculine.

32. Neither Party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, or accidents, fires, explosions, earthquakes, floods, winds, failure of public transportation, or any other similar serious cause beyond the reasonable control of either Party. In such an event the intervening cause must not be through the fault of the Party asserting such an excuse, and the excused Party is obligated promptly to perform in accordance with the terms of the Agreement after the intervening cause ceases.

33. In connection with the performance of work under this Agreement, the SERVICE PROVIDER agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability, pregnancy, sexual orientation, genetic information (GINA) or gender identity or expression, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation apprenticeship. The SERVICE PROVIDER further agrees to insert this provision in all

subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

34. The SERVICE PROVIDER shall keep confidential all information, in whatever form, produced, prepared, observed or received by the SERVICE PROVIDER to the extent that such information is confidential by law or otherwise required by this Agreement.

35. Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The Parties **OR** DEPARTMENT will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

36. The SERVICE PROVIDER shall provide a minimum of fifty-one percent (51%) of the combined value of all items of work covered by this Agreement. The SERVICE PROVIDER shall not assign or subcontract any of the work performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER shall, prior to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the subcontract or subagreement for said work. Any assignment of rights or delegation of duties under this Agreement, without the prior written consent of the DEPARTMENT, shall be void.

37. The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of the Agreement and this Agreement shall be construed as if such provision did not exist. The unenforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

38. Except as otherwise provided for by law or this Agreement, the rights and remedies of the Parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, the recovery of actual damages and the prevailing party's reasonable attorney's fees and costs.

39. It is specifically agreed between the Parties executing this Agreement that it is not intended by any of the provisions of any part of this Agreement to create in the public or any member thereof a third party beneficiary status hereunder, or to authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damage, or pursuant to the terms or provisions of this Agreement.

40. The Parties hereto represent and warrant that the person executing this Agreement on behalf of each Party has full power and authority to enter into this Agreement and that the Parties are authorized by law to perform the services set forth herein.

41. This Agreement constitutes the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto and the Attorney General.

NCHRP REPORT 20-24 (37) A (01)

**MEASURING PERFORMANCE AMONG STATE DOTs:
SHARING BEST PRACTICES - CONSTRUCTION
SCHEDULE AND BUDGET PERFORMANCE UPDATE**

FINAL REPORT

Prepared for
National Cooperative Highway Research Program
Transportation Research Board
Of The National Academies

The information contained in this report was prepared as part of the NCHRP Project 20-24 (37), National Cooperative Highway Research Program.

SPECIAL NOTE: This report **IS NOT** an official publication of the National Cooperative Highway Research Program, Transportation Research Board, National Research Council, or The National Academies.

Prepared by

Joe Crossett and Kyle Schneweis
High Street Consulting Group
Chevy Chase, Maryland

April 2011

ACKNOWLEDGMENTS

This study was requested by the American Association of State Highway and Transportation Officials (AASHTO), and conducted as part of National Cooperative Highway Research Program (NCHRP) Project 20-24. NCHRP is supported by annual voluntary contributions from the state departments of transportation (DOTs). NCHRP Project 20-24 provides funds for research studies intended to address specific needs of chief executive officers (CEOs) and other top managers of DOTs. The work was guided by an NCHRP project panel composed of Ms. Mara K. Campbell, Missouri DOT; Mr. Carlos Braceras, P.E., Utah DOT; Ms. Daniela Bremmer, Washington State DOT; Ms. Jane D. Hayse, Atlanta Regional Commission; Mr. Charles E. Howard, Jr., Puget Sound regional Council; Mr. Mark C. Larson, Minnesota DOT; Dr. John C. Milton, P.E., Washington State DOT; Dr. Jeff Price, Virginia DOT; Ms. Catherine P. Rice, P.E., Maryland State Highway Administration; Mr. Steve Simmons, Texas DOT; Mr. Jack R. Stickel, Alaska DOT; Ms. Joyce N. Taylor, P.E., Maine DOT; Dr. Mary Lynn Tischer (FHWA Liaison); Ms. Connie Yew (FHWA Liaison); Mr. David Dubov (AASHTO Liaison); Mr. Matthew Hardy, (AASHTO Liaison); Dr. Anthony R. Kane (AASHTO Liaison); and Mr. Thomas Palmerlee (TRB Liaison). The project was managed by Dr. Andrew Lemer, NCHRP Senior Program Officer.

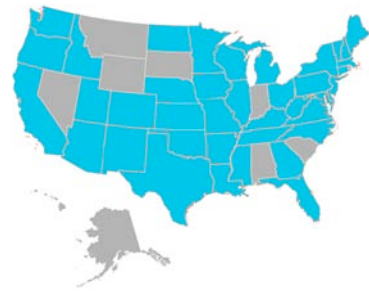
DISCLAIMER

The opinions and conclusions expressed or implied in this report are those of the research agency. The opinions and conclusions expressed or implied are those of the scan team and are not necessarily those of the Transportation Research Board, the National Research Council, or the program sponsors. The document has not been edited by the Transportation Research Board.

Executive Summary

PURPOSE To compare performance and establish best practices of state DOTs in delivering transportation construction projects on time and on budget

39 STATES PARTICIPATED



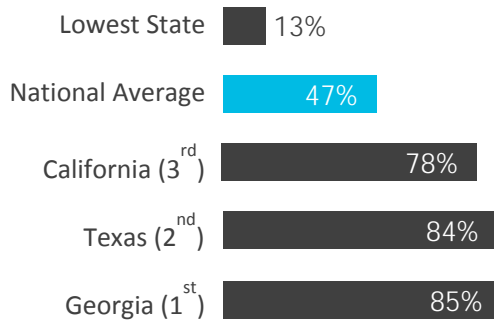
DEFINITION of ON BUDGET When the final cost of a project is at or below the original bid award amount.

DEFINITION of ON TIME When the final completion date is on or before the original planned completion date or the working days used are equal or less than the original working days authorized.

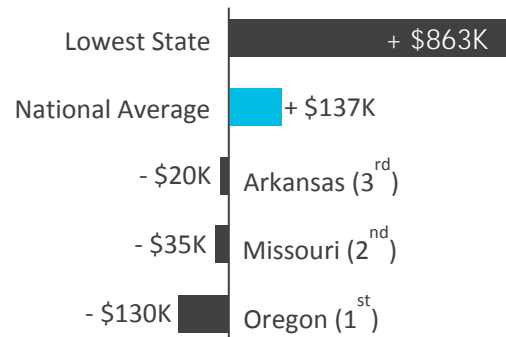
PROJECTS ANALYZED Every state's construction projects completed between January 1, 2001 and June 30, 2010

ON BUDGET RESULTS

Percent of projects on budget

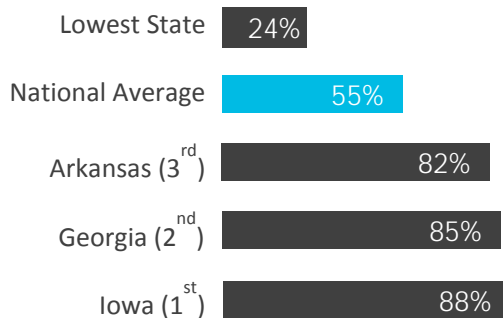


Average amount over budget per project



ON TIME RESULTS

Percent of projects on time



YOUR STATE'S RESULTS

Participating states can review their results at: www.mydotperformance.org

Georgia performance results



BEST PRACTICES

To investigate the best practices, **a series of interviews was conducted in Feb 2011 with senior DOT staff** at the top 7 performing states. The following is a list of common best practices:

An established focus on construction project delivery that makes project delivery a high priority or important goal for top management.

Formal program or process to measure project delivery. Several states use cost and schedule measures similar to those used in the study.

Monitoring of schedules and budgets closely and continuously through regular project meetings and reports.

A formal and strict process for changing schedules and budgets encourages project managers and contractors to keep projects moving and on budget.

NEXT STEPS

Experimentation with new performance measures naturally leads to scrutiny about how to improve them. These next steps would help advance the use and value of comparative cost and schedule performance measures:

Immediately – Establish a Regular Reporting Schedule: Establish a process for annual reporting of project delivery data beginning in the fall of 2011. One of the products of the project is a web-based database that could support this process with minimal effort.

States interviewed:

Arkansas	Missouri
California	Oregon
Georgia	Texas
Iowa	

Publishing of performance results at a district or regional level to promote competition and share best practices.

A contract administration framework that holds contractors accountable with penalties ranging from liquidated damages to preventing a contractor from bidding on other state jobs.

A willingness to let staff have flexibility to find creative and efficient ways to keep projects on time and on budget.

Consideration of on time and on budget performance during the project design phase. Doing homework in pre-construction phases of project delivery helps improve performance.

Short Term – Enhance Database Capabilities: Improve the accuracy and consistency of future results by updating the database analytics and investigating select data quality issues through a combination of mining the current data and a series of phone interviews

Medium Term – Establish a Multi-State Peer Exchange: Bring states together to discuss the results, best practices, and the measures themselves. A series of peer exchanges or webinars would improve the value and accuracy of the measures, and improve the sharing of project delivery best practices.

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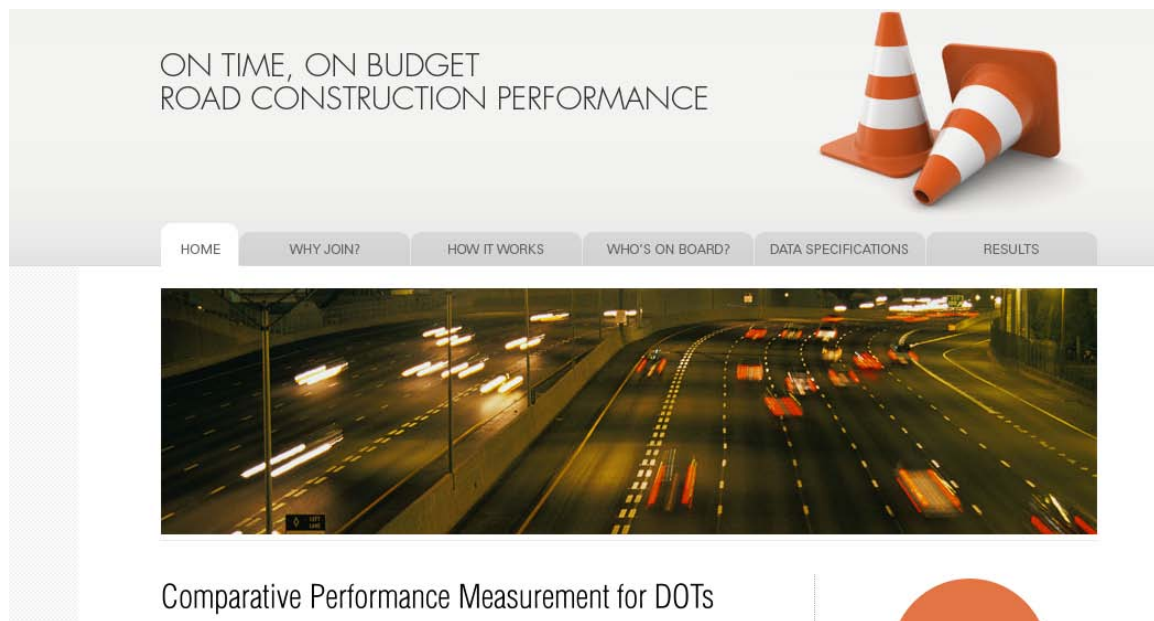
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1.0 Introduction

1.1 Study Background

This study evaluates the comparative performance of 39 state DOTs in delivering transportation construction projects within their originally anticipated cost and schedule. The study examines each state’s performance track record for all projects finished over a period from January 1, 2001 to June 30, 2010. Typical projects included in the analysis span the full range of a DOT’s activities including operations work, such as installation of ITS devices or traffic signals; maintenance activities, such as guard rail installation or striping; pavement preservation work, such as resurfacing; bridge preservation work, such as deck replacement; and capacity additions. A major work product of the study is a user-friendly web database that participating states can use to review their results. (See Figure 1.1)

Figure 1.1. Screenshot of Web-Based Project Cost and Schedule Performance Database



Adherence to planned budgets and schedules is a prerequisite of good performance for all state DOTs. At any time, a DOT has hundreds of projects – large and small - underway. Each project may take months or years from start to finish and without skillful planning and execution, delays or added costs can easily occur that are unacceptable.

The comparative construction project delivery performance study is part of a series of NCHRP-sponsored projects that have examined the comparative performance of state DOTs on various topics. Projects in the series have included a previous project delivery study, and studies on pavement condition, incident management, safety, and bridge condition. Over the course of these studies, comparative performance data has proven helpful for agencies interested in boosting their own performance by learning about the practices their peers use to achieve results.

The first national comparative study of project delivery performance was completed in 2007 with data from 20 states and spanning 5 years.¹ This study updates the 2007 report by adding 19 new states and 5 more years of project data. It also establishes a password protected, Internet-based project delivery performance reporting tool that participating states can use to compare their own performance to that of other states. The tool allows states to analyze their performance by year, project type, and contract value. Finally, the study also recommends some areas of improvement that can, over time, help states achieve a greater degree of consistency and comparability in using common project delivery performance measures across states.

1.2 Study Methodology

The study's approach included four major elements:

- *Data Collection and Analysis* - Solicitation of 39 participating states, collection of states' data, creation of a database for storing performance data, analysis and ranking of states based on the data, and identification of top performing states based on the rankings;
- *Identification of Good Practices* - Identification of practices in use among the seven top performing states that may have contributed to their successful cost or schedule performance;
- *Recommendations for Areas of Improvement* - Recommendations on immediate, short-term and medium-term actions that can be taken to improve availability of consistent comparative measures for assessing project delivery performance; and,

¹ NCHRP Project 20-24 (37) A (01), *Comparing State DOTs' Construction Project Cost & Schedule Performance – 28 Best Practices from 9 States*; April, 2007

- *Permanent Reporting Database* - Development of a user-friendly, web-based database that allows for easy continuation and expansion of comparative project delivery performance analysis.

2.0 Study Overview

2.1 State Participation

Thirty-nine states participated in the study. After joining in one of three informational conference calls held in September and October 2010 to learn about data reporting requirements and the overall purpose of the study, each state’s contact person ensured data was submitted on all project contracts in their project management system that were finished between the beginning of 2001 and June 2010. Participating states included:

Arizona	Maine	North Dakota
Arkansas	Maryland	Ohio
California	Massachusetts	Oklahoma
Colorado	Michigan	Oregon
Connecticut	Mississippi	Pennsylvania
Delaware	Minnesota	Tennessee
Florida	Missouri	Texas
Georgia	Nebraska	Utah
Idaho	New Hampshire	Vermont
Illinois	New Jersey	Virginia
Iowa	New Mexico	Washington
Kansas	New York	Wisconsin
Louisiana	North Carolina	West Virginia

A list of the contact point information used to gather data for each of the 39 states above is provided in Appendix A.

2.2 Project Cost and Schedule Measures

The foundations of this study are two simple measures of whether a completed construction project’s final cost and schedule met the planned cost and schedule:

- **Cost Performance Measure Definition** - Percent of states' completed contracts for which the final cost is at or below the original bid award amount.

“Original bid award amount” is tracked by all state DOTs. It represents the winning contractor’s estimate of a contract’s final cost at the time construction begins. During data collection, DOTs are instructed to exclude any contingencies or change orders that might be added to the original bid award amount.² Contractor costs are usually the lion’s share of a project’s budget although other costs may include construction inspection or state furnished materials. “Final cost” is a contract data point that all state DOTs also track within their electronic construction management systems. It is universally understood to represent the amount paid out to contractors under a contract.

- **Schedule Performance Measure Definition** - Percent of states' completed contracts for which either the contract’s final completion date is the same as or earlier than the originally scheduled completion date or the number of working days used is equal to or less than the originally authorized number of working days.

State DOTs generally set a contract’s schedule either by estimating a number of working days or choosing a calendar date deadline. Some agencies use both yardsticks, while others favor one. For this study, either yardstick is acceptable. While all 39 states in the study collect the necessary cost information to calculate performance, only 32 states in the study collect adequate schedule information to calculate performance. In several instances, some of these 32 states only provided information for a portion of their projects.

The cost and schedule performance definitions used in the study are precisely consistent with the ones used for the 2007 report, which were developed by a group of seven states working together to reach agreement on simple definitions of on time and on budget project delivery performance that could be used by any state. By maintaining these definitions, we have preserved continuity with the first study. The measures used in this study

² DOTs were allowed to make upward or downward adjustments to the original bid award amount for changes in fuel and materials costs, if any, or for incentive pavements, such as for pavement smoothness.

represent a strict way to define on budget and on time performance - cost or schedule overruns are not accepted for any reason. During the study, some states suggested that allowances could be added for legitimate additions to schedule or cost. As a practical matter, however, using such an approach to measure performance is challenging because states do not generally identify the cause of cost or schedule overruns in ways that can be analyzed easily on a widespread basis.

2.3 Methods for Calculating Performance

To calculate cost and schedule performance for each DOT, selected contract record data was gathered from participating DOTs. (See Appendix B for a list of data fields that were used to calculate and report performance.)

Methodologies for calculating cost and schedule performance using this information are as follows:

- **Cost Performance** – All 39 participating state DOTs’ construction offices were able to provide cost-related data from their construction management systems that allowed calculation of cost performance. A total of 100,934 contract records in the project database include sufficient data to calculate cost performance. Most states were able to provide data for the entire study period from 2001 to 2010, but four provided data for periods starting between 2002 and 2008 because of limitations in their data collection systems prior to these dates.

Every contract record with acceptable data was included in the study if it was completed between January 1, 2001 and June 30, 2010. Contracts were assumed to be complete if they had a final voucher date or equivalent data field that fell within the study period.³ If a state was able to include data on adjustments to the original bid award amount for either changes in fuel/materials costs or incentives paid for performance, these were factored into the performance calculation by adding them to the original bid award amount. Thirteen of the participating states provided information on adjustments.

³ Since our definition of “complete” requires a project to have a “final voucher date” or equivalent, the database has a tendency to exclude recently finished projects that are open to traffic or 95 percent complete, but that have not been finalized in terms of full close out. Sometimes close out can take many months and as a result the database may not include states’ very latest performance data.

A contract was considered “on budget” if its final cost was equal to or less than its original bid award amount. The original bid award amount does not include any change order costs. Several states suggested that future work in this area might include consideration of ways to account for some types of change orders.

- **Schedule Performance** – 32 of the 39 state DOTs’ construction office staff were able to provide schedule-related data for the study from their construction management systems that allowed calculation of schedule performance. A total of 72,803 contract records in the project database include sufficient data to calculate schedule performance. Of the states that shared schedule data, some were only able to generate schedule data for a portion of the contracts they submitted.

As with the cost performance analysis, every contract record with acceptable data was included in the on time component of the study if it was completed between January 1, 2001 and June 30, 2010. Contracts were assumed to be complete if they had a final voucher date or similar that fell within the study period.

A contract was considered on schedule if either the contract’s final completion date is the same as or earlier than the originally scheduled completion date or the number of working days used is equal to or less than its the originally authorized number of working days.

After the consultant team estimated schedule and cost performance, each state that supplied data for the project was provided an opportunity to review their own results.

2.4 Data Analysis Options

As part of this study, sufficient contract-related data was collected from states to allow various fine grain performance analysis options beyond basic on cost and schedule performance. The project’s web-based performance database allows individual states to further examine their own performance in detail. Performance can be examined by year, cost, acceptable over budget cushion, project type (preservation, capacity, pavement/bridge, operations/maintenance); and performance of ARRA projects:

- **Performance by Year of Project Completion** - Each state’s data can be examined on a year-by-year basis from 2001 to 2010. Data for most states includes this entire time range, however, four states were able only

to provide data for a subset of these years.

- **Performance by Project Cost** – Each state’s data can be examined by cost, which enables performance results to be sorted by projects costing less than \$500,000 to over \$100 million.
- **Performance by Project Type** – Where possible, states’ data can be examined by project type, including bridge preservation projects, pavement preservation projects, bridge capacity projects, pavement capacity projects, maintenance projects and operations projects. This data should be treated with caution, however, because states’ individual contract classification systems are not always well suited to generalization.

In addition, performance can be tracked for ARRA projects and performance can be assessed using a budget contingency cushion of anywhere between zero (0) percent and twenty (20) percent above original budget.

2.5 Project Delivery Performance Web-based Database

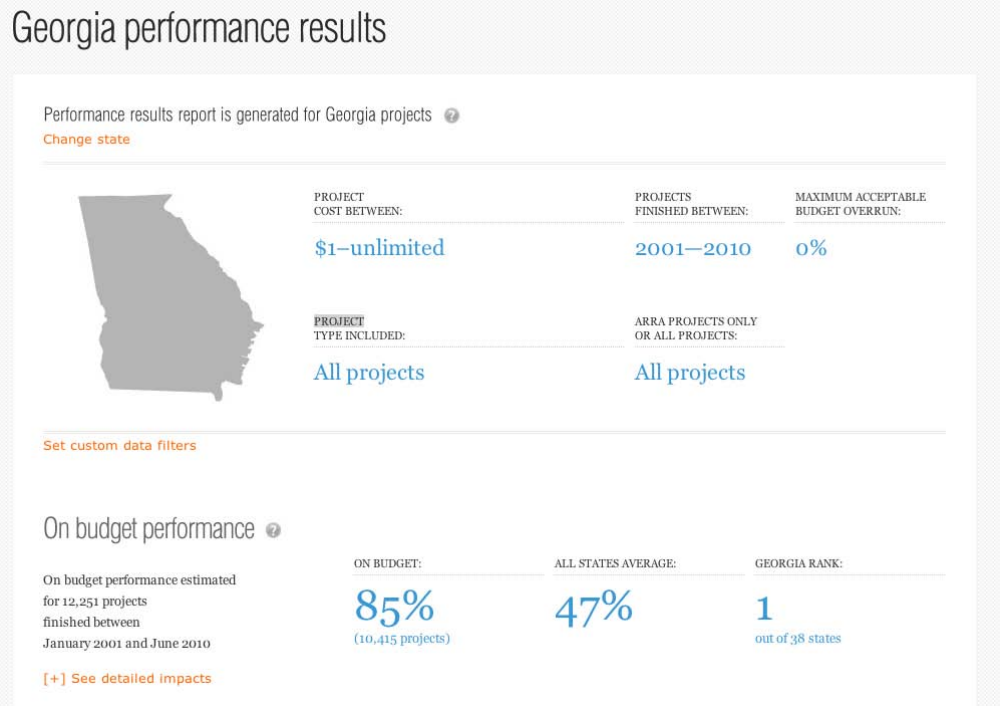
Data collected as part of this project is stored in a password-protected, database that serves two functions:

- **Data Import Tool** – A user with administrative privileges may use the website to maintain the database by adding new data from states as needed. The administrator can “clean” and post data provided by state DOTs in a Comma Separated Value (CSV) file format. Cleaning data involves standardizing states’ unique date and dollar cost formats and mapping states’ individual field terms to standard database definitions. The data import function is described in detail in Appendix C.
- **Performance Analysis Tool** – Users with state-specific privileges may review their states’ cost and schedule performance results compared to those of other states in the database. They can use the web tool either to get a simple snapshot of their state’s performance or to examine their state’s performance by project type, year or cost. A screenshot of the performance analysis tool is shown in Figure 2.1.

The website is accessible at www.mydotperformance.org. A password is needed to access state specific results.⁴

⁴ Please contact Joe Crossett, 240 252 5111 to obtain password information.

Figure 2.1. Database Screenshot of State-Level Performance Results



3.0 Comparative Performance Analysis Results

3.1 Project Delivery Cost Performance

Review of the 39 states' project delivery cost data shows the following:

- **Nationwide Project-by-Project Cost Performance** – Forty-seven (47) percent of projects were completed at or below their original contract award amount on average, as shown in Figure 3.1. (Based on calculation of the mean share of contracts completed at or below their original contract award amount among 39 states for all projects finished between January 1, 2001 and June 30, 2010.) Best performers out-performed the average of their peers by a large margin:

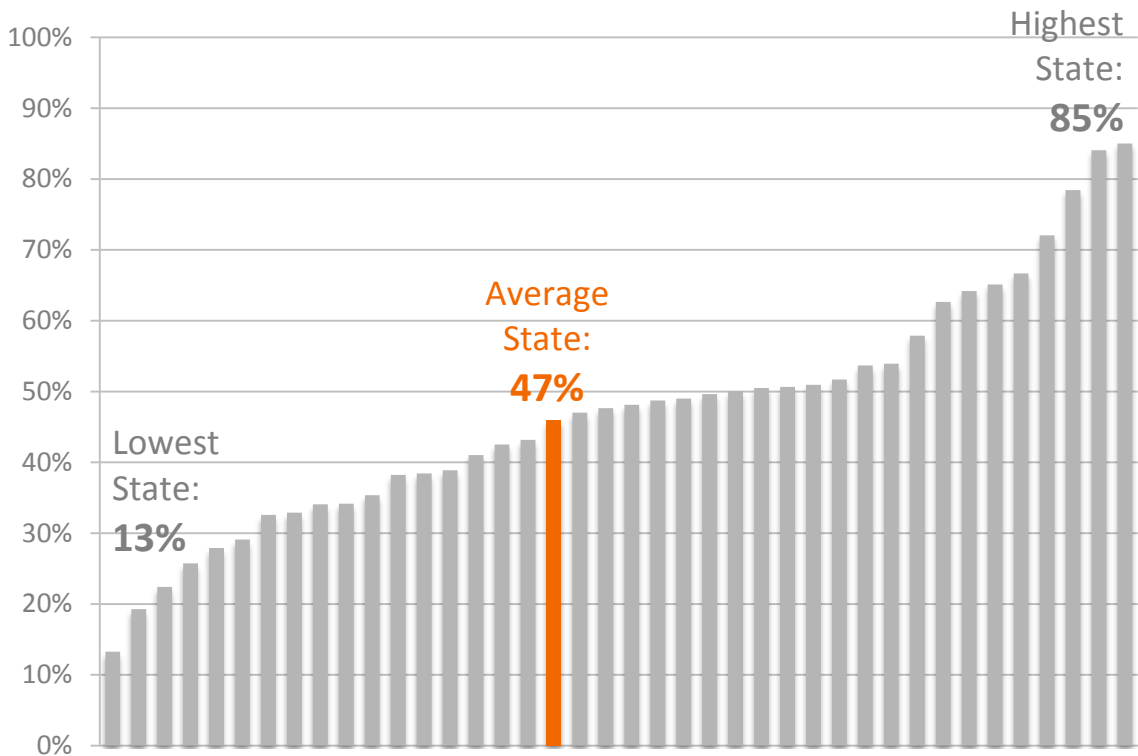
Best Performers: Georgia DOT – 85 percent of projects on budget

Texas DOT – 84 percent of projects on budget

California DOT – 78 percent of projects on budget

Range in Performance: In contrast to Georgia DOT's delivery of eighty-five (85) percent of projects for their anticipated cost, the weakest performer in the data series delivered thirteen (13) percent of projects for their anticipated cost, as shown in Figure 3.1.

Figure 3.1. Nationwide Average Project-by-Project Cost Performance

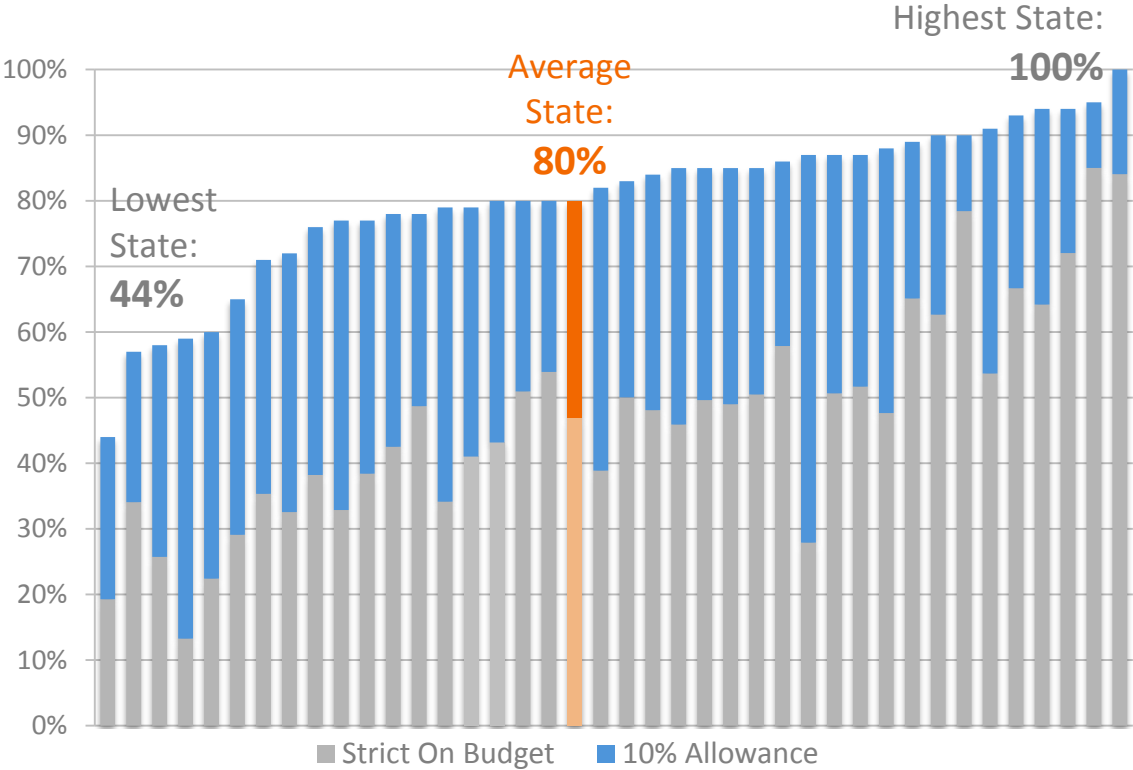


Average Amount Over Original Contract Award: For the 39 participating states, the average project was finished approximately \$90,000 over its original bid award amount. If projects at or below their original bid award amount are excluded, this figure rises to approximately \$300,000 per project or fourteen (14) percent of the original bid award amount.

Effect of a Ten (10) Percent Contingency: If a ten (10) percent contingency is added to all original bid award amounts, states' average performance rises from forty-seven (47) percent of projects completed at or below their original contract award amount on average to eighty (80) percent on average, as shown in Figure 3.2. Using this contingency amount, the average project was finished approximately \$113,000 under its original bid award amount.

Performance for Projects over \$10 Million: Four (4) percent of projects in the database had an original bid award amount of over \$10 million. Among the 39 states, eighty-one (81) percent of projects in this cost range were not completed for less than their original contract award amount on average and the average amount over the original award was \$2.8 million.

Figure 3.2. Nationwide Average Project-by-Project Cost Performance (+10%)



- **Performance Based on Combined Cost of All Projects** – States may manage costs among many projects – adding costs on some and saving costs on others – rather than aiming to keep every project within budget. With the right mix of cost savings among projects, a middling project-by-project based cost performance score could mask good program-wide performance. To account for this possibility, totals were calculated for each state’s original bid award amounts and final costs. States were then ranked according to their relative cost savings or additions on a per project basis.

On average, states delivered projects with a net additional cost of \$137,000 over the original bid award amount. Five (5) states out of 39 delivered all their projects with a total final cost at or below the total original contract award amount. The top three best performers using this method are as follows:

Best Performers: Oregon DOT – \$130,000 cost savings per project⁵

Missouri DOT – \$35,000 cost savings per project

Arkansas DOT – \$20,000 cost savings per project

The earlier best performers were ranked 5 (Texas), 6 (Georgia) and 25 (California) respectively, using this alternate ranking approach.

Range in Performance: In contrast to Oregon DOT’s delivery of its projects with an average \$130,000 savings per project below their anticipated cost, the weakest performer in the data series delivered its projects with an average added cost of \$733,000 per project over anticipated cost.

3.2 Project Delivery Schedule Performance

Review of the 32 states out of 39 participants that provided project schedule cost data suggests the following results:

- **Nationwide Project-by-Project Schedule Performance** – Fifty-five (55) percent of projects were completed on or before their original completion date, as shown in Figure 3.3. (Based on calculation of the mean share of

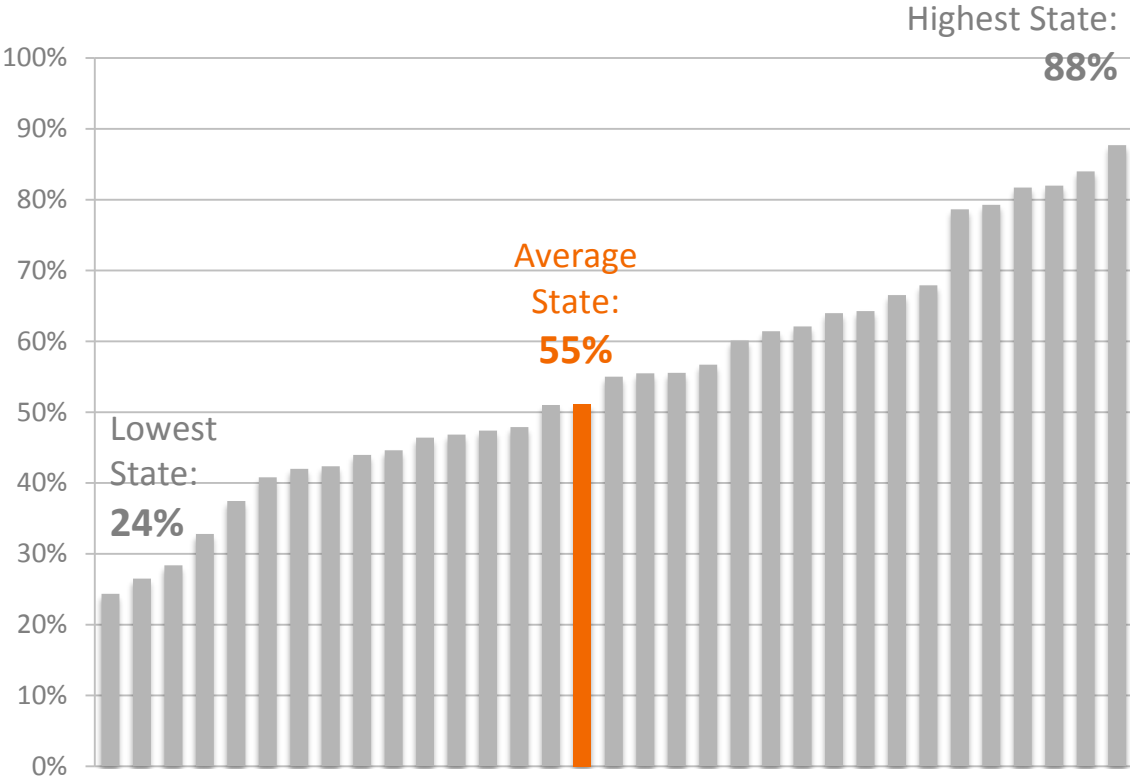
⁵ Interviews with Oregon DOT staff revealed that the agency included a 3.5 percent contingency in the data it provided for the study, which may reduce their real ranking. By contrast Missouri DOT specified that it included no contingency in its data.

contracts completed on or before their original contract award amount among 32 states for all projects finished between January 1, 2001 or later and June 30, 2010.) Best performers out-performed the average of their peers by a large margin:

- Best Performers:* Iowa DOT – 88% of projects on schedule
- Georgia DOT – 85% of projects on schedule
- Arkansas DOT – 82% of projects on schedule⁶

Range in Performance: In contrast to Iowa DOT’s delivery of eighty-eight (88) percent of projects on time, the weakest performer in the data series delivered twenty-four (24) percent of projects for their anticipated cost, as shown in Figure 3.3.

Figure 3.3. Nationwide Average Project-by-Project Cost Performance



⁶ Arkansas was jointly ranked 3rd, but the other 3rd ranked state only provided schedule data for 2008-2010.

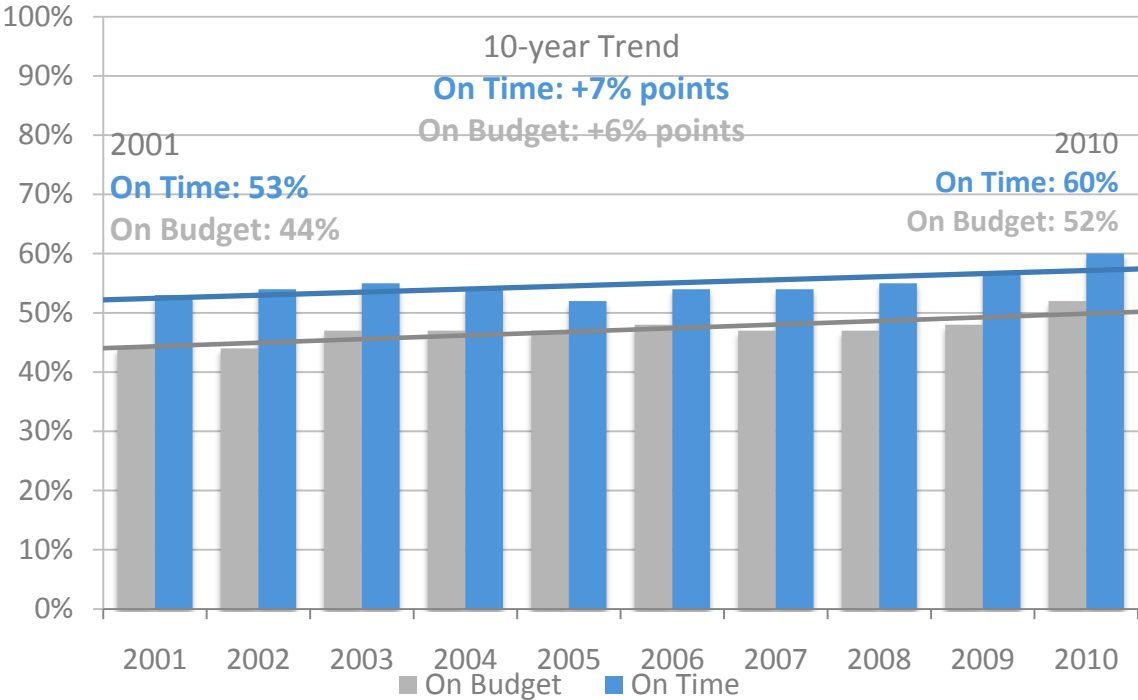
Average Amount of Delay - For the 32 participating states, the average late project was finished 114 days after its originally scheduled completion date or allotted amount of working days.

Performance for Projects over \$10 Million - Four (4) percent of projects in the database had an original bid award amount of over \$10 million. Among the 32 states for which schedule performance results are available, sixty-six (66) percent of projects in this cost range were not completed within their original schedule on average and the average amount over the original schedule was 240 days.

3.3 Change in States’ Performance Over Time

Over time, states appear to be making modest improvements in the share of projects they complete within planned budgets and schedules. Figure 3.4 shows that average cost performance has improved by six (6) percentage points since 2001, although most of this improvement occurred in 2003 and 2009. Figure 3.4 also shows that average schedule performance has improved by seven (7) percentage points since 2001, although most of this improvement occurred in 2009 and 2010.

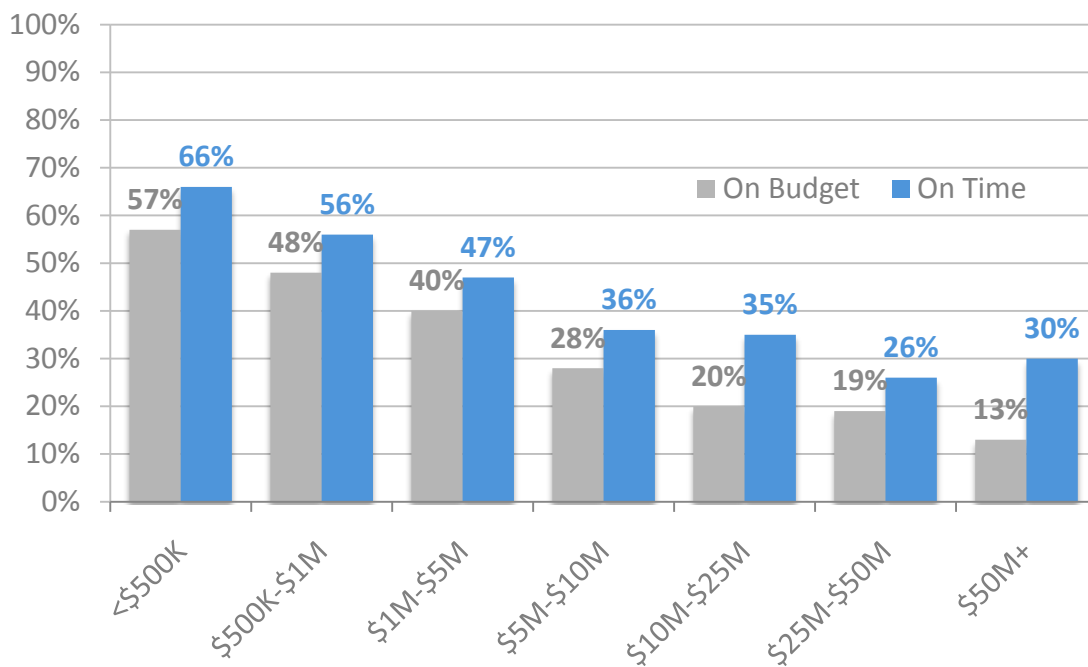
Figure 3.4. Nationwide Improvement in Performance, 2001-2010



3.4 Performance by Project Cost

States' ability to keep projects within their original budgets and schedules varies significantly by project cost. Fifty-seven (57) percent of projects under \$500,000 are completed within their anticipated cost and sixty-six (66) percent are completed for their anticipated schedule. As shown in Figure 3.5, these figures decrease steadily as project cost increases; only thirteen (13) percent of projects over \$50 million are completed for their anticipated cost and thirty-one (31) percent are completed within their anticipated schedule.

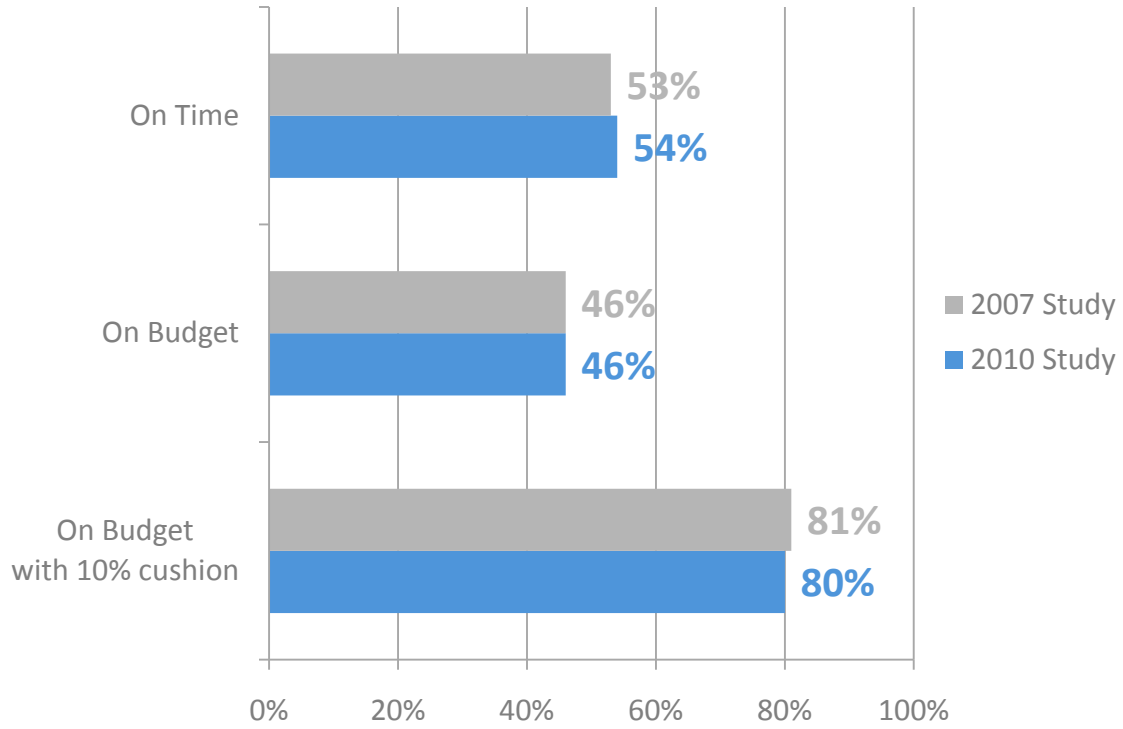
Figure 3.5. Performance by Project Cost, All States Average (2001 to 2010)



3.5 Consistency with 2007 Study Results

The first national comparative study of project delivery performance was completed in 2007 with data from 20 states and spanning 5 years from 2001 to 2005. This study updates the 2007 report by adding 19 new states and 5 more years of project data. Despite a doubling in the number of states that participated, the results of the 2007 study are very similar to those of the 2010 study for the period 2001 to 2005, as shown in Figure 3.6.

Figure 3.6. Comparison of All States Average Cost and Schedule Results (2007 Study Versus 2010 Study)



4.0 State Interview Findings

Results for the measures described in Section Three suggest that states vary in their ability to deliver projects within originally anticipated costs and schedules. These results beg the question - “what do strong performers do to keep their projects within original cost and schedule limits?”

This section reports on activities and processes that the best performers in the study group of 39 states say they are undertaking to deliver projects on or below their original anticipated cost and schedule.

4.1 What Defines a Strong Performer?

- **Strong Cost Performers** - Among the states studied, the share of projects completed within their original bid award amount ranged from 13 (thirteen) percent to 85 (eighty-five) percent. On average, forty-seven (47) percent of projects were completed at or below their original contract award amount, as shown in Figure 3.1. The top three best performers out-performed the rest of their peers by a margin that ranged from 6 (six) to thirteen (13) percent and were thus selected for interview:
 - Georgia DOT – 85 percent of projects at or below cost
 - Texas DOT – 84 percent of projects at or below cost
 - California DOT – 78 percent of projects at or below cost

Georgia, Texas, and California are obvious starting places for seeking out good practices used by states to keep projects on budget.

Since many states focus on managing overall program budgets as well as individual project budgets, the top three states with the best records in achieving overall cost savings were also identified, including:

- Oregon DOT – \$130,000 average cost savings per project
- Missouri DOT – \$35,000 average cost savings per project
- Arkansas DOT – \$20,000 average cost savings per project

By contrast 33 of the 39 states added an average of \$164,000 per project.

- **Strong Schedule Performers** - Among the states studied, the share of projects completed within their original scheduled timeframe ranged from 24 percent to 88 percent. On average, fifty-five (55) percent of projects were completed at or below their original contract award amount, as shown in Figure 3.3. The three best performers out-performed the average of their peers by a margin of 27 to 33 percent:

- Iowa DOT – 88 percent of projects on schedule
- Georgia DOT – 85 percent of projects on schedule
- Arkansas DOT – 82 percent of projects on schedule ⁷

4.2 What Performance Good Practices Were Found?

In late February 2011, phone interviews were conducted with senior staff at each of the seven highest performing states shown in the list below:

- Arkansas State Highway and Transportation Department (AHTD): Scott Bennett, Assistant Chief Engineer for Planning;
- CalTrans: Elizabeth Dooher, Chief, Office of Engineering Management;
- Georgia DOT (GDOT): Thomas Howell, Director, Division of Construction;
- Iowa DOT (IDOT): John Smythe, Construction Engineer;
- Missouri DOT (MoDOT): Travis Koestner, Assistant State Construction and Materials Engineer;
- Oregon DOT (ODOT): Jeff Gower, State Construction and Materials Engineer; and
- Texas DOT (TxDOT): Ken Barnett, Director, Construction Division.

Together, the ideas uncovered in the interviews with these individuals provide some practical tips for any state considering ways to strengthen its project delivery performance. No single state employs every good practice on the list, but the ideas provide a menu of transferable strategies to which any state may wish to give further consideration.

- **Top Performers Focus on Project Delivery; Some have done so for a Long Time** – All of the states interviewed indicated that keeping within planned project schedules and budgets is a high management priority – some, including Texas, Arkansas and Georgia DOTs, emphasized that this is a critical issue in their states. Several of the top performers interviewed for the study say they have emphasized cost and schedule performance for many years. At Oregon DOT, for example, performance in this area has been measured for “at least 15 years” according to Jeff Gower, ODOT’s

⁷ Arkansas was jointly ranked 3rd, but the other 3rd ranked state only provided schedule data for 2008-2010.

state construction engineer. At Arkansas SHTD, according to Scott Bennett, the agency has emphasized on time and on budget delivery for “many years.” They suggest that good performance results do not occur overnight.

- **Project Delivery Performance Measures are Usually Part of Top Performers’ Performance Initiatives** – Several of the seven states interviewed indicate that they track cost and schedule performance measures similar to those used in this study, examples include:
 - *CalTrans*: California’s state DOT tracks a robust set of 39 measures for construction, including measures that match those used in this study. Caltrans’ construction measures focus on six areas of project delivery including contract administration, contracting, claims, environmental compliance, safety, and arbitration. The measures are primarily used internally for improving management practices and holding staff accountable.
 - *Missouri DOT*: Performance measurement is part of MoDOT’s culture and the DOT includes a section in its quarterly “Tracker” performance measures report called “*Fast Projects that are of Great Value.*”⁸ This section reports several measures including “percent of programmed project cost as compared to final project cost;” “percent of projects completed within programmed amount;” and “percent of projects completed on time.” MoDOT uses its measures for internal management accountability and to communicate with the public and its stakeholders.
 - *Oregon DOT*: Oregon DOT’s “*Annual Performance Progress Report*” tracks project-level schedule performance in terms of “the percent of projects with the construction phase completed within 90 days of original contract completion date.” and project budget performance is measured in terms of “the percent of original construction authorization spent,” which is a measure of whether the DOT’s overall construction program stays within anticipated costs. Measures are used internally for management of the construction program, but they also are reported to the state legislature.

⁸ 2010 Tracker Report; http://www.modot.mo.gov/about/general_info/Tracker.htm (checked Feb 28, 2011)

- *Texas DOT*: TxDOT's online "TxDOT Tracker" reports "the number of construction projects completed where the days assessed do not exceed the allocated number of days" and the "final project construction cost compared to original low bid price."⁹ The measures are reported on TxDOT's website and to the state legislature. They also are used to keep staff accountable.

In each of these examples, project delivery performance measures are part of a broad agency-wide culture of using measures to track performance on many important topics. The measures are seen as a way to provide accountability to stakeholders, set leadership priorities, and motivate and manage staff. Use of performance measures has helped these and other states keep a strong focus on project delivery.

- **Some Top Performers have Externally Driven Project Delivery Performance Mandates** – Several of the states interviewed, are specifically held accountable by their state legislatures for tracking project delivery performance, examples include:
 - *Oregon DOT*: In Oregon, the DOT is required to provide the State Legislature with an "Annual Performance Progress Report" that includes various "Key Performance Measures" including measures of project delivery performance.¹⁰
 - *Texas DOT*: In Texas, state law since 2009 has mandated use of specific project delivery performance measures and even sets goals and timelines for achievement. (S.B. 1, 81st Legislature, Regular Session, General Appropriations Act)

Performance mandates such as these give states further reason to improve their project delivery performance.

- **Many Top Performers "Drill Down" from State-wide Performance Results to Support Project Management** – Of the states interviewed, those that use project delivery performance measures indicate they are reporting statewide results on an annual basis, but that they also are "drilling down" more frequently into performance data to provide

⁹ Texas DOT Tracker; http://www.txdot.gov/about_us/sppm/txdot_tracker.htm (checked Feb 28, 2011)

¹⁰ Oregon DOT 2010 Annual Performance Report
<http://www.oregon.gov/ODOT/CS/PERFORMANCE/index.shtml> (checked Feb 28, 2011)

district-level, or even manager-level performance reports that are used as a regular part of their project management activities:

- *CalTrans*: Every phase in delivery of the program is broken out and measured – at a program level, at a district level, and at a project level. A report is put out by CalTrans headquarters every quarter that helps to share best practices within the agency and promotes competition within the agency to perform better.
- *Oregon DOT*: At ODOT, region and manager-level data is shared on a monthly basis so that construction staff in the regions can see their performance results and discuss them.
- *Texas DOT*: At TxDOT, cost and schedule data are regularly shared with construction managers in each of the DOT's 25 Districts for the purpose of ensuring projects are delivered on time and on budget.

Each of the above states places great importance on using drill down performance data as a powerful tool and motivation for regions and managers to work on improving their performance.

- **Top Performers Often Build Groundwork for On Time and On Budget Performance into Project Design** – Several of the states interviewed describe different ways that they are able to assure good performance during construction by doing their “homework” in pre-construction, for example:
 - *Arkansas HTD*: Staff reports that most project design work is done in-house, which helps assure predictable and accurate standards that make the contractors’ job of keeping projects on schedule and on budget easier.
 - *Georgia DOT*: At GDOT, a lot of time is spent upfront during preliminary field plan review and final plan review to create the very best set of plans as a way to avoid having to issue supplemental change orders.
 - *Iowa DOT*: At IDOT, project cost estimates are carefully calculated using detailed information about item level costs to ensure that budgets are not found lacking during construction.
 - *Texas DOT and Missouri DOT*: MoDOT and TxDOT describe similar approaches for building flexibility into their project designs that allow contractors more freedom to select options for completing projects

without going over budget or falling behind schedule by altering project elements where needed to save time or money.

- **Several Top Performers make Changes to Schedules and Budgets Arduous** – Some of the states interviewed in the study report that they deliberately rely on tough protocols that make changes to project cost or schedule difficult to approve, for example:
 - *Arkansas HTD*: All project change orders of \$20,000 to \$75,000 must be approved by the District Engineer and Arkansas HTD headquarters must approve all change orders over \$75,000.
 - *Oregon DOT*: At ODOT, project managers have no authority to overrun a project’s budget; they must get approval from the area manager for increases of up to \$500,000 and the Oregon Transportation Commission must approve changes over \$500,000. Likewise, a project manager cannot add more than 14 days to a project’s schedule without approval.
 - *Texas DOT*: At TxDOT, cost overruns are taken out of a District’s overall budget. A District Engineer must find ways to pay for a project that goes over budget by cutting costs from other projects in their District portfolio.

By making changes to schedules or budgets difficult, states keep managers focused on finding ways to save costs and time.

- **Top Performers Monitor Schedules and Budgets Closely** – Most of the states interviewed indicated that they regularly monitor schedules and budgets, for example:
 - *Georgia DOT*: Contractors must submit regular project progress reports. If they get more than 15 percent behind schedule they must submit a revised schedule to show how they will get the project back on time. If they don’t submit a revised schedule, GDOT stops payments until they do.
 - *Oregon DOT*: At ODOT, all project managers are expected to update their project schedule and budget monthly to ensure problems are spotted early. Likewise, contractors must provide regular schedule updates for complex projects.
- **Top Performers Hold Contractors Accountable** – Several of the states interviewed mention that they use various strategies to hold contractors

accountable for cost and schedule performance:

- *Arkansas HTD*: If a project falls more than 25 percent behind schedule, the contractor receives a letter from the resident engineer. If the project goes more than 50 percent behind schedule, a letter is sent from the chief engineer. Contractors are prevented from bidding on new jobs if they have late projects.
- *Georgia DOT*: If a contractor gets two or more projects more than 15 percent behind schedule, they are prevented from bidding on new jobs for 6 months. Staff reports that the threat of not letting them bid on new work keeps projects moving.
- *Oregon DOT*: At Oregon DOT, liquidated damages are used to ensure that contractors have an incentive to stay on schedule.
- **Top Performers Let Staff Have Flexibility** – Some of the states interviewed emphasize that they give staff flexibility to find project solutions that work, for example:
 - *Georgia DOT*: Construction staff is given the authority to and are expected to resolve issues at the lowest possible level.
 - *Oregon DOT*: At ODOT, staff is given flexibility to respond to issues as they emerge and to find alternate solutions that help keep their projects within schedule and on budget.
- **Top Performers Meet Regularly to Discuss Project Delivery** – Several of the states interviewed mentioned that they hold regular leadership meetings to discuss project delivery performance, for example:
 - *Arkansas HTD*: Top project delivery staff at Arkansas HTD meet monthly to review active projects and discuss issues, including on time and on budget performance.
 - *CalTrans*: At CalTrans, quarterly meetings are held to discuss the status of each project – every functional unit involved in the project attends to discuss what’s going well, not just in construction, but also in design and other areas.
 - *Iowa DOT*: At Iowa DOT, monthly reviews are held to identify reoccurring reasons for cost overruns on projects that are over budget and to better understand the causes and solutions.
 - *Oregon DOT*: At ODOT, the “construction leadership team” tracks performance measures. It is made up of DOT representatives from

around the State and it meets regularly to make a variety of policy level decisions about how to manage projects.

- **Top Performers Motivate Senior Executives to Deliver Projects** – In California, the DOT’s Director has established a formal “Contract for Delivery” with each individual Division Director that outlines the projects that are to be delivered that year. Out of 1,600 projects only 1 was not delivered in 2010.

5.0 Next Steps for Cost and Schedule Reporting

A process of continual learning and improvement often characterizes performance measurement. Experimentation with new performance measures naturally leads to scrutiny about how to improve upon them. In this section, recommended next steps and associated costs for continuing to advance the use of comparative cost and schedule performance measures are outlined. The next steps are grouped by their approximate time horizon for implementation:

- *Immediate continuation of cost and schedule reporting* - States supply updated 2011 project delivery data in Fall 2011. (Costs could consist of in-kind support from public agencies or \$20,000 to \$30,000 for consultant support).
- *Short-term adjustments to cost and schedule measures* – Use consultant support to make minor enhancements in database analytics and to validate core data elements. (Costs could be met with in-kind support or about \$25,000 in consultant support.)
- *Medium-term peer exchange dialogue and refinement of measurement approaches* – Establish an ongoing peer exchange process among states to promote better on time and on budget performance. (Costs could be met with in-kind support or about \$40,000 in consultant support.)

5.1 Immediate Continuation of Cost and Schedule Reporting

With modest effort, the on time and on budget performance reporting presented in this study can easily be continued after the project is complete. One of the project’s products is a MySQL database tool that offers a user-friendly, Internet-based interface for collecting and analyzing project delivery performance data. The web-based database could continue to be hosted by an independent third party, or hosting could be taken over by

AASHTO or a state DOT interested in supporting comparative performance measurement.

Steps Required for Immediate Continuation - Maintaining annual reporting of cost and schedule performance using the database is a four-step process:

- **Step 1: Determine Who Leads Reporting** – Prior to initiating the next round of cost and schedule reporting, a decision must be made on what agency will take the lead in coordinating data efforts.

Time: Minimal

Cost: In kind

- **Step 2: Invite States to Participate** – Lead agency (e.g., AASHTO’s Standing Committee on Performance Management (SCOPM)) invites states to participate in a new round of reporting using a combination of email and phone contact with the 39 states from this study as a starting point (Participating states and points of contact listed in Appendix A.) The www.mydotperformance.org website, which provides basic background on DOTs’ comparative performance efforts could also be used to help promote participation. In addition, efforts could be made to reach out to states that did not participate in the current study.

Time: 20 to 60 hours

Cost: In kind

- **Step 3: Request for States’ Data** – Lead agency sends a data request to each state via email using the qualitative description of data needs in Appendix B and an Excel spreadsheet template to be used for reporting data, as shown in Appendix C. Use of the standard template for reporting data ensures it can be easily exported to a database in Step 4.

Time: 40 to 60 hours

Cost: In kind

- **Step 4: Upload States’ Data** – Lead agency verifies that each state’s data is consistent with the Excel template. Data is saved in CSV file format and transferred to the online database via the automated web tool, which walks users through the steps required to clean data for inclusion in the

database. Appendix D provides a detailed description and screenshots of the protocol for using the web tool to upload states' data.

Time: 80 to 100 hours

Cost: In kind

By following these steps, regular comparative project delivery performance reports will be automatically generated for participating states. The most significant barriers to immediate continuation of cost and schedule reporting are identification of a lead agency to coordinate the reporting process and maintaining states' interest in providing data. The web-based database could easily be folded into a broader electronic comparative measurement website.

Estimated Immediate Continuation Costs – Costs for immediate continuation of cost and schedule reporting are assumed to be minimal if a public agency takes over responsibility for gathering and uploading data. The estimated personnel time required to conduct one round of reporting per year is 140 to 220 hours, or about 7 to 10 percent of one full time employee's time. If management of the data collection was outsourced to a consultant, costs might range from \$20,000 to \$30,000, based on the level of effort described.

5.2 Short-Term Adjustments to Cost and Schedule Reporting

In the short-term, i.e., before the next round of cost and schedule data collection, some high benefit, low cost optional adjustments could help to improve accuracy and value of future results:

Updates to Database Analytics - The on time, on budget database analytics could be updated, based on additional scrutiny of states' data to help provide improved insights on states' performance:

- **Add State Rankings Based on Aggregate Cost Performance** - The primary cost performance measure used in this study, which was agreed to in 2006 by a small group of states as part of the earlier NCHRP study, lists the share of each participating state's completed projects that were finished at or below their originally anticipated cost. These results are used to provide a relative ranking of each participating state's performance.

States may, however, manage costs among many projects – adding costs on some and saving costs on others – rather than aiming to keep every

project within budget. With the right mix of cost savings among projects, a middling project-by-project based cost performance score could mask good program-wide performance. An aggregated approach that ranks states according to their ability to keep within a total budget across all projects would help address this concern.

Adapting the database analytics to accommodate these concerns would require modest additional web design work and some analytic research to determine appropriate action.

Time: 40 hours

Cost: \$5,000 (For out-sourced web design services/consultant support)

Phone Interviews with States to Investigate Selected Data Quality Issues

– Phone interviews with state contact points could further affirm the quality of data used in the study and provide insights on areas where quality improvements can be easily implemented. Two key data quality issues to address in these interviews should include:

- **Causes for the Disparity in Total Projects Reported by Each State** – The number of projects completed by each state is expected to vary due to factors such as, but not limited to, transportation system scale, age, and contracting practices. Data submissions by some states, however, suggest that they may be over or underreporting completed projects. One large northeast state, for example, reported only 409 projects for the ten-year period compared to an average of 2,593 projects per state. Another state reported over 4,000 more projects than the next closest state. Such inconsistencies should be further investigated to determine if they affect data quality.
- **Stricter Detection of Contingencies Built into Original Cost or Schedule Data** – States were asked to exclude contingencies in their reporting of “original bid award amount” and “original schedule” data, however, one state indicated after the fact that they could not or did not back out cost contingencies. Inclusion of any contingency creates a favorable bias in a state’s performance results that may lead to a better ranking than is deserved, therefore a clear picture of whether contingencies are included in any state’s data would be valuable. If contingencies are known, they can be backed out during the data upload process.

Phone interviews with 39 states would take approximately 3 hours per state to organize, conduct and summarize for a total of about 120 hours.

Time: 120 hours

Cost: In kind or \$20,000 (For consultant support)

Estimated Short-Term Adjustments Costs – Costs for short-term adjustments to cost and schedule reporting are based on some consultant/web design support to carry out the activities described above. The estimated personnel time required is 160 hours. If adjustments are outsourced to a consultant, costs might be in the range of \$25,000.

5.3 Medium-Term Refinement of Measurement Approaches

Each of the seven top performers interviewed as part of this project declared a strong interest in continuing to compare performance. In the medium-term, potentially after the next round of cost and schedule data collection is completed, an ongoing peer exchange series could be established to give states a regular forum for discussing comparative performance issues. The peer exchanges could be held about once a year and they would give states an opportunity to discuss performance results and investigate more complex questions about how to measure and compare project delivery performance. Topics for dialogue could include:

- **Accommodating Alternate Performance Thresholds** - If a state gears its construction management practices toward achieving different thresholds for on time and on budget performance than the ones used in this study, it may consistently fail to meet the study's thresholds – resulting in a poor performance ranking. A state, for example, may consider projects to be finished on budget, if final costs come within a set percentage of the original bid award amount.

The extent to which states are using alternate definitions for on time and on budget performance was not examined as part of this study. Further review would help determine if states are managing to other definitions and whether they should be allowed to replace “original bid award amount” or “original schedule” with customized measures of performance that are based on their preferred definitions. Ideally, a process would be established to make each state's definition transparent to other participating states. This would be an ideal topic for further research and dialogue among states.

- **Accounting for “Acceptable” Change Orders** - Some states (including several top performers) do not routinely anticipate or support “change orders” that result in added project costs or time; they expect the difference to be made up elsewhere on a project. Other states, however, consider “change orders” that sometimes add costs or time to a project as a reasonable part of project management. Discussion is needed to determine if and how reasonable “change orders” could be tracked and incorporated into the performance measures used for this study. As a practical matter, it may be difficult to collect standardized data that indicates when additional costs or time are legitimate.
- **Relationship Between Contract Risk Management and Performance Measurement** - Project schedule and cost can be altered by unanticipated events during construction. States have differing philosophies about how to manage risk during the contracting process. Some states seek to account for risk early by cushioning original bid award amounts and schedules; alternatively, they may push risk to contractors who account for it in their bids. Under these circumstances, original bid award amounts are likely to provide a reasonable projection of final costs. Other states manage unforeseen risks, if they occur, via changes in scope after the project letting. Since states differ in their approaches, a one-size-fits-all measurement approach may favor one group over others. Further research and dialogue is needed to examine the extent to which risk management practices in contracting influence comparative performance measurement practices.
- **Accounting for Differences in States’ Budgeting Practices** - The way a state sets its budget for a program of transportation projects may influence how accurately the comparative measures used in this study reflect its performance. If a state adheres to a fixed budget once projects are programmed, then the original anticipated cost and schedule are likely to be a reliable baseline for gauging performance. If, however, a state tends to make conservative scope assumptions about projects at their outset with the anticipation that scopes, costs and schedules may be expanded later when, or if, additional funds become available, then the original anticipated cost and schedule are a less reliable baseline for gauging performance.

The extent to which states participating in the study use a fixed budgeting approach that favors the current comparative measures is not known.

Likewise, the extent to which states may vary their practices over time in response to changing budgetary conditions is unknown. A qualitative assessment is needed of the potential impact that states' budgeting practices may have on the value and credibility of the current comparative performance measures. This could be achieved via a national dialogue on comparative project delivery performance measures. If necessary, consideration could be given to allowing states to justify alternate baselines for cost and schedule performance that reflect their budgeting practices.

- **Changes to States' Project Delivery Data Collection Practices** – As part of the dialogue process, states also could evaluate opportunities for greater standardization in their contract data collection practices that would support comparative performance measurement, one example of an area where greater standardization could occur is states' classifications for project type: States do not use standard terminology to describe project type (e.g. bridges versus highways or preservation versus capacity) and some states choose from hundreds of non-standard terms to describe projects. At present, each state's project types must be mapped to a standard list used for the web database, which requires considerable time and subjective interpretation. Alternately, states could move to use of a standard project classification system in place of, or alongside their own classification systems. The value of presenting performance by project type must be evaluated in the context of the added burden required of states to make it meaningful.
- **Other Issues Related to Measuring Project Delivery Performance** – Many other issues are likely to arise as states become more familiar with the concept of comparative project delivery. Some states, for example, have suggested exploring performance differences between urban and rural projects, while others are concerned about how construction season length affects their performance rating relative to other states. Other states have raised concerns about use of "working days" as a way to measure schedule performance; they question whether it accurately portrays a commitment to complete a project by a set date. Another factor of concern is the ability of states to provide contract adjustment information that may alter their performance results. The peer exchanges could be used to explore issues such as these as they arise.

Time: 240 hours to organize a one-day workshop and produce summary report

Cost: \$35,000 to 40,000

Time: Unknown

Cost: Unknown

Estimated Medium-Term Refinement Costs – Costs for medium term refinement of on time and on budget reporting are assumed to include consultant support to carry out a workshop. The estimated personnel time required is 240 hours at a cost of about \$40,000.

Appendix A – State Contact Points

Arizona

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dhammit@azdot.gov

Arkansas

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(501) 569 2241

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Ohio

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Oklahoma

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Tennessee

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Texas

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Utah

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Virginia

Jay Stiles

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Washington

Todd Lanphere

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(360) 705 7936

Wisconsin

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West Virginia

Todd Rumbah

stephen.t.rumbaugh@wv.gov

(304) 558 9569

Appendix B - Contract Record Reporting Fields

For each contract record provided by a state, the following data will be submitted:

1. Unique contract identifier;
2. Working day or calendar day contract type;
3. State's final voucher date or similar that indicates project is complete and all costs are paid;
4. Field that indicates whether contract is funded with all/or some ARRA money;
5. Field that indicates whether contract is for project on local or state system, if available;
6. Project type (e.g. bridge replacement, repaving, etc.);
7. Original number of working days allowed (for working day contracts);
8. Working days charged (for working day contracts);
9. Original specified completion date (for calendar day contracts);
10. Substantial completion date or similar (for calendar day contracts);
11. Original contract bid award amount excluding contingencies, if any;
12. Final cost;
13. If available, final cost adjustment for performance bonus or penalty; and
14. If available, final cost adjustment for inflation in materials costs.

Appendix C – Excel Template for States’ Data

Contract ID	Final Voucher Date	Local Project	ARRA Project

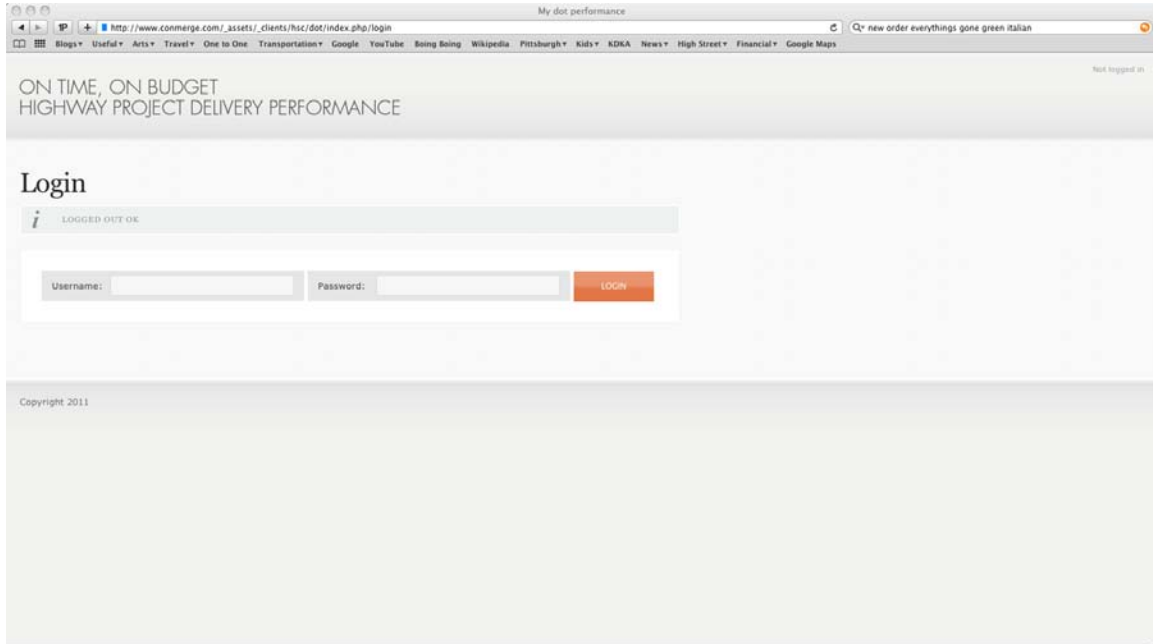
Contract Schedule Type	Contract Project Type	Notice to Proceed Date	Original Working Days Approved

Final Working Days Approved	Total Working Days Charged	Original Specified Completion Date	Final Specified Completion Date

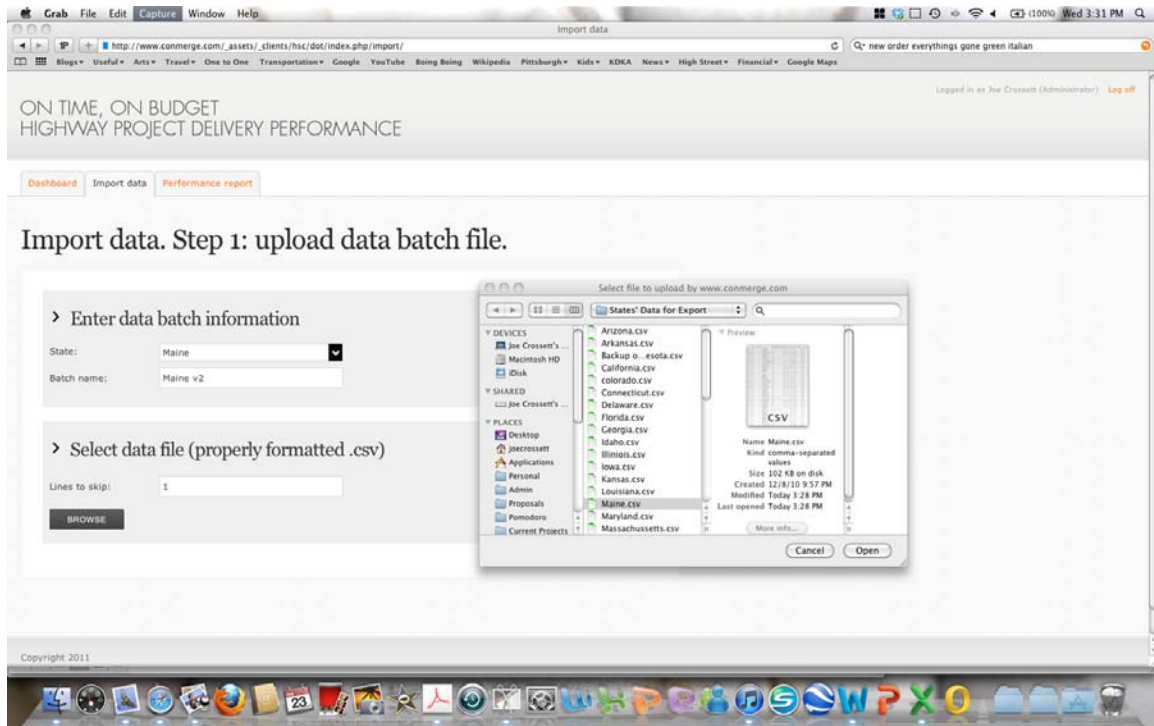
Substantial Completion Date	Original Bid Award Amount	Original Bid Award Plus Adjustments	Final Cost	Liquidated Damages Days

Appendix D – Screenshots of Data Upload Protocol

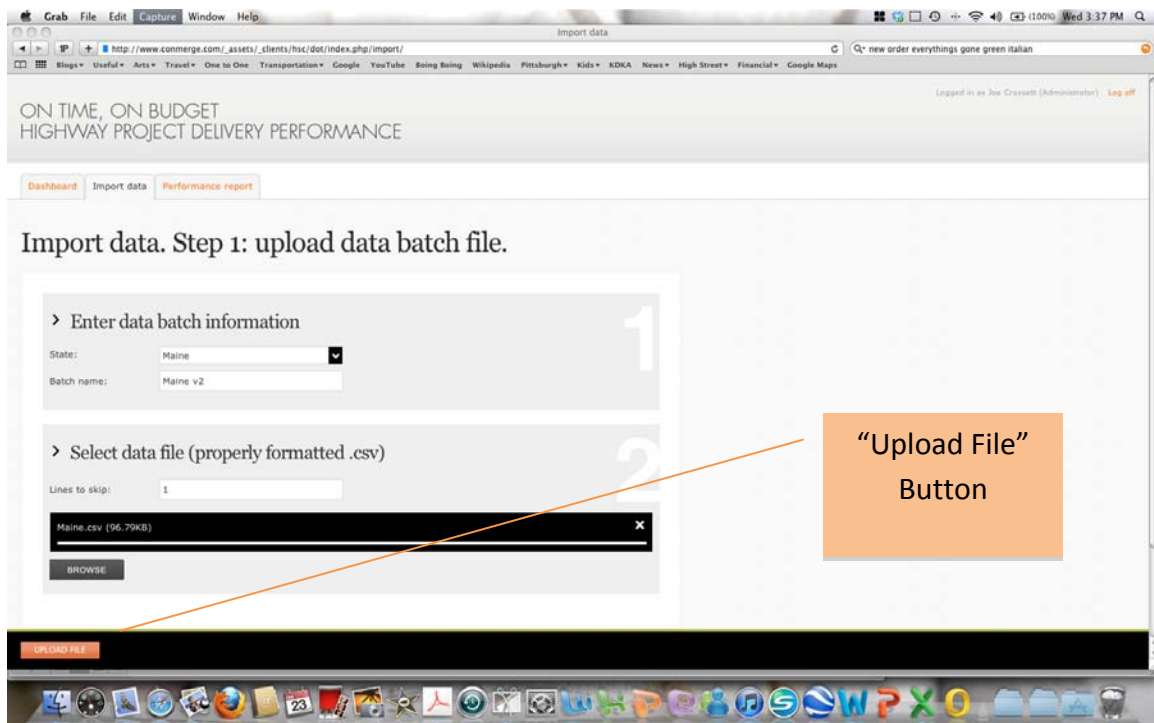
A: User logs in with administrator privileges to web tool



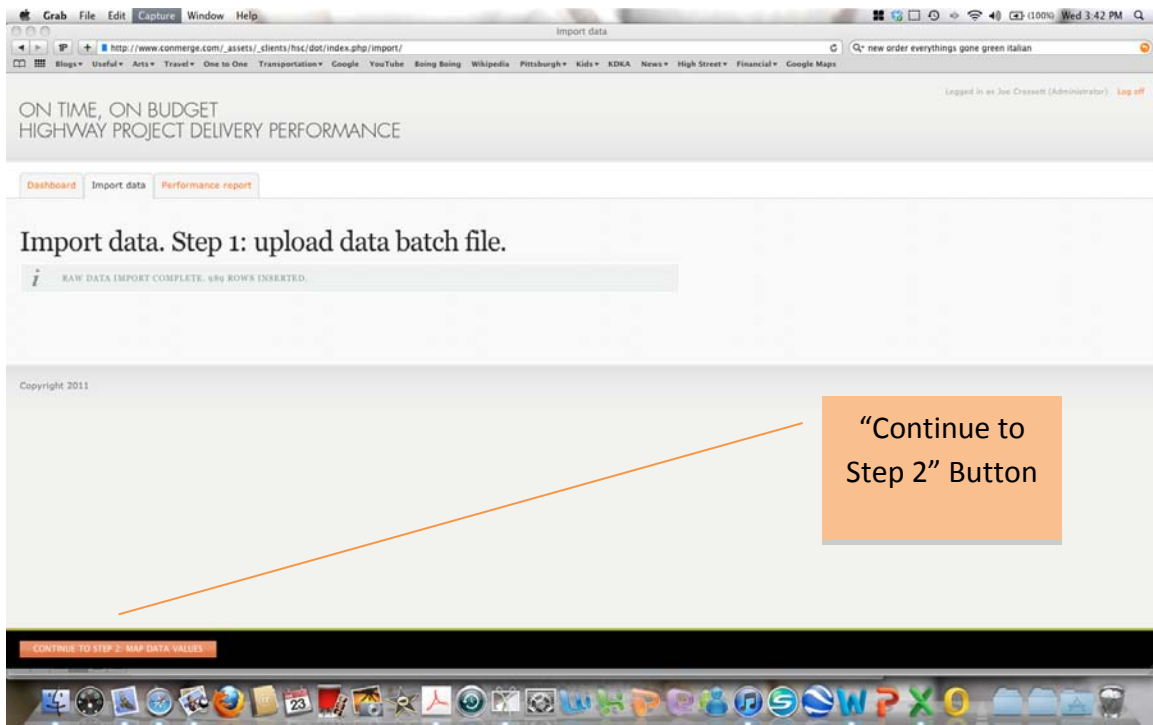
B: User selects state's name from drop down menu; creates a unique "batch name" for state's data file; tells uploader to skip 1st line of data file (which contains column headers); and clicks "browse" to choose CSV data file to upload from user's hard drive.



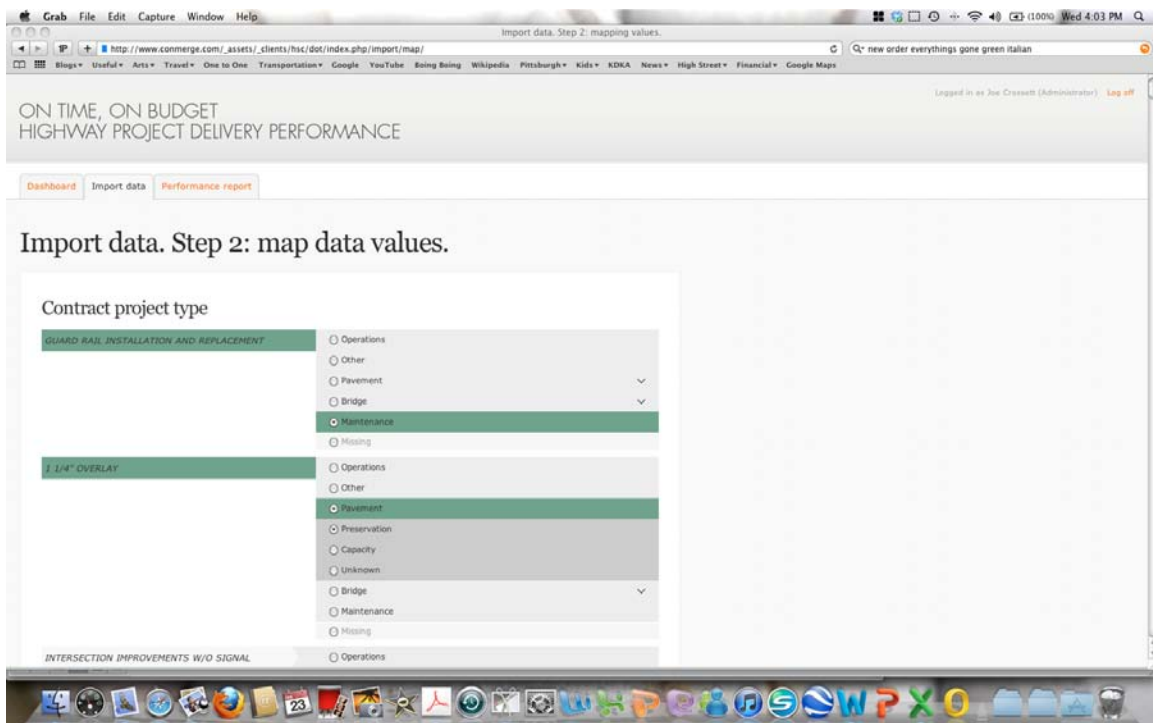
C: User clicks on orange "Upload File" button in bottom left of window



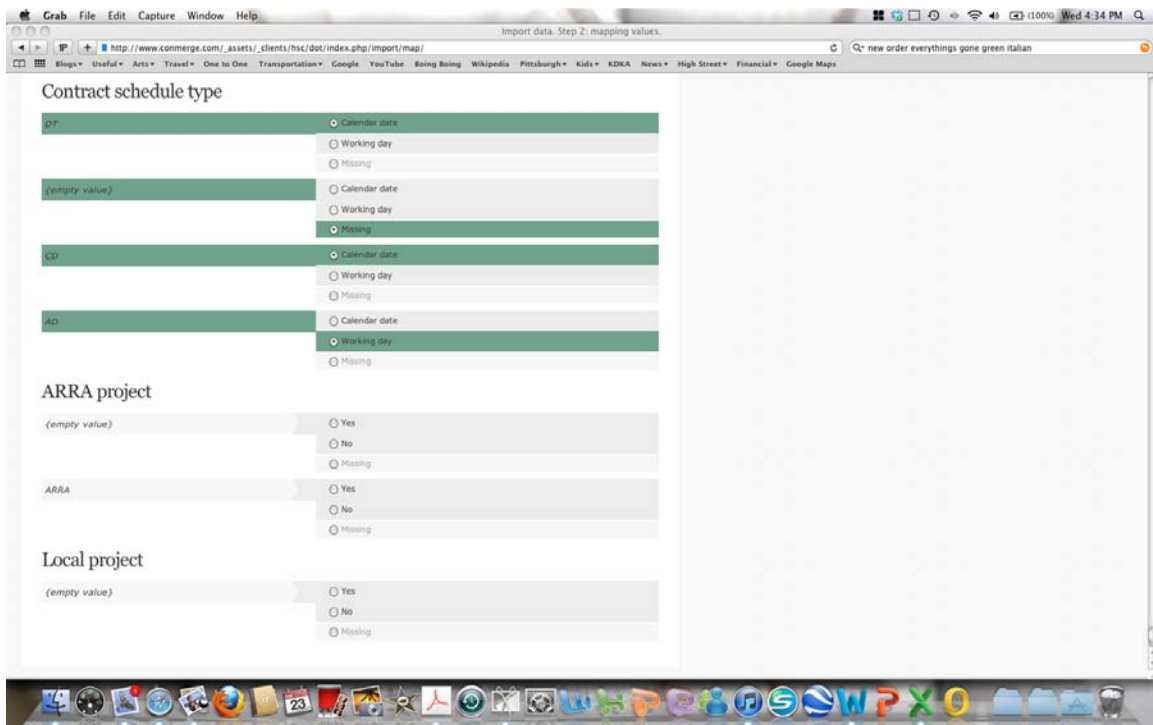
D: If data uploads successfully, display will show a message stating “Raw data import complete. XXX rows inserted.” User must click on “Continue to Step 2” button.



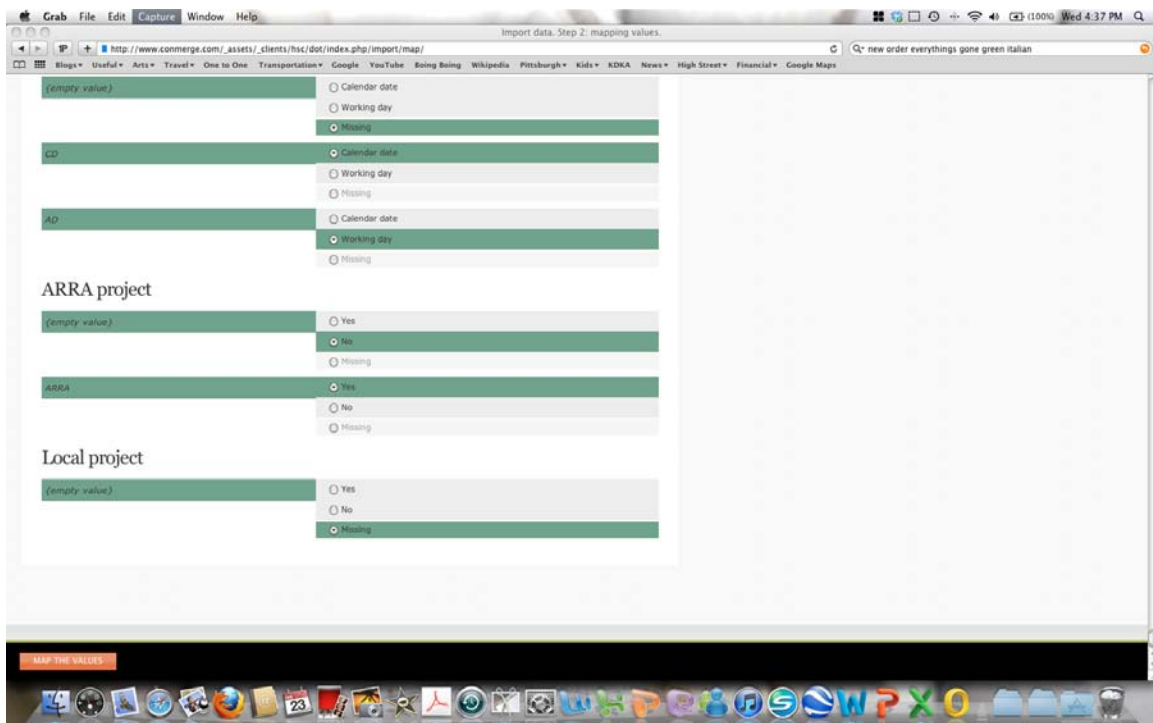
E: User maps each unique “contract type” field term used by a state to a standard contract type used in the database (Operations, Pavement, Bridges, etc.).



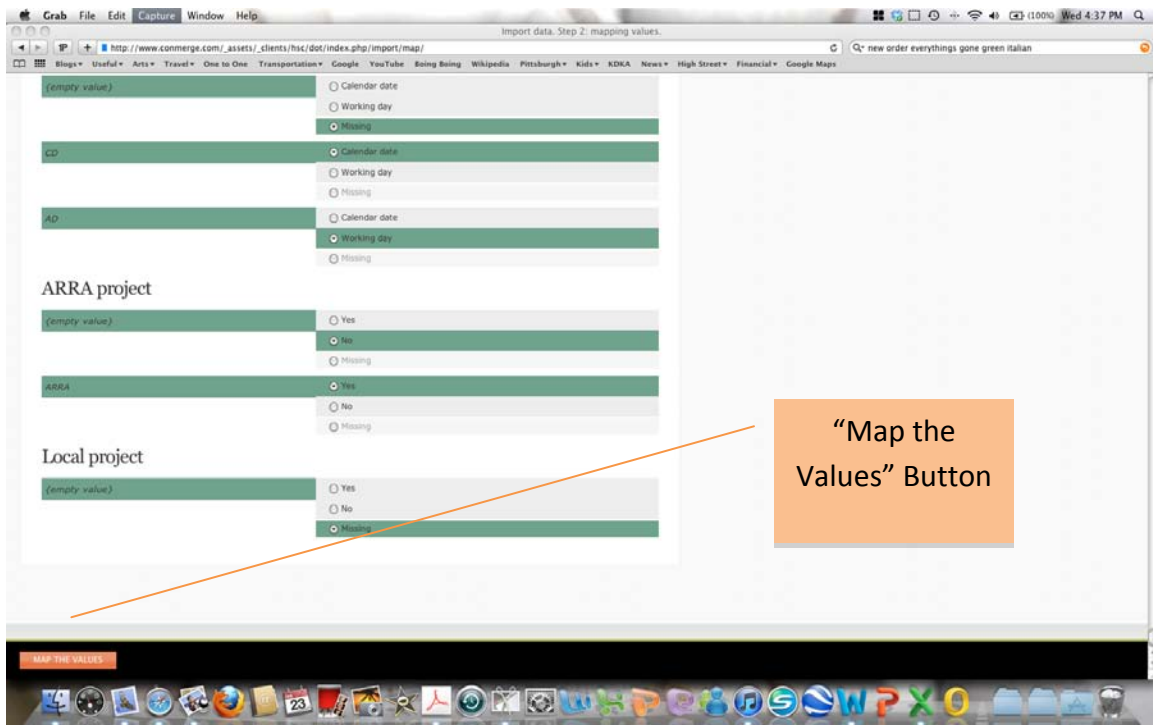
F: User maps each unique “contract schedule” field term used by a state to a standard contract type used in the database (Working Days, Calendar Days, Unknown).



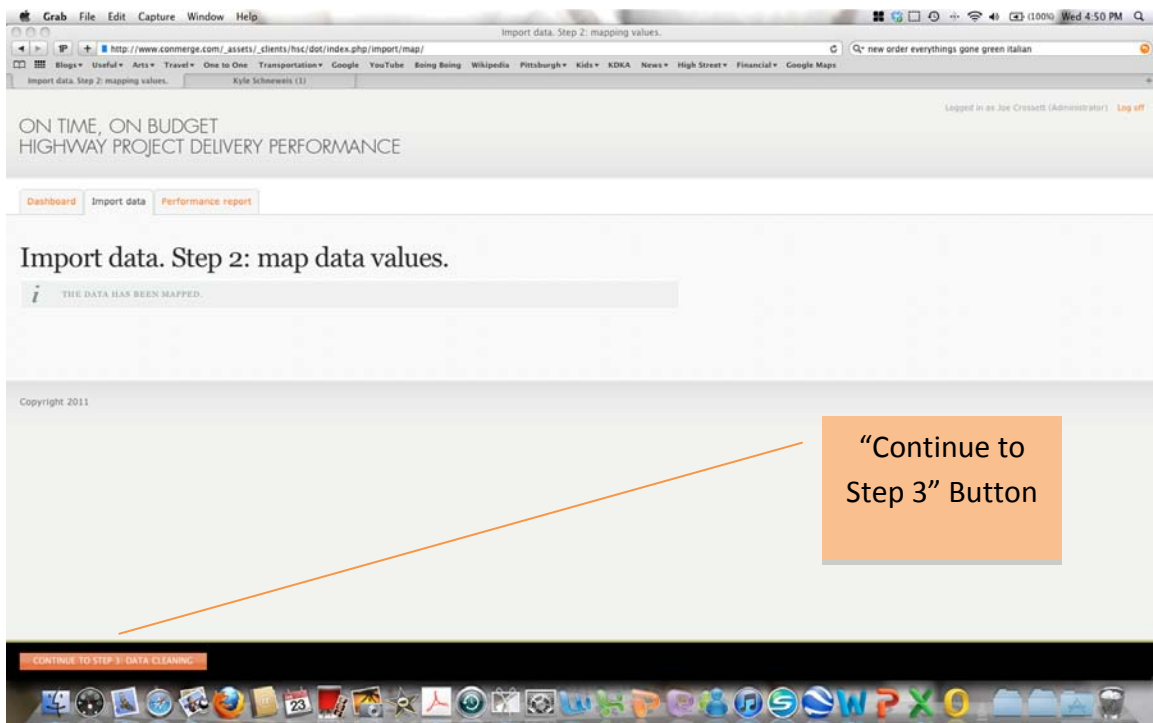
G: User maps each unique “ARRA” and “Local Project” field term used by a state to a standard contract type used in the database (ARRA: Y/N; Local Project: Y/N).



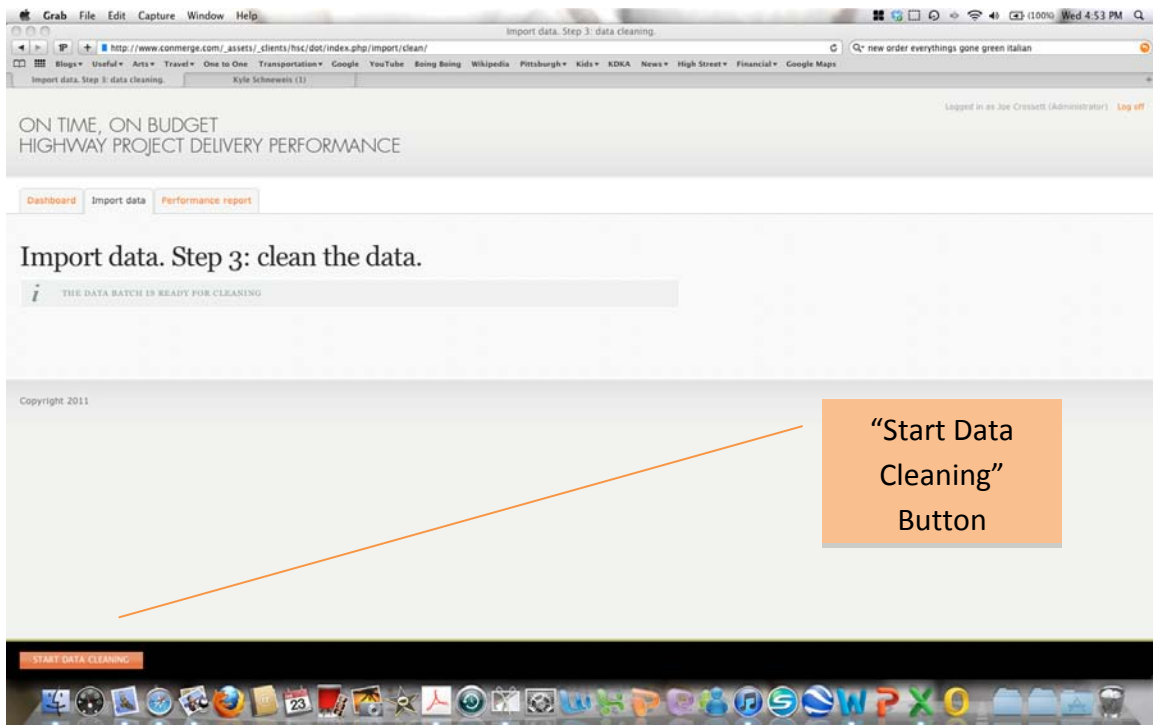
H: User clicks on orange “Map the Values” button in bottom left of window to continue.



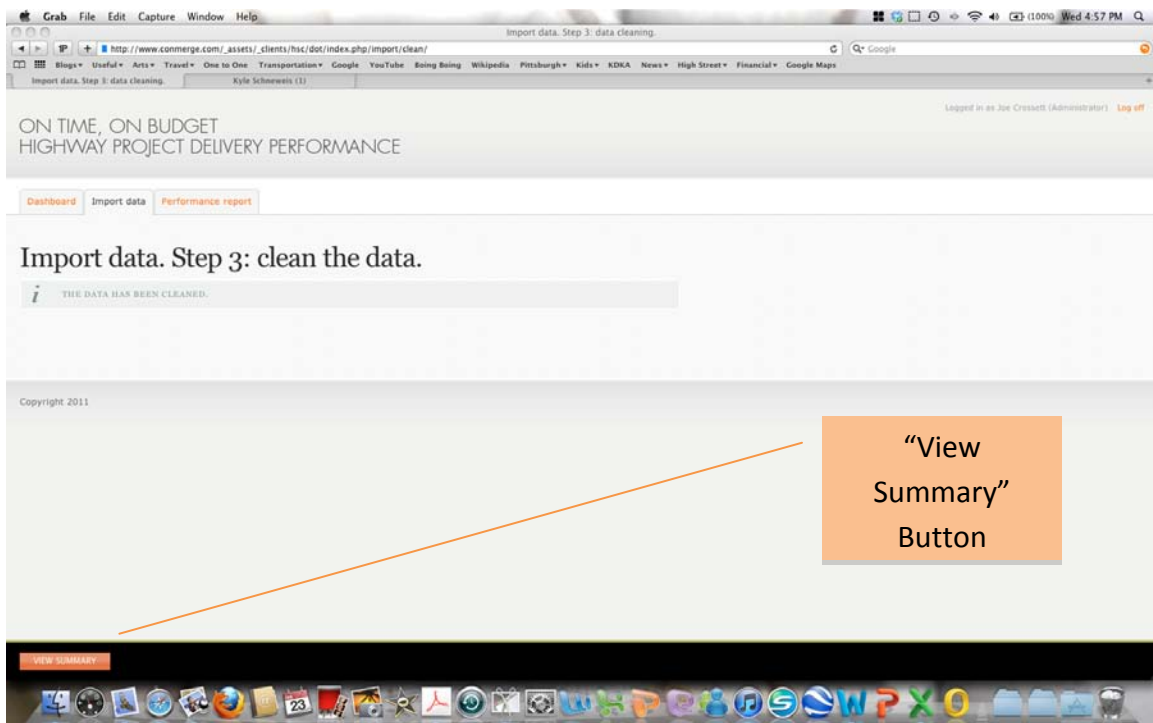
I: If data mapping is successful, display will show a message stating “The data has been mapped.” User must click on “Continue to Step 3” button to begin data cleaning



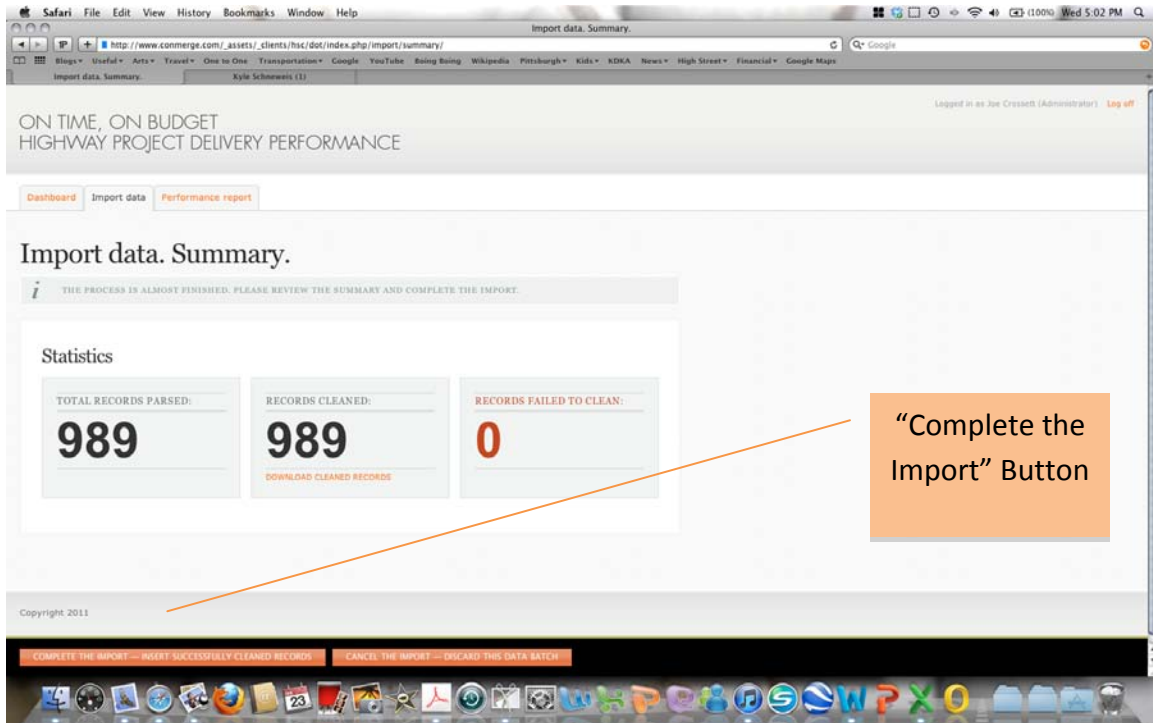
J: Display will show a message stating “The data is ready for cleaning.” User must click on “Start Data Cleaning” button.



K: If operation is successful, display will show a message stating “The data has been cleaned.” User must click on “View Summary” button to finish upload.



L: User must click on “Complete the Import” button to finish upload.



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

No. 066-15-002

Project Specifications and Instructions
for Submitting a Proposal to Furnish

Statewide NDOT Operational Audit

Due: March 17, 2015



Rudy Malfabon, P.E., Director
Department of Transportation

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SECTION I - INSTRUCTIONS TO PROPOSER

The enclosed Request for Proposal (RFP) is being advertised for use in submitting information that will be used to select a firm with whom the Nevada Department of Transportation (DEPARTMENT) hopes to negotiate an agreement for the described services.

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statement of Qualifications (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

The proposer shall submit one (1) CD containing one (1) typewritten, legible proposal as instructed above as well as in Section X (B), contained within one (1) Portable Document Format (PDF) file. The proposer shall also submit one (1) Cost Proposal in a separate envelope included with their proposal package. In addition, the DEPARTMENT is testing new functionality with the DEPARTMENT's electronic portal/website, located at www.nevadadot.com/Doing_Business/Vendors/Vendor_Portal_Login.aspx. Proposers are encouraged also submit the proposal electronically through the portal to assist with our testing, however, this is NOT required.

If the proposer chooses to submit proposals electronically through the above link, Vendor registration is required. If you are not a registered vendor with the DEPARTMENT, please register online using the [vendor registration](#) form and follow the instructions. After submitting the online application, you will receive an email with your registration number. Once you receive the registration number, you will be able to submit your proposal electronically.

Proposals must be received **NO LATER THAN 3:00 P.M. PST, on Tuesday March 17, 2015**, and the proposal package containing the CDs must be addressed **exactly** as follows:

Agreement Services
Nevada Department of Transportation
Attn: RFP 498-14-002
1263 South Stewart Street, Room 101A
Carson City, NV 89712

Proposals received after the specified deadline or submitted to the wrong location **will not** be considered and will be disposed of in an appropriate manner suitable to the DEPARTMENT.

Proposals and Statements of Qualification will first be reviewed to determine if minimum qualification requirements are met. Any proposals submitted that do not meet the minimum qualification requirements, as outlined below, will be disposed of in an appropriate manner, at the sole discretion of the DEPARTMENT, and without further review.

Qualification Requirements:

- The firm must be well versed with at least three (3) years' experience performing similar audits.
- The firm must have knowledge and demonstrated experience in evaluating internal controls, policies and procedures, construction contracts, procurement processes, facility and shop operations.

Any proposal received prior to the date and time specified above for receipt of proposals may be withdrawn or modified; electronically submitted proposals can be modified through the Vendor Portal Login webpage, while proposals submitted on CDs can be modified through a written request from the proposer. To be considered, however, a written request to withdraw the proposal or the modified proposal must be received before the time and date specified above for receipt of proposals. Oral interviews may be conducted for each firm that submits a written proposal. The DEPARTMENT has the sole discretion as to whether it will or will not conduct oral interviews. In the event that the DEPARTMENT elects to conduct oral interviews, each proposer in the competitive range will be advised of the format for such interview, and will be provided with a schedule for such interview. Competitive range refers to a list of the most highly rated proposals based on the initial ranking of the proposals; it is based on the initial rating of each proposal measured against all evaluation criteria set forth in this RFP.

Confidential Information, Trade Secrets, and/or Proprietary Information must be uploaded into the Confidential/Proprietary folder provided on the Vendor Proposal webpage if submitted electronically, or sealed in a separate package with each page clearly marked "Confidential" if submitted on CD. The failure to separate and mark this information as per NRS 333.020 and 333.333 shall constitute a complete waiver of any and all claims for damages caused by release of the information by the DEPARTMENT. If the DEPARTMENT reviews the confidential information and determines that the information is not considered confidential pursuant to NRS Chapter 333, the DEPARTMENT will contact the proposer. The proposer must advise the DEPARTMENT as to whether it either accepts the DEPARTMENT's determination that the information is not confidential, or withdraws the information. The proposer will not be allowed to alter the proposal after the date and time set for receipt of proposals shown above. Notwithstanding the provisions in NRS Chapter 333, the DEPARTMENT retains its immunity pursuant to the provisions of NRS 239.012 for any "good faith" release of information, and the immunities from liability provided to it pursuant to NRS Chapter 41.

Issuance of this RFP shall in no way constitute a commitment by the DEPARTMENT to execute an agreement. The DEPARTMENT reserves the right to reject any or all proposals received in response to this RFP, or to cancel this RFP if it is deemed in the best interest of the DEPARTMENT to do so.

The DEPARTMENT reserves the right to issue supplemental notices to this RFP prior to the closing date. If a firm chooses to download this procurement from the www.nevadadot.com website, it is the firm's responsibility to check for any supplemental notices to this procurement from the www.nevadadot.com website.

The DEPARTMENT assumes no financial responsibility in connection with the proposers' costs incurred in the preparation and submission of the proposal packets, or by attending the oral interviews, if such interviews are conducted by the DEPARTMENT in its sole discretion.

Proposers should provide a minimum of three (3) references from similar projects performed for the state and/or large local government clients within the last three (3) years. Proposers are required to submit a Reference Questionnaire to the business references listed within the proposal. The business

references must submit the Reference Questionnaire directly to the DEPARTMENT's Agreement Services Section. It is the proposer's responsibility to ensure the completed forms are received by the DEPARTMENT on or before the proposal submission deadline for inclusion in the evaluation process. The DEPARTMENT may contact any or all business references for validation of information submitted. With this RFP, the proposer is furnished a copy of an Agreement sample (see Attachment F - Agreement Sample). To maintain consistency between the DEPARTMENT and its SERVICE PROVIDERS, only those portions of the Agreement sample which are open for negotiation shall be blank.

A pre-negotiation audit may be required by the DEPARTMENT's Internal Audit Division. All DEPARTMENT audits will be conducted in accordance with the AASHTO Uniform Audit and Accounting Guide 2012, which can be found at www.transportation.org. The Specific Rates of Compensation method of compensation shall be used for the proposer's services, as set forth in 48 CFR Chapter 1.

The following rules of contact shall apply during this procurement for the project:

A. After release of the RFP and through the Notice of Intent to the Notice of Award of the agreement, the proposers shall **ONLY** correspond with the DEPARTMENT regarding this RFP through the DEPARTMENT's designated representative as per NAC 333.155. The designated representative's contact information is:

Agreement Services
Nevada Department of Transportation
1263 South Stewart Street, Room 101A
Carson City, Nevada 89712
Phone: 775-888-7070, Option 1
Fax: 775-888-7101
agreeservices@dot.state.nv.us

B. The proposers shall not contact the DEPARTMENT's employees, including department heads, members of the review committee and/or any official who will participate in the decision to award the agreement regarding the project, except through the process identified above;

C. Any communications determined to be improper may result in disqualification, at the sole discretion of the DEPARTMENT;

D. Any official information regarding the RFP will be disseminated by the DEPARTMENT. Specific information necessary for the preparation of proposals will be disclosed to all proposers;

E. The DEPARTMENT will not be responsible for any oral exchange or any other information or exchange that occurs outside the official process specified herein.

SECTION II - PROPOSER QUESTIONS

The DEPARTMENT will respond to questions regarding the RFP, including requests for clarification and requests to correct errors, submitted in writing by proposers. Only **written** requests as described above will be considered. No oral requests will be considered. No requests for additional information or clarification to any other DEPARTMENT office, consultant, employee or the FHWA will be considered.

Any questions raised by proposers must be submitted in writing to Agreement Services, 1263 South Stewart Street, Room 101A, Carson City, Nevada, 89712, faxed to (775) 888-7101, submitted electronically on the Open Procurements section of www.nevadadot.com, or emailed to agreeservices@dot.state.nv.us and **received by 3:00 P.M. PST, on February 20, 2015**. Written responses will be distributed by the DEPARTMENT on or before **February 26, 2015**.

SECTION III - RFP SCHEDULE

Task	Date
Advertised	02/04/2015, 02/11/2015, and 02/18/2015
Proposers' Questions Due	02/20/2015
DEPARTMENT's Response to Proposers' Questions Distributed	02/26/2015
Proposal Due	03/17/2015

SECTION IV - DBE REQUIREMENTS

There are no Disadvantaged Business Enterprise (DBE) requirements for the project.

SECTION V - NEVADA BUSINESS LICENSE REQUIREMENT

The selected firm, prior to doing business in the State of Nevada, must be appropriately licensed by the Office of the Secretary of State pursuant to NRS 76.100. Information regarding the Nevada State Business License can be located at www.nvsos.gov.

Firms must provide the following:

A. Nevada State Business License Number, and

B. Business Entity's Legal Name (affirm that it is the same name under which the proposer is doing business)

Additionally, if the firm is a corporation, LLC, LP, LLP, or LLLP, or non-profit corporation based out of state, it must be registered as a foreign business entity equivalent in Nevada, in active status, and in good standing with the Nevada Secretary of State.

Each proposer shall clearly state, at the time of proposal, its willingness to adhere to this requirement by providing a copy of its Nevada State Business License, a copy of its application from the Secretary of State Office, or a print out of the entity status, which can be obtained from the Nevada Business Search found on the homepage of the Nevada Secretary of State's website at www.nvsos.gov.

Award of any RFP is contingent on a proposer having and holding an active and valid Nevada State Business License. The successful proposer must satisfy this requirement within five (5) business days of issuance of the Notice of Intent. If a proposer is unable or unwilling to adhere to this requirement, the DEPARTMENT will deem the proposer to be non-responsive, and the DEPARTMENT shall proceed to negotiate with the next most qualified firm, and so on, until an agreement, that is acceptable to the DEPARTMENT, is negotiated.

To apply for a Nevada State Business License or to file appropriate formation documents with the Nevada Secretary of State's office, please visit www.nvsos.gov. Business licenses can be obtained immediately by applying on-line; however, paper applications may take several weeks to process.

SECTION VI - SELECTION PROCESS

Selection will be based on the factors listed in the Evaluation Criteria Items section (see Section X (A)), which will be used by a Review Committee to evaluate the proposals. If the committee elects, in its sole discretion, to conduct oral interviews, each proposer in the competitive range shall be notified of the interview schedule, and will be required to confirm their willingness to attend the oral interview. Failure of a proposer to appear at the oral interview, if the committee elects to conduct such interviews, will be considered non-responsive, and that proposer will be eliminated from any further consideration. The committee tasked with ranking the proposals will be comprised of DEPARTMENT staff and other

members representing local entities, who shall remain anonymous to protect the integrity of the procurement process.

The committee may use the information submitted in the proposer's proposal package, the information referencing this RFP, and the information presented at the interview, if applicable, to arrive at the final ranking. The proposals will be ranked and an agreement shall be negotiated following the selection of a firm. If an acceptable agreement cannot be reached with the highest ranked firm, the DEPARTMENT shall proceed to negotiate with the next highest ranked firm, and so on, until an acceptable agreement is negotiated, or the DEPARTMENT, in its sole discretion, elects to terminate the solicitation.

SECTION VII - BACKGROUND

The DEPARTMENT's Director's Office has the need for a firm with the ability to perform financial and operational audits, and other related audit work of various operational areas within the DEPARTMENT.

SECTION VIII - SCOPE OF SERVICES

The Scope of Services consists of operational audits of various areas of the DEPARTMENT to identify opportunities for improving internal controls and to evaluate effectiveness and efficiency. The objectives of each audit include an initial assessment and a detailed assessment. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks.

The objectives of said audits are:

1. PROCUREMENT CARDS

- a. Initial assessment
 - i. Review current policies and procedures related to Procurement Cards;
 - ii. Review segregation of duties;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed;
 - ii. Determine if the proper accounting records and other documentation is available to support charges;
 - iii. Determine if the segregation of duties is adequate;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improvements to the policies and procedures and internal controls.

2. PURCHASING SUPPLIES AND EQUIPMENT

- a. Initial assessment
 - i. Review current policies and procedures related to Purchasing Supplies and Equipment;
 - ii. Review established policies and procedures for purchasing non-rental equipment;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed by HQ Divisions, and Districts;
 - ii. Determine if the appropriate controls are being followed consistently in the stockrooms located statewide for supplies and equipment;
 - iii. Determine if the established policies and procedures for purchasing vehicles (light fleet) and heavy equipment estimated to cost over \$50,000.00 are being followed (proper justification, approvals, procurement and reporting);
 - iv. Determine if the proper accounting records and other documentation is available to support charges;
 - v. Report on exceptions;

- vi. Recommend opportunities for improvements to the policies and procedures and internal controls

3. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Review established policies and procedures for coding productive labor and overhead activities appropriately on time sheets;
 - iii. Recommend opportunities for improvements to the policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the equipment mechanics are coding productive labor and overhead activities appropriately on time sheets;
 - ii. Determine if activities that should be coded as overhead are appropriately identified by equipment mechanics on time sheets;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improvements to the policies and procedures and internal controls.

4. OVERTIME

- a. Initial assessment
 - i. Review current policies and procedures related to Overtime;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if overtime is pre-approved per adopted policies and procedures (HQ Divisions, and Districts statewide);
 - ii. Determine if maintenance call-out procedures have been adopted in each District and are being followed for emergency maintenance activities;
 - iii. Determine if furlough restrictions on overtime are being followed;
 - iv. Report on exceptions;
 - v. Recommend opportunities for reducing the amount of overtime accrued at the District and Division level.
 - vi. Recommend opportunities for improvements to the policies and procedures and internal controls.

5. STATE VEHICLE USAGE

- a. Initial assessment
 - i. Review current policies and procedures related to State Vehicle Usage;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if prior approvals are obtained for home storage;
 - ii. Determine if home storage is properly reported to Accounting Division;
 - iii. Determine if reported improper use of state vehicles is investigated, and appropriate corrective measures are taken, if necessary;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

6. PROPER MAINTENANCE OF DEPARTMENT FACILITIES

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance of Department Facilities;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment

- i. Determine if maintenance schedules are kept for various building control systems (for example, HVAC) for each DEPARTMENT facility;
 - ii. Determine if facility maintenance is managed at each DEPARTMENT facility;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
7. COST EFFECTIVENESS OF EQUIPMENT REBUILD PROGRAM – For the last six years, the DEPARTMENT Equipment Division has rebuilt drive trains for selected heavy fleet such as trucks, loaders, and paint strippers. Some rebuild work is contracted out and some is performed in-house. The equipment mechanics working on the rebuild program are less available for day-to-day equipment maintenance functions. The DEPARTMENT has also had major maintenance on agency aircraft, such as new engines. The DEPARTMENT would like to assess the cost effectiveness of the major equipment rebuild program in the equipment division and the major maintenance program of agency aircraft and determine if it is an efficient use of DEPARTMENT resources.
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. Investigate and determine the cost effectiveness of the equipment rebuild program and major maintenance on agency aircraft;
 - ii. Recommend improvements to increase cost effectiveness or;
 - iii. Recommend other alternatives that would be more cost effective than the current program;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.
8. PROPER MANAGEMENT AND ADMINISTRATION OF MAINTENANCE CONTRACTS – The DEPARTMENT contracts out various maintenance services. This can be outsourced work normally performed by maintenance forces (street sweeping, contracted surface treatments on pavements, janitorial services, facilities maintenance) and unique work that the DEPARTMENT does not have resources to perform (certain facilities maintenance activities, maintenance of elevators and escalators at pedestrian bridges). The DEPARTMENT would like to assess if the managers of maintenance contracts have the proper skills and training to monitor performance by contracted service providers and training for proper administration. For example, does a DEPARTMENT maintenance contractor manager receive training on proper review of invoices for work performed? How is performance monitored on maintenance contracts?
- a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. For outsourced maintenance contracts, determine who administers the contracts and assess whether the administration of contracts is delegated to the appropriate level;
 - ii. Assess whether the administrators of maintenance contracts receive appropriate training;
 - iii. In general, make recommendations to improve the effectiveness of administering and monitoring maintenance contracts;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls
9. INTERLOCAL AGREEMENTS – An agreement between public agencies to obtain a service from a public agency is known as an Interlocal Agreement. The DEPARTMENT also can enter into a Cooperative Agreement, which is an agreement between two or more public agencies for the

joint exercise of powers, privileges and authority. Authority is granted under NRS 277.045 and 277.180. An example of an Interlocal agreement is the DEPARTMENT distributing federal funds to a metropolitan planning organization (MPO) for their use on programs and projects.

- a. Initial assessment
 - i. Review current policies and procedures related to Interlocal Agreements;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - ii. Review amendments to Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - iii. Review the reported Interlocal Agreements and amendments for compliance with the reporting matrix approved by the Board of Transportation (as appropriate for the execution date of the agreement/amendment; the reporting matrix has been amended periodically);
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

10. PROFESSIONAL SERVICES CONTRACTS – The DEPARTMENT uses professional services contracts when it has insufficient resources to perform the work in-house, when it does not have in-house expertise, or to meet delivery schedule requirements in a timely manner. The DEPARTMENT would like to assess and improve how its technical Divisions determine when to outsource professional services. The following technical Divisions which use professional services contracts shall be considered under this item: Project Management; Roadway Design; Structures; Hydraulics; Landscape & Aesthetics; Right-of-Way; Environmental; Maintenance & Asset Management; Architectural; Traffic Operations; Construction; Materials; Roadway Systems; Multimodal Planning; Program Development; Safety; Locations. This task shall be limited to a review of state fiscal years 2011-2014.

- a. Initial assessment
 - i. Review current policies and procedures related to Professional Services Contracts;
 - ii. Interview the technical divisions listed above to assess how they determine the need to outsource professional services;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review sample scopes of work to determine if all or a portion of work should be considered to be eliminated from outsourcing in the future;
 - ii. Review amendments to professional services contracts to assess if they were anticipated in the original agreement or unanticipated. (For instance, that the original agreement allowed for the addition of future phases of work that was substantially more effort than the original scope of work, as with preliminary engineering proceeding after environmental clearance on design projects);
 - iii. Make recommendations to improve how the assessment to determine the need to outsource professional services is conducted;
 - iv. Make recommendations on reducing the number and cost of amendments to professional services contracts;
 - v. Make recommendations regarding where current staff may be better utilized before hiring outside professional services.

11. CONSTRUCTION CONTRACT CHANGE ORDERS – Construction contracts can be revised by change order. The contracts closed out in state fiscal years 2011 – 2014 shall be reviewed.

- a. Initial assessment

- i. Review current policies and procedures related to Construction Contract Change Orders;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Work with the Construction Division, and confirm the percentage of cost overruns/underruns due to change orders;
 - ii. Review the cause of change orders (design error; unforeseen conditions; added scope; etc.) and report on the distribution of change orders;
 - iii. Identify areas that commonly resulted in change orders that could be avoided through improved design review and other measures;
 - iv. Make recommendations on reducing the number of Construction Contract Change Orders.

12. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review the productivity of the Equipment Division and District equipment shops;
 - ii. Review equipment maintenance and repair that is outsourced and make recommendations on whether the work should continue to be outsourced or performed in-house;
 - iii. Review equipment maintenance and repair that is performed in-house and make recommendations on whether the work should continue to be performed in-house or outsourced;
 - iv. Report on observed discrepancies of productivity statistics between the equipment shops;
 - v. Make recommendations on how to improve the overall productivity of equipment shops.

SECTION IX - PROJECT SCHEDULE

It is anticipated that the project schedule will be twelve (12) to fifteen (15) months from the execution date of the agreement.

SECTION X - PROPOSAL CONTENT

A section of the proposal shall be devoted to each Evaluation Criteria Item. The proposal must be signed by the individual(s) legally authorized to bind the firm as per NRS 333.337.

A. EVALUATION CRITERIA ITEMS

1. Project Approach:

- a. Describe your firm's understanding of project requirements contained in the Scope of Services.
- b. Identify specific methods to be used to complete each project requirement.
- c. Identify potential complications or difficulties that might be encountered in the implementation of required services along with suggested resolutions for each.

2. Project Team:

- a. Provide a summary of the education including CPE Hours & Course Listing, and experience of each member of the Project Team who will be assigned to this project, including resumes for the project manager and the key principals.

- b. Include a current organizational chart of the project team, including sub-consultant(s) with responsibilities of team members identified therein.
- c. Identify the location(s) where actual work will be completed.
- d. Provide a percentage of work to be completed at each location.
- e. Identify the location of the office which will provide primary project control for this project.

3. Past Performance:

- a. Describe your firm's competence in the services to be provided contained in the Scope of Services.
- b. Provide the details of the audits completed, including Attestation Engagements, in accordance with Generally Accepted Government Auditing Standards in the past three (3) years.
- c. Provide information that your firm is free from personal, external, and organizational impairments to independence and avoid the appearance of such impairments to independence for the project contained in the Scope of Services.
- d. Provide a copy of the most recent Peer Review Report of the firm and Letter of Comments, if any.

4. Availability and Capacity:

- a. Provide a listing of your firm's technical equipment which will support this effort.
- b. Provide a matrix or chart which lists all current projects of the Project Team, the number of hours remaining for completion of each project and the estimated completion date for each project.
- c. In view of this data, describe your firm's ability to meet time lines established for this project.
- d. Identify the availability of Project Team to attend meetings and interact with DEPARTMENT staff on short notice.

5. Proximity of Project Team:

- a. Describe your firm's location in the geographical area.
- b. Describe your knowledge of the locality of the project.

6. Cost: Submitted in a separate sealed envelope.

Proposals shall be submitted in two (2) distinct parts - the **Technical Proposal** and the **Cost Proposal**. The Technical Proposal **must not** include any cost information. Electronic Cost Proposal submissions must be uploaded in the Cost Proposal file. While Technical Proposals submitted on CD and the hardcopy Cost Proposal may be shipped together in the same shipping container, the Technical Proposals and the Cost Proposal must be placed in separate envelopes within the shipping container and clearly marked with the proposer's name and the RFP number; each respective envelope must be marked "Technical Proposal" or "Cost Proposal," as appropriate.

B. PROPOSAL LIMITATIONS

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statements of Qualification (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

C. DISCLOSURE OF CURRENT AND FORMER STATE EMPLOYEES

Proposals from firms employing current employees or former employees of the State of Nevada will be considered pursuant to the requirements and limitations set forth in the NRS Chapter 333.705, and the State Administrative Manual, Sections 322 and 323.

If the apparent top-ranked firm proposes any current state employees or former state employees who left state service within the preceding two (2) years, the DEPARTMENT must request approval from the State Board of Examiners (BOE) prior to entering into an agreement with such firm. The proposer shall submit, as part of their proposal, the "Authorization Current Employee, Authorization Former Employee Form" to assist the DEPARTMENT in requesting approval from the BOE.

The forms are located at http://purchasing.state.nv.us/contracting/current_and_former.htm. In the event of a denial by the BOE, the proposer will be allowed one (1) opportunity to replace the disapproved employee with another employee who possesses substantially equivalent capabilities. The DEPARTMENT has the authority to approve or deny the equivalent employee.

SECTION XI - AWARD PROCESS

The DEPARTMENT shall issue its Notice of Intent in accordance with NAC §333.170. Any award is contingent upon the successful negotiation of final contract terms and upon approval of the Transportation Board, when required. Negotiations shall be confidential and not subject to disclosure to competing firms. The terms agreed to by the parties shall be confidential until an agreement is executed. If contract negotiations cannot be concluded successfully, the DEPARTMENT, at its sole discretion and upon written notice to all firms, may negotiate a contract with the next highest ranking firm or withdraw the RFP and cancel this procurement.

The DEPARTMENT shall issue a Notice of Award in accordance with NAC §333.170, at which time proposals are no longer confidential and can be requested by the public from the DEPARTMENT via a Public Records Request, which can be located at: www.nevadadot.com/Contact_Us/Public_Records_Requests.aspx.

SECTION XII - TERMS, CONDITIONS AND EXCEPTIONS

This procurement is being conducted in accordance with NRS Chapters 333 and 408 and NAC Chapter 333.

The DEPARTMENT reserves the right to alter, amend, or modify any provisions of this RFP, or to withdraw this RFP, at any time prior to the award of a contract pursuant hereto, if, in the sole discretion of the DEPARTMENT, it is in the best interest of the state to do so.

The DEPARTMENT reserves the right to waive informalities and minor irregularities in proposals received.

The DEPARTMENT reserves the right to reject any or all proposals received prior to contract award (NRS §333.350).

The DEPARTMENT shall not be obligated to accept the lowest priced proposal, but will make an award in the best interests of the State of Nevada after all factors have been evaluated (NRS §333.335).

Any irregularities or lack of clarity in the RFP must be brought to Agreement Service's attention as soon as possible, so that corrective addenda may be furnished to all proposers.

Alterations, modifications or variations to a proposal may not be considered unless authorized by the RFP, or by an addendum or an amendment to the RFP.

Proposals which appear unrealistic in the terms of technical commitments, lack of technical competence, or are indicative of failure to comprehend the complexity and risk of this contract, may be rejected.

All materials submitted in accordance with the prescribed deadline become the property of the DEPARTMENT and will not be returned. The DEPARTMENT's selection or rejection of a proposal does not affect this right. The master copy of each proposal shall be retained for official files and will become public record after execution of a contract. Only specific parts of the proposal may be labeled a "trade secret," provided that the proposer agrees to defend and indemnify the DEPARTMENT for honoring such a designation (NRS §333.333); unsuccessful proposals containing "trade secrets" will be returned pursuant to NRS 293.010. The failure to so label any information shall constitute a complete waiver of any and all claims for damages caused by any release of such information by the DEPARTMENT. The DEPARTMENT shall not be liable for disclosure or release of information when authorized or required by law to do so pursuant to NRS 239.012.

A proposal submitted in response to this RFP must identify any sub-consultants, and outline the contractual relationship between the awarded proposer and each such sub-consultant. An official of each proposed sub-consultant must sign, and include as part of the proposal submitted in response to this RFP, a statement to the effect that the sub-consultant has read this RFP, and agrees to abide by the awarded proposer's obligations. A sub-consultant's compliance with these requirements does not create a contractual relationship between the sub-consultant and the DEPARTMENT.

The awarded proposer will be the sole point of contract responsibility. The DEPARTMENT will look solely to the awarded proposer for the performance of all contractual obligations, which may result from an award based on this RFP, and the awarded proposer shall not be relieved for the non-performance of any or all of its sub-consultants.

The awarded proposer must maintain, for the duration of its contract, insurance coverage as set forth in the agreement executed in response to this RFP. Work on the contract shall not begin until after the awarded proposer has submitted to the DEPARTMENT acceptable evidence of the required insurance coverage. Failure to maintain any required insurance coverage or alternative method of insurance acceptable to the DEPARTMENT in its sole discretion will be deemed a breach of contract.

Each proposer must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict must be disclosed. By submitting a proposal in response to this RFP, proposers affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a proposer's proposal. An award will not be made where a conflict of interest exists. The DEPARTMENT, in its sole discretion, will determine whether a conflict of interest exists and whether it may reflect negatively on the DEPARTMENT's selection of a proposer. The DEPARTMENT reserves the right in its sole discretion to impose additional requirements upon the proposer to mitigate

such conflict of interest or to disqualify any proposer on the grounds of an actual or an apparent conflict of interest.

The DEPARTMENT will not be liable for Federal, State, or Local excise taxes.

The DEPARTMENT reserves the right to negotiate final contract terms with any proposer selected in accordance with NAC §333.170. The contract between the parties will consist of the final executed contract, the RFP with any modifications thereto, and the awarded proposer's proposal with any modifications and clarifications thereto that are incorporated at the request of the DEPARTMENT during the evaluation and negotiation process. In the event of any conflict or contradiction between or among these documents, the documents shall control in the following order of precedence: the final executed contract, addenda to the RFP, the RFP, any modifications and clarifications to the awarded proposer's proposal, and the awarded proposer's proposal. Specific exceptions to this general rule may be noted in the final executed contract.

The proposer understands and acknowledges that the representations above are material and important, and will be relied on by the DEPARTMENT in its evaluation of a proposal. Any misrepresentation by a proposer shall be treated as fraudulent concealment from the DEPARTMENT of the true facts relating to the proposal.

No announcement concerning the award of a contract as a result of this RFP can be made without the prior written approval of the DEPARTMENT.

The Nevada Attorney General will not render any type of legal opinion regarding this transaction.

SECTION XIII - PROTEST PROCEDURE

Protests may be filed only with respect to:

1. Allegations that the terms of the RFP are wholly ambiguous, are contrary to legal requirements applicable to the procurement, or exceed the DEPARTMENT's authority, and/or
2. A determination as to whether a proposal is responsive to the requirements of the RFP, or failed any Pass/Fail criteria, as applicable, and/or
3. The award of an Agreement.

A. DEADLINES FOR PROTESTS

Protests concerning the issues described in Section XIII (1) and contained in the RFP must be filed no later than ten (10) calendar days prior to the proposal due date, and those contained in any amendment to the RFP must be filed no later than three (3) business days after the DEPARTMENT distributes the related addenda.

Protests concerning the issues described in Section XIII (2) must be filed within ten (10) calendar days after the DEPARTMENT issues to the proposer a notice regarding the failure of any pass/fail criteria, or a notice regarding the non-responsiveness of the proposal.

Protests concerning the issue described in Section XIII (3) must be filed within ten (10) calendar days after the DEPARTMENT issues the Notice of Award.

The DEPARTMENT will not accept any protests received after the above-stated deadlines for receipt of such protests.

B. PROTEST CONTENTS

Protests shall include information about the protesting firm, including the firm's name, mailing address, and phone number, as well as the name of the individual responsible for the submission of the protest. Protests shall completely and succinctly state the grounds for the protest, its legal authority, and its factual basis; protests shall include all factual and legal documentation in sufficient detail to establish the merits of the protest. Statements shall be sworn and submitted under penalty of perjury.

C. FILING OF PROTEST

Protests shall be in writing, and filed by hand delivery on or before the applicable deadline to:

Nevada Department of Transportation
ATTN: Administrative Services/Dispute Resolution Office
1263 South Stewart Street, Room 101A
Carson City, NV 89712

The proposer filing the protest shall concurrently submit a copy of the protest to the other proposers; the other proposers' addresses may be obtained from the DEPARTMENT.

D. COMMENTS FROM OTHER PROPOSERS

Other proposers may file statements in support of or in opposition to the protest within seven (7) calendar days of the filing of the protest. The DEPARTMENT shall promptly forward copies of all such statements to the protester. Any statements shall be sworn and submitted under penalty of perjury.

E. BURDEN OF PROOF

The protester shall have the burden of proving the basis of its protest. The DEPARTMENT may, in its sole discretion, discuss the protest with the protester and other proposers. No hearing will be held on the protest. The protest shall be decided on the basis of written submissions.

F. DECISION ON PROTEST

The DEPARTMENT's Director or designee shall issue a written decision regarding the protest within thirty (30) calendar days after the filing of the detailed statement of protest. If it is necessary to address the issues raised in a protest, the DEPARTMENT may, in its sole discretion, make appropriate revisions to the RFP by issuing addenda.

G. PROTESTER'S PAYMENT OF COSTS

If a protest is denied, the proposer filing the protest shall be liable for the DEPARTMENT's costs reasonably incurred to defend against or resolve the protest, including attorney's fees, consultant fees and costs, and any reasonably unavoidable damages sustained by the DEPARTMENT as a consequence of the protest.

H. RIGHTS AND OBLIGATIONS OF PROPOSERS

Each proposer, by submitting its proposal, expressly recognizes the limitation on its rights to protest provided in this Section XIII and expressly waives all other rights and remedies, and agrees that the decision on the protest is final and conclusive. If a proposer disregards, disputes, or does not follow the exclusive protest remedies provided in this section, it shall indemnify and hold harmless the DEPARTMENT and its officers, employees, agents, and consultants from and against all liabilities, fees and costs, including legal and consultant fees and costs, and damages incurred or suffered as a result

of such proposer's actions. **Each proposer, by submitting a proposal, shall be deemed to have irrevocably and unconditionally agreed to this indemnity obligation.**

No Stay Pending Final Determination: Agreement negotiations with the selected proposer shall not be stayed during the pendency of any protest. Any agreement with the selected proposer shall be made contingent upon the outcome of any pending protest.

ATTACHMENTS

- Attachment A - Statement of Qualification
- Attachment B - Reference Questionnaire
- Attachment C - Cost Proposal
- Attachment D - Checklist
- Attachment E - Title VI Compliance Questionnaire
- Attachment F - Agreement Sample

Attachment A
Statement of Qualification

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Statement_of_Qualification_Form.pdf

The Statement of Qualification Form must be completed in full, and submitted as part of the proposal package per Request for Proposal instructions.

1. Date prepared: _____
2. Firm's name: _____
3. Firm's address: _____
Phone: _____ FAX: _____
4. Is your local office the main office? _____ or branch office? _____ or sole office? _____
5. Year your firm was established: _____
6. Year your local office was established: _____
7. Location of:
 - a. Main office: _____
 - b. Local office: _____
 - c. Invoice remit-to office: _____
8. Year former firm(s) were established:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
9. Name, title, telephone number, address and e-mail address of one principal in firm who may be contacted:

10. List locations of other offices (no more than five):

	<u>Address</u>	<u>Telephone</u>	<u>No. of Personnel</u>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____

11. Total employees presently employed:
- a. At your local Northern Nevada office: _____
 At your local Southern Nevada office: _____
- b. Total in your firm: _____
12. By category, give the number of projects your firm is working on / has worked:
- | | <u>Current/Active</u> | <u>Last Five (5) Years</u> |
|------------------------|-----------------------|----------------------------|
| a. Public/Governmental | _____ | _____ |
| b. Commercial | _____ | _____ |
| c. Residential | _____ | _____ |
| d. Other | _____ | _____ |
13. Nevada Department of Transportation encourages the participation and utilization of minority and women-owned businesses.
- a. Is your firm certified as a minority-owned, women-owned or disabled veteran-owned business?
 Yes ___ No ___ Specify _____
- b. If yes, by what governmental agency? _____
14. Specialty: _____ (i.e.: Project Management, etc.)

The DEPARTMENT periodically engages consultants to perform work of a specialized nature including (but not limited to) such areas as DBE Supportive Services, Claims Review, etc.

I. Briefly describe your specialty as it applies to this Project's discipline, and the scope of the services that your firm provides.

II. Select three recent projects that have applicability to this Project, and list a reference that the DEPARTMENT may contact for each.

PROJECT NAME	REFERENCE	TELEPHONE
		()
		()
		()



**Attachment B
Reference Questionnaire
State of Nevada
Department of Transportation**

RFP No. 066-15-002 REFERENCE QUESTIONNAIRE
FOR:

_____ (Name of company requesting reference)

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Reference_Questionnaire_070-028_Jan2014.pdf

This form is being submitted to your company for completion as a business reference for the company listed above. Please return this form to the Nevada Department of Transportation (NDOT) via email to agreeservices@dot.state.nv.us, or fax to (775) 888-7101 no later than **March 17, 2015, at 3:00pm**. Do not remit this document to the company requesting the reference.

The information contained in this questionnaire will be confidential and will not be accessible to the referenced company. For questions or concerns regarding this form, please contact the Agreement Services Division by phone (775) 888-7070 or email agreeservices@dot.state.nv.us and refer to the RFP number.

CONFIDENTIAL INFORMATION

Company providing reference: _____
 Contact name and title/position: _____
 Contact telephone number: _____
 Contact email address: _____

Questions:

1. In what capacity have you worked with this company in the past? Please explain the company's responsibilities.
 COMMENTS:

2. How would you rate this company's knowledge and expertise?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

3. How would you rate the company's flexibility relative to changes in the project scope and timelines?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

4. What was your level of satisfaction with hard-copy materials/products developed by the company?
_____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

5. Was the work done by this company completed on time and within budget?
COMMENTS on Time:

COMMENTS on Budget:

6. Who were the company's principal representatives involved in your project and how would you rate them individually? Please comment on the skills, knowledge, behaviors or other factors on which you base your rating.
(3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

Name: _____ Rating: _____

COMMENTS:

7. With which aspect(s) of this company were you:
Most satisfied with
COMMENTS:

Least satisfied with
COMMENTS:

8. Would you recommend this company's service to your organization again?
COMMENTS:

**Attachment C
Cost Proposal**

RFP No.: 066-15-002 Statewide NDOT Operational Audit

INSTRUCTIONS: The Cost Proposal shall be itemized by task, and then added up for the Total Proposed Cost. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks. Each task is described in Section VIII - Scope of Services.

The DEPARTMENT has established an initial budget for the Statewide NDOT Operational Audit of \$650,000.00.

Task	Cost Per Task
1a. Procurement Cards-Initial assessment	
1b. Procurement Cards-Detailed assessment	
2a. Purchasing Supplies And Equipment-Initial assessment	
2b. Purchasing Supplies And Equipment-Detailed assessment	
3a. Maintenance And Equipment Shops-Initial assessment	
3b. Maintenance And Equipment Shops-Detailed assessment	
4a. Overtime-Initial assessment	
4b. Overtime-Detailed assessment	
5a. State Vehicle Usage-Initial assessment	
5b. State Vehicle Usage-Detailed assessment	
6a. Proper Maintenance of Department Facilities-Initial assessment	
6b. Proper Maintenance of Department Facilities-Detailed assessment	
7a. Cost Effectiveness of Equipment Rebuild Program-Initial assessment	
7b. Cost Effectiveness of Equipment Rebuild Program-Detailed assessment	
8a. Proper Management and Administration of Maintenance Contracts-Initial assessment	
8b. Proper Management and Administration of Maintenance Contracts-Detailed assessment	
9a. Interlocal Agreements-Initial assessment	
9b. Interlocal Agreements-Detailed assessment	
10a. Professional Services Contracts-Initial assessment	
10b. Professional Services Contracts-Detailed assessment	

11a. Construction Contract Change Orders-Initial assessment	
11b. Construction Contract Change Orders- Detailed assessment	
12a. Maintenance and Equipment Shops-Initial assessment	
12b. Maintenance and Equipment Shops-Detailed assessment	
Total Proposed Cost:	

Name

Signature

Firm Name

Attachment D Checklist

This checklist is provided for the proposer's convenience only, and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite items in the number and form set forth in the proposal instructions, may in the sole discretion of the DEPARTMENT, be deemed non-responsive and not considered for contract award.

1. Number of Pages within Page Range (see Section X (B))
2. Sections match Evaluation Criteria Items (see Section X (A))
3. Technical Proposal
4. Cost Proposal in a separate sealed envelope
5. Statement of Qualification (see Section X (B))
6. Nevada State Business License (see Section V)

Attachment E
Title VI Compliance Questionnaire

Title VI is a statute provision of the Civil Rights Act of 1964:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 U.S.C. Sec 2000d)

The following information will be used by the Nevada Department of Transportation (DEPARTMENT) and the Federal Highway Administration (FHWA) for statistical purposes only. This information will be stored confidentially, and will not affect any decisions made by the DEPARTMENT.

Your participation is voluntary, but would be greatly appreciated.

Choose one ethnic group with which the principal owner(s) most identify:

- Black** (Not of Hispanic origin: All persons having origins in any of the Black racial groups.)
- Asian/Pacific Islander** (All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.)
- Hispanic** (All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)
- Native American** (All persons having origins in any of the original peoples of North America and who maintain cultural identification through a tribal affiliation or community recognition.)
- White** (Not of Hispanic origin: All persons having origins in any of the original peoples of Europe, North Africa, or Middle East.)
- Other** (All persons not matching one of the other choices.)

Sex: Male Female

- I understand my participation is voluntary and decline to provide the requested information

Firm Name: _____

Owner Name (Print): _____

Owner Name (Sign): _____

Date: _____

Attachment F
Agreement Sample
SERVICE AGREEMENT

This Agreement, made and entered into the _____ day of _____, _____ by and between the STATE OF NEVADA, acting by and through its DEPARTMENT OF TRANSPORTATION (hereinafter "DEPARTMENT") and **NAME AND ADDRESS** (hereinafter "SERVICE PROVIDER"). Individually they are each a "Party" and collectively they are the "Parties."

WITNESSETH:

WHEREAS, the Director of the DEPARTMENT may, pursuant to Nevada Revised Statutes (hereinafter "NRS") Chapter 333 & Chapter 408, contract for technical services that may be required; and

WHEREAS, NRS Chapter 333 authorizes heads of state departments to contract for the services of independent contractors; and

WHEREAS, **PROJECT IDENTIFICATION**, is necessary for **PROJECT EXPLANATION** (hereinafter "PROJECT"); and

WHEREAS, SERVICE PROVIDER's services will be of great benefit to the DEPARTMENT and to the people of the State of Nevada.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is agreed by and between the Parties as follows:

ARTICLE I - SCOPE OF SERVICES

1. The SERVICE PROVIDER agrees to **SUMMARIZE PROJECT DESCRIPTION OR INSERT:** perform services listed in Attachment A - Scope of Services attached hereto and incorporated herein.
2. The SERVICE PROVIDER agrees to furnish all labor, materials, services, equipment, tools and other expenses necessary to perform the professional services required under the terms of this Agreement, except as specifically provided otherwise herein.
3. The SERVICE PROVIDER agrees to comply with all requirements contained in the underlying Request for Proposal which is incorporated into this Agreement by reference. **ONLY USE PARAGRAPH IF APPLICABLE**

ARTICLE II - PERFORMANCE

1. The term of this Agreement shall be from the date first written above through and including **DATE**, unless a change extending the term is further agreed to by written amendment signed by all parties to this Agreement and approved by appropriate official action of the governing body of the DEPARTMENT prior to such term expiration date.

OR

1. The term of this Agreement shall be from the date first written above through and including **DATE**, thereby terminating **NUMBER (#)** years from the above date or upon completion of the case, including any appeal, whichever comes first. **ONLY USE PARAGRAPH FOR EXPERT WITNESS OR LEGAL**

2. In the event that the SERVICE PROVIDER performs or causes to be performed any work after: (a) the Agreement's expiration date as set forth within this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date; or (b) termination of this Agreement prior to the expiration date set forth within this Agreement; then the DEPARTMENT shall make no payment for work performed following the expiration or termination dates, and the SERVICE PROVIDER shall forfeit any and all right to payment for such work.

3. The SERVICE PROVIDER, on behalf of itself, its spouses, heirs, executors, administrators, successors, subrogees, servants, insurers, attorneys, independent representatives, personal representatives, agents, and assigns, does hereby waive, release, and forever discharge the State of Nevada, the DEPARTMENT, and each and every of their departments, divisions, agencies, officers, directors, agents, contractors, and

employees, from any and all claims, demands, liens, liability, actions, causes of action, and suits for damages, at law and in equity, in any way connected with or arising from the SERVICE PROVIDER's provision of services and work performed following termination of this Agreement, and/or following the expiration date of this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date.

4. Neither the State of Nevada, the DEPARTMENT, nor any of their departments, divisions, agencies, officers, directors, agents, contractors, and employees, shall have authority to extend this Agreement beyond the expiration date set forth within this Agreement, unless such extension is set forth within a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date. The SERVICE PROVIDER shall not rely upon any oral or written representations expressed extrinsic to a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date, purporting to alter or amend this Agreement, including but not limited representations relating to the extension of the Agreement's expiration date.

5. Paragraphs 1 through 4 of this Article II - Performance, shall survive the termination and expiration of this Agreement.

6. The SERVICE PROVIDER shall not proceed with said work until a copy of this Agreement is fully executed, signed by all individuals on the signatory lines below (hereinafter the "Final Execution Date"), and the Agreement is received by the SERVICE PROVIDER, which shall then constitute the written "Notice to Proceed" from the DEPARTMENT. The SERVICE PROVIDER shall notify the DEPARTMENT in writing of the exact date of commencement. If the SERVICE PROVIDER does commence said work prior to receiving said "Notice to Proceed" or prior to the Final Execution Date, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Final Execution Date and/or Notice to Proceed. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

OR

6. The SERVICE PROVIDER shall not proceed with work until the SERVICE PROVIDER receives a written "Notice to Proceed" from the DEPARTMENT. If the SERVICE PROVIDER does commence said work prior to receiving said Notice to Proceed, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Notice to Proceed and/or Final Execution Date. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR PARTIALLY OR FULLY FEDERALLY FUNDED PROJECTS**

7. The SERVICE PROVIDER agrees to complete the PROJECT within **NUMBER (#)** calendar **OR** working days of the commencement day of the PROJECT and agrees to pay to the DEPARTMENT, the sum of **NUMBER** and **#/100 Dollars (\$#)** for each and every calendar day past said date when the delay is caused by negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's direct control. These damages are not intended as a penalty. Damages are difficult to ascertain and the Parties agree that this amount is a reasonable estimate of presumed actual damages. **ONLY USE PARAGRAPH IF APPLICABLE**

8. In the event the DEPARTMENT discovers a SERVICE PROVIDER's error or omission before its discovery by the SERVICE PROVIDER, the DEPARTMENT shall not unreasonably delay in notifying SERVICE PROVIDER of such error or omission. DEPARTMENT's notice to SERVICE PROVIDER shall specify the maximum time period SERVICE PROVIDER will be allowed for correction. The SERVICE PROVIDER shall make all necessary corrections resulting from its errors and omissions, and shall without delay make any corrections necessitated by the negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's control, and shall make such corrections without additional compensation. SERVICE PROVIDER shall track all related costs for the correction. Acceptance of the professional services by the DEPARTMENT will not relieve the

SERVICE PROVIDER of the responsibility for any subsequent correction of any such errors and omissions, and the clarification of any ambiguities. The SERVICE PROVIDER will be responsible for additional costs in subsequent related construction resulting from its errors or omissions. Should the DEPARTMENT use its own personnel, supplies or equipment to remedy the deficiency, all such costs incurred by the DEPARTMENT shall be deducted from the sum due or which may become due to the SERVICE PROVIDER. In the event all such costs and charges incurred by the DEPARTMENT exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall reimburse the DEPARTMENT the amount of said excess.

9. The SERVICE PROVIDER shall assign one individual throughout the life of this Agreement who shall have overall PROJECT responsibility unless illness or termination requires replacement. **IF APPLICABLE ADD:** This individual shall be registered in accordance with NRS Chapter 625, Professional Engineers and Land Surveyors. This individual shall ensure that each sheet of the final submittal, including the title sheet, is stamped (electronic or wet stamp acceptable), signed and dated (original signature and date required) in accordance with NRS Chapter 625 and Nevada Administrative Code, Chapter 625.

10. A key person is defined as any individual identified by the SERVICE PROVIDER in its proposal as being part of the team to be assigned to the PROJECT. The SERVICE PROVIDER acknowledges and agrees, that the award of this Agreement was based, in part, on its ability to manage the PROJECT, and the qualifications, experience, and capacity of the SERVICE PROVIDER's aforementioned key persons and team. The SERVICE PROVIDER represents, warrants and covenants that such key persons are and will continue to be available to undertake and perform all services identified herein and fulfill the roles identified in its proposal. The SERVICE PROVIDER shall notify the DEPARTMENT in writing within ten (10) calendar days when a key person leaves the PROJECT team. **ONLY USE PARAGRAPH IF APPLICABLE**

a. If a key person leaves the PROJECT team, the SERVICE PROVIDER shall promptly propose a replacement within thirty (30) calendar days to and for the DEPARTMENT's review and written consent.

b. The DEPARTMENT shall have the unilateral right to terminate this Agreement:

(1) If a key person leaves the PROJECT team for a reason other than death, retirement, incapacitation or leaving SERVICE PROVIDER's employment (including the employment with SERVICE PROVIDER's affiliates, subsidiaries and parent companies/organizations);

(2) If a key person listed by the SERVICE PROVIDER in its proposal to perform or supervise various aspects of design is changed or leaves the PROJECT team; or

(3) If the DEPARTMENT does not accept the SERVICE PROVIDER's proposed key person replacement.

c. If this Agreement is terminated pursuant to the above, the SERVICE PROVIDER shall be paid for actual costs incurred for all services rendered and accepted by the DEPARTMENT and an amount of fee proportional to the work completed as of the date of termination. Additionally, the SERVICE PROVIDER shall not be entitled to any settlement costs, if any. Such termination will not occur if the SERVICE PROVIDER provides a replacement that is acceptable to the DEPARTMENT within thirty (30) calendar days of the date when the key person is changed or has left the PROJECT team.

11. The SERVICE PROVIDER shall at all times maintain control over and have complete responsibility for all services performed pursuant to this Agreement by the SERVICE PROVIDER and any of its subcontractors.

12. The SERVICE PROVIDER warrants that all deliverables and professional services produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry. The standard of care applicable to SERVICE PROVIDER's services will be of the degree of skill and diligence normally employed by professional engineers **OR** SERVICE PROVIDERS performing the same or similar services at the time said services are performed.

13. This Agreement, and any amendments, may be suspended temporarily, either wholly or in part, by the DEPARTMENT upon oral notice confirmed in writing within ten (10) calendar days, when the DEPARTMENT determines that conditions beyond the control of the SERVICE PROVIDER are unfavorable to its satisfactory continuation of work. Should such conditions be encountered, the time for completion may be extended in an amount determined by the DEPARTMENT to be equivalent to the delay. Requests for suspension of time by the SERVICE PROVIDER must have the written approval of the DEPARTMENT. No allowance shall be made for delay or suspension of the services solely due to the fault of the SERVICE PROVIDER.

14. An alteration ordered by the DEPARTMENT which substantially changes the services provided for by the expressed intent of this Agreement will be considered extra professional services and shall be specified in a written amendment signed by all Parties, which will set forth the nature and scope thereof. The method of payment for extra professional services shall be specified at the time the amendment is written.

15. The SERVICE PROVIDER shall not assign or subcontract, any of the professional services performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER will, subsequent to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the contract or agreement for professional services. The SERVICE PROVIDER shall require any subcontractor to comply with all provisions of 48 CFR Chapter 1, Part 31, in its agreement with the subcontractor, if the SERVICE PROVIDER subcontracts any professional services contemplated by this Agreement. The SERVICE PROVIDER will be responsible for any costs or deficiencies resulting from noncompliance if the subcontractors fail to comply with 48 CFR Chapter 1, Part 31.

16. The SERVICE PROVIDER agrees to complete and sign Attachment B - "AFFIDAVIT REQUIRED UNDER SECTION 112(c) of Title 23 United States Code, Act of August 27, 1958 and Part 29 of Title 49, Code of Federal Regulations, November 17, 1987," Attachment C - "CERTIFICATION REQUIRED BY SECTION 1352 of TITLE 31, UNITED STATES CODE, RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS," and "INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES," attached hereto and incorporated herein. **ONLY USE PARAGRAPH IF PROJECT IS FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

17. The SERVICE PROVIDER acknowledges that the DEPARTMENT has established a Disadvantaged Business Enterprise (DBE) participation requirement of **NUMBER** percent (#%) of the total dollar value of the Agreement costs. A DBE must be a small business concern as defined by the U.S. Small Business Act, 15 U.S.C. § 632 or by 49 CFR Subtitle A, Part 26. **ONLY USE PARAGRAPH IF APPLICABLE**

18. Failure by the Service Provider to fulfill the DBE Agreement requirements and to demonstrate good faith efforts, either in the Service Provider's proposal or during the performance period, constitutes a breach of this Agreement. In event of such a breach, the DEPARTMENT may:

(a) Withhold progress payments or a portion thereof;

(b) Deduct, as damages, an amount equal to the unmet portion of the DBE commitment not achieved. This amount will be determined by multiplying the percentage of DBE participation proposed by the total cost set forth in the agreement and then multiplying the actual percentage of DBE participation used during the agreement by the total cost set forth in the agreement. In the event the actual percentage of DBE participation is less than the proposed percentage of DBE participation, the difference in these two figures shall be the amount of damages due to the DEPARTMENT;

(c) Remove the SERVICE PROVIDER from the prequalified list for repeated violations, falsifications, or misrepresentations; and/or

(d) Terminate the Agreement.

19. This Agreement shall not become effective until and unless approved by the State Board of Examiners. **ONLY USE PARAGRAPH IF APPLICABLE**

20. This Agreement is contingent upon the verification that the SERVICE PROVIDER has a valid and active Nevada Business License and is in good standing in all areas of the Secretary of State's business requirements. If the SERVICE PROVIDER is an out of state provider, the SERVICE PROVIDER must be registered as a foreign business entity equivalent in Nevada, in active status and in good standing.

ARTICLE III - TERMINATION

1. The DEPARTMENT may terminate this Agreement without cause **NUMBER** (#) calendar **OR** working days after service of a termination letter to the SERVICE PROVIDER. In the event this Agreement is terminated in this manner, the SERVICE PROVIDER shall be paid for the cost of the professional services which have been completed and accepted by the DEPARTMENT up to the date of termination.

2. The continuation of this Agreement beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Nevada State Legislature and/or federal sources. The DEPARTMENT may terminate this Agreement, and the SERVICE PROVIDER waives any and all claims for damages, effective immediately upon receipt of written notice, or any date specified therein, if for any reason the DEPARTMENT's funding from state and/or federal sources is not appropriated or is withdrawn, limited or impaired.

3. A default or breach may be declared with or without termination. This Agreement may be terminated by either Party upon written notice of default or breach to the other Party as follows:

a. If the SERVICE PROVIDER fails to provide or satisfactorily perform any of the professional services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or

b. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law or regulation to be held by the SERVICE PROVIDER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed or not renewed; or

c. If the SERVICE PROVIDER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of a bankruptcy court; or

d. If DEPARTMENT materially breaches any material duty under this Agreement and any such breach impairs the SERVICE PROVIDER's ability to perform; or

e. If it is found by the DEPARTMENT that any quid pro quo or gratuities in the form of money, services, entertainment, gifts or otherwise were offered or given by the SERVICE PROVIDER, or any agent or representative of the SERVICE PROVIDER, to any officer or employee of the State of Nevada with a view toward securing an agreement or securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performing of such agreement.

4. Termination upon a declared default or breach may be exercised after service of written notice and the subsequent failure of the defaulting Party, within fifteen (15) calendar days of service of that notice, to provide evidence, satisfactory to the aggrieved Party, showing the declared default or breach has been corrected. Such correspondence shall be deemed to have been served on the date of postmark.

5. In the event of the SERVICE PROVIDER's breach of this Agreement, all costs and charges incurred by the DEPARTMENT, together with the cost of completing the work under this Agreement, shall be deducted from any money due or which may become due to said SERVICE PROVIDER. If expenses exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall be liable and shall pay to the DEPARTMENT the amount of said excess.

6. This Agreement shall be terminated when the professional services contemplated and covered by this Agreement have been completely performed by the SERVICE PROVIDER, and all items of professional services have been approved and accepted by the DEPARTMENT.

ARTICLE IV - COST

1. The "specific rates of compensation" method of compensation shall be used for the SERVICE PROVIDER's services.

2. The total cost of the services by the SERVICE PROVIDER shall not exceed the sum of **NUMBER** and **#/100 Dollars (\$#)**, which includes the fixed fee.

3. The rate will be reimbursed at **NUMBER** and **#/100 Dollars (\$#)** per **DESCRIPTION** and shall include direct salary costs, indirect costs, other direct costs and fixed fee. **IF APPLICABLE, INCLUDE SCHEDULE AS AN ATTACHMENT**

4. The DEPARTMENT will pay the SERVICE PROVIDER in monthly installments based upon progress and final payment reports submitted by the SERVICE PROVIDER and as approved by the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

5. The SERVICE PROVIDER is required to submit a monthly progress report in the DEPARTMENT's format showing the status of the professional services and the degree of completion thereof.

6. The SERVICE PROVIDER agrees to complete and sign Attachment D - Service Provider Cost Certification of Final Indirect Costs, attached hereto and incorporated herein. **ONLY USE FOR PROJECTS PARTIALLY OR FULLY FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

IF APPLICABLE, INSERT THE FOLLOWING THREE PARAGRAPHS AT THE END OF THE METHOD OF COMPENSATION CHOSEN AND RENUMBER THEM ACCORDINGLY, EXCEPT WHEN THE LUMP SUM METHOD OF PAYMENT IS USED, IN WHICH CASE THEY ARE NOT TO BE INSERTED.

X. Travel costs will be reimbursed at the current rates allotted to state employees. Travel costs will be reimbursed based on actual costs limited by Federal Travel Regulations (FTR) and the CONUS rate for Nevada. The FTR breaks down meals and incidental expenses at its website: www.gsa.gov/mie. The first and last travel days are calculated at seventy-five percent (75%). The lodging rate excludes taxes and fees. Taxes and fees are reimbursable. See this website for lodging in Nevada: <http://www.gsa.gov/portal/category/100120>. The SERVICE PROVIDER shall provide lodging receipts.

X. The SERVICE PROVIDER shall be reimbursed for the use of company vehicles as agreed upon with the Project Manager. Cost shall include a direct expense that includes anticipated mileage, insurance, maintenance and a lease fee, if applicable.

X. When requested by the DEPARTMENT, the SERVICE PROVIDER shall schedule its own airline and rental car reservations by the most economical means for reimbursement. Original receipts for airfare and rental cars must be submitted with the "Claim for Travel Expense." The DEPARTMENT is not responsible for payment of any premium, deductible or assessments on insurance policies purchased by the SERVICE PROVIDER for a rental vehicle.

ARTICLE V - SCHEDULE OF PAYMENTS

1. The SERVICE PROVIDER shall submit a signed invoice monthly **OR** bi-weekly **OR** quarterly **OR** semi-annually **OR** yearly **OR** upon completion for all services rendered along with one copy of substantiating documentation. The invoice must be submitted on the SERVICE PROVIDER's stationery using the DEPARTMENT's format or submitted on the DEPARTMENT's standard invoice form. The DEPARTMENT will utilize its normal accounting procedure in the payment of the invoices submitted. **IF APPLICABLE ADD:** The Fixed Fee shall be paid monthly and shall be calculated as a percentage of the direct salary plus overhead costs of that month's invoice until the full agreed fee is paid.

2. Payment will be made for one hundred percent (100%) of the amount of each invoice, until a maximum of ninety percent (90%) of the total Agreement costs have been billed by the SERVICE PROVIDER. Thereafter, payment for the remaining ten percent (10%) of the total Agreement costs shall be withheld by the DEPARTMENT, until such time as the professional services delivered by the SERVICE PROVIDER have been completely accepted by the DEPARTMENT. The final audit shall be performed after the release of the retained amount, and may cause an adjustment of payments to the DEPARTMENT or to the SERVICE PROVIDER. No interest shall be paid to the SERVICE PROVIDER on this retained amount or any adjustment of payments. **ONLY USE PARAGRAPH IF APPLICABLE**

3. The DEPARTMENT reserves the right to inspect and approve the professional services performed before payment is made to the SERVICE PROVIDER. Payment will be withheld for deliverables and professional services the DEPARTMENT determines to be unsatisfactory in that they have not been provided in a workmanlike manner consistent with standards in the trade, profession or industry. Payment shall remain unpaid until the professional services are completed in accordance with the standards and work requirements defined in this Agreement. In such an event, the DEPARTMENT will provide the SERVICE PROVIDER with a written explanation as to why payment has been withheld.

4. The total cost of services for this Agreement, is the negotiated amount identified in Article IV, Paragraph 2. This amount was based upon the SERVICE PROVIDER's costs and fixed fee as well as the costs and fixed fees, if any, of all of its subcontractors. If a subcontractor does not expend all funds allocated to it for services identified in its agreement with the SERVICE PROVIDER, a copy of which shall be provided to the DEPARTMENT prior to issuance of the Notice to Proceed, the SERVICE PROVIDER shall not redistribute or expend such funds without the prior written approval of the DEPARTMENT. Failure to notify the DEPARTMENT prior to the use of such funds will constitute grounds for denial of reimbursement for such expenditures.

5. Payment of invoices, interest penalties, and discounts shall be paid as follows:

a. The SERVICE PROVIDER shall be paid within sixty (60) calendar days of a postmarked invoice which is complete, correct, and undisputed by the DEPARTMENT.

b. The DEPARTMENT shall have twenty (20) calendar days after postmark of an invoice to dispute any or all of the charges on that invoice. The undisputed amount shall be paid to the SERVICE PROVIDER within sixty (60) calendar days of the date of postmark. The disputed amount shall be negotiated and resolved in good faith by both Parties and paid within forty (40) calendar days after the date the corrected invoice is received by the DEPARTMENT or is approved by both Parties for payment.

c. If the DEPARTMENT fails to pay the SERVICE PROVIDER the undisputed amount within sixty (60) calendar days after the postmark date of the invoice, the interest penalty assessed to the DEPARTMENT shall be one percent (1%) of the undisputed amount per month, not to exceed a total of One Thousand and No/100 Dollars (\$1,000.00).

d. Payment of penalties shall not apply to the final payment or bill pertaining to this Agreement as determined by the post audit.

6. The prevailing party in an action to enforce this Agreement is entitled to reasonable attorney's fees and costs.

ARTICLE VI - MISCELLANEOUS PROVISIONS

1. The SERVICE PROVIDER shall be responsible for and shall comply with all applicable federal, state, and local government obligations and DEPARTMENT policies and procedures. The SERVICE PROVIDER will be responsible for and shall pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are SERVICE PROVIDER's responsibility in accordance with NRS Chapter 361. The SERVICE PROVIDER warrants that it has a valid business license. The SERVICE PROVIDER agrees to be responsible for and shall pay any such government obligations not paid by its subcontractors during performance of this Agreement. The DEPARTMENT may set-off any consideration due against any delinquent government obligation.

2. It is expressly understood that the SERVICE PROVIDER is an independent contractor, and is subject to all statutes and laws, including NRS 333.700 relating to independent contractors. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the DEPARTMENT whatsoever with respect to the indebtedness, liabilities, and obligations of the SERVICE PROVIDER or any other party. Neither the SERVICE PROVIDER nor its employees, agents or representatives shall be considered employees, agents or representatives of the DEPARTMENT.

3. The SERVICE PROVIDER shall be solely responsible for its own employees, and the DEPARTMENT shall have no obligation with respect to:

- a. Withholding of income taxes, FICA or any other taxes or fees;
- b. Industrial insurance coverage;
- c. Participation in any group insurance plans available to employees of the DEPARTMENT;
- d. Participation or contributions by either the SERVICE PROVIDER or the DEPARTMENT to the Public Employees Retirement System;
- e. Accumulation of vacation leave or sick leave; or
- f. Unemployment compensation coverage provided by the DEPARTMENT.

4. The SERVICE PROVIDER shall indemnify and hold the DEPARTMENT harmless from, and defend the DEPARTMENT against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes, fees, insurance, contributions, leave or coverage.

5. Unless expressly provided in this Agreement, the SERVICE PROVIDER shall not engage or use the devices and/or services of the DEPARTMENT's personnel without the prior written consent of the DEPARTMENT.

6. The SERVICE PROVIDER shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT proof of worker's compensation insurance as required by the NRS.

OR

6. The SERVICE PROVIDER, as a sole proprietor who does not use the services of his employees, if any, shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT Attachment E - "Worker's Compensation Insurance Affidavit." **ONLY USE PARAGRAPH IF APPLICABLE; RE-LETTER ATTACHMENTS IF NECESSARY**

7. The SERVICE PROVIDER shall furnish a Certificate of Errors and Omissions Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00). **INCREASE FROM \$1,000,000.00 UP TO \$3,000,000.00 DEPENDING UPON THE SIZE OF THE PROJECT**

8. The SERVICE PROVIDER shall furnish a Certificate, Declarations Page and an Endorsement designating the DEPARTMENT as an additional insured evidencing Commercial General Liability Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00) per occurrence. These policies shall be maintained for the entire period of this Agreement. The policies shall include a 30-day advance written notice of any cancellation of said policies. The SERVICE PROVIDER shall furnish the DEPARTMENT with certificates of such insurance prior to commencement of professional services.

9. All insurance required by this Agreement shall be placed with insurers with a rating from the current issue of Best's Key Rating Guide of no less than A-: VII.

10. The DEPARTMENT has the option of requesting, at any time, a meeting with the SERVICE PROVIDER or its authorized representative to discuss and review PROJECT status and the SERVICE PROVIDER shall furnish thereafter a copy of the minutes of such meetings to the DEPARTMENT.

11. The SERVICE PROVIDER has total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement, and shall check all such material accordingly for completeness, missing items, correct multipliers and consistency. The deliverables shall be reviewed by the DEPARTMENT for conformity with the DEPARTMENT's procedures and contract terms. The SERVICE PROVIDER acknowledges that review by the DEPARTMENT does not include detailed review or checking of major components and related details or the accuracy of such deliverables, and the DEPARTMENT's review shall not relieve the SERVICE PROVIDER of its total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement.

12. The SERVICE PROVIDER shall appear as an expert witness on behalf of the DEPARTMENT in any subsequent court action which involves any of the services required by this Agreement. Compensation for services rendered in this regard will be paid at a rate to be negotiated at the time such services are necessary.

13. Upon completion, termination or cancellation of the services embraced under this Agreement, all professional services inclusive of research, investigation and analysis data, reports (including files stored on mobile media), computations, tabulations, original drawings and design files (including CAD information stored on mobile media), correspondence input from external sources (including subcontractors), etc., shall be delivered to and become the property of the DEPARTMENT, without limitation. Reuse of said materials, information or data, during performance or following termination of this Agreement, on any other project or for any other purpose except as provided for herein, shall be at the DEPARTMENT's discretion and the DEPARTMENT's sole decision. The SERVICE PROVIDER shall not utilize any materials, information or data obtained as a result of performing the services called for in this Agreement in any commercial or academic publication or presentation without the express written permission of the DEPARTMENT. The SERVICE PROVIDER shall not reference an opinion of an employee or agent of the DEPARTMENT obtained as a result of performing the services called for in this Agreement, in any publication or presentation, without the written permission of the employee or agent to whom the opinion is attributed, in addition to the permission of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

14. All design drawings must be created and delivered to the DEPARTMENT in Microstation "dgn" format. Drawing files converted to Microstation format from other formats will not be accepted by the DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

15. All roadway design engineering files must be created and delivered to the DEPARTMENT in InRoads format. Design files converted to InRoads format from other formats will not be accepted by the

DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

16. All reports and notes for special provisions shall be delivered to the DEPARTMENT via FTP or email using the most current version of Microsoft Word. **ONLY USE PARAGRAPH IF APPLICABLE**

17. The SERVICE PROVIDER agrees that any reports, materials, studies, photographs, negatives, drawings or other documents prepared by the SERVICE PROVIDER in the performance of its obligations under this Agreement shall be the exclusive property of the DEPARTMENT. The SERVICE PROVIDER shall remit all such documents to the DEPARTMENT upon completion, termination or cancellation of this Agreement or upon written request of the DEPARTMENT. The SERVICE PROVIDER shall not use, willingly allow or cause to have such documents used for any purpose other than performance of the SERVICE PROVIDER's obligation under this Agreement, without the prior written consent of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

18. The SERVICE PROVIDER and successors, executors, administrators, and assigns of the SERVICE PROVIDER's interest in the professional services or the compensation herein provided shall be bound to the DEPARTMENT to the full legal extent to which the SERVICE PROVIDER is bound with respect to each of the terms of this Agreement.

19. The SERVICE PROVIDER warrants that it has not employed or retained any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) to solicit or secure this Agreement and that the SERVICE PROVIDER has not paid or agreed to pay any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) any fee, commission, percentage, brokerage fee, or any other gifts contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the DEPARTMENT shall have the right to annul this Agreement without liability, or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

20. It is the intent of the Parties to avoid and resolve disputes at the lowest level possible. Accordingly, the DEPARTMENT and the SERVICE PROVIDER will enter into a partnering relationship, pursuant to the provisions set forth in Attachment **LETTER**. Any unresolved disputes will be referred to a nonbinding dispute resolution process pursuant to the terms outlined in Attachment **LETTER**. Nothing herein contained shall impair the Parties' right to file suit in the state district courts of the State of Nevada in the event the dispute resolution process is unsuccessful. **ONLY USE PARAGRAPH IF APPLICABLE**

OR

20. Any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement shall be decided by the DEPARTMENT. It is the intent of the DEPARTMENT to resolve disputes at the lowest level possible. Nothing herein contained shall impair either of the Parties' right to file suit in the state district courts of the State of Nevada.

21. During the performance of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Compliance with Regulations: The SERVICE PROVIDER shall comply with all of the regulations relative to nondiscrimination in federally-assisted programs of 49 CFR Part 21 as they may be amended from time to time (hereinafter "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

b. Nondiscrimination: The SERVICE PROVIDER, with regard to the professional services performed by it during the Agreement, shall not discriminate on the grounds of race, color, age, religion, sex, creed, handicap, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The SERVICE PROVIDER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5. of the Regulations, including employment practices, when the Agreement covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, Including Procurement of Materials, and Equipment: In all solicitations either by competitive bidding or negotiation made by the SERVICE PROVIDER for professional services to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the SERVICE PROVIDER of the SERVICE PROVIDER's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, age, religion, sex, creed, handicap or national origin.

d. Information and Reports: The SERVICE PROVIDER shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a SERVICE PROVIDER is in the exclusive possession of another who fails or refuses to furnish this information, the SERVICE PROVIDER shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the SERVICE PROVIDER's noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding of payments to the SERVICE PROVIDER under the Agreement until the SERVICE PROVIDER complies, and/or

2. Cancellation, termination or suspension of the Agreement, in whole or in part.

f. Agreements with subcontractors will include provisions making all subcontractor records available for audit by the DEPARTMENT or the FHWA.

g. Incorporation of Provisions: The SERVICE PROVIDER will include the provisions of Paragraphs (a) through (f) above in every subcontract including procurement of materials and leases of equipment, unless exempt by Regulations, order, or instructions issued pursuant thereto. The SERVICE PROVIDER will take such action with respect to any subcontract or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. In the event SERVICE PROVIDER becomes involved in, or is threatened with litigation by a subcontractor or supplier as a result of such direction, the SERVICE PROVIDER may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and the SERVICE PROVIDER may request the United States to enter into such litigation to protect the interests of the United States.

22. In the event federal funds are used for payment of all or part of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Debarment and/or Suspension: The SERVICE PROVIDER certifies that neither it nor its subcontractors, nor their principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

b. ADA: The SERVICE PROVIDER and subcontractor shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1980, as amended, and regulations adopted thereunder contained in 49 CFR, Part 27, and any relevant program-specific regulations.

c. Civil Rights: The SERVICE PROVIDER and subcontractor shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or person offered employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition, including AIDS and AIDS-related conditions.

23. Each party agrees to keep and maintain under generally accepted accounting principles full, true and complete records and documents pertaining to this Agreement and present, at any reasonable time, such information for inspection, examination, review, audit and copying at any office where such records and documentation are maintained. It is expressly understood that the duly authorized representatives of the DEPARTMENT and the FHWA shall have the right to inspect/audit the professional services and charges of the SERVICE PROVIDER whenever such representatives may deem such inspection to be desirable or necessary. Such records and documentation shall be maintained for three (3) years after final payment is made.

24. To the fullest extent permitted by law, the SERVICE PROVIDER shall defend, indemnify and hold harmless the State of Nevada, and the employees, officers and agents of the State of Nevada from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorney's fees, that are caused by the negligence, errors, omissions, reckless or intentional misconduct of the SERVICE PROVIDER or the employees or agents of the SERVICE PROVIDER in the performance of this Agreement.

25. The SERVICE PROVIDER shall use its own vehicles and the DEPARTMENT is not responsible for the payment of any premiums, deductible or assessments on any insurance policies purchased by the SERVICE PROVIDER.

26. The SERVICE PROVIDER warrants that all deliverables and work produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry.

27. The SERVICE PROVIDER is required to register as a vendor with the Nevada State Controller's office. The Registration Substitute IRS Form W-9 can be accessed at http://controller.nv.gov/VendorServices/Vendor_Services.html. The SERVICE PROVIDER will follow the Registration Instructions, complete the Registration Substitute IRS Form W-9 and submit it to the State Controller's Office.

28. The SERVICE PROVIDER agrees that, prior to any sale, transfer, business name change, change in principals or any other occurrence that alters or this Agreement in any way, the SERVICE PROVIDER shall notify the DEPARTMENT of such intent at least seven (7) calendar days prior to making said change.

29. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other Party at the address set forth below:

FOR DEPARTMENT: Rudy Malfabon, P.E., Director
Attn: **DIVISION CHIEF**
Nevada Department of Transportation
Division:
1263 South Stewart Street
Carson City, NV 89712
Phone:
Fax:
E-mail:

FOR SERVICE PROVIDER: **NAME**
FIRM
MAILING ADDRESS, CITY, STATE, ZIP CODE
PHYSICAL ADDRESS, CITY, STATE, ZIP CODE
Phone:
Fax:
E-mail:

30. This Agreement and the rights and obligations of the Parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The Parties consent to the exclusive jurisdiction of the Nevada state district courts for enforcement of this Agreement.

31. As used herein the term "SERVICE PROVIDER" shall include the plural as well as the singular, and the feminine as well as the masculine.

32. Neither Party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, or accidents, fires, explosions, earthquakes, floods, winds, failure of public transportation, or any other similar serious cause beyond the reasonable control of either Party. In such an event the intervening cause must not be through the fault of the Party asserting such an excuse, and the excused Party is obligated promptly to perform in accordance with the terms of the Agreement after the intervening cause ceases.

33. In connection with the performance of work under this Agreement, the SERVICE PROVIDER agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability, pregnancy, sexual orientation, genetic information (GINA) or gender identity or expression, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation apprenticeship. The SERVICE PROVIDER further agrees to insert this provision in all

subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

34. The SERVICE PROVIDER shall keep confidential all information, in whatever form, produced, prepared, observed or received by the SERVICE PROVIDER to the extent that such information is confidential by law or otherwise required by this Agreement.

35. Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The Parties **OR** DEPARTMENT will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

36. The SERVICE PROVIDER shall provide a minimum of fifty-one percent (51%) of the combined value of all items of work covered by this Agreement. The SERVICE PROVIDER shall not assign or subcontract any of the work performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER shall, prior to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the subcontract or subagreement for said work. Any assignment of rights or delegation of duties under this Agreement, without the prior written consent of the DEPARTMENT, shall be void.

37. The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of the Agreement and this Agreement shall be construed as if such provision did not exist. The unenforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

38. Except as otherwise provided for by law or this Agreement, the rights and remedies of the Parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, the recovery of actual damages and the prevailing party's reasonable attorney's fees and costs.

39. It is specifically agreed between the Parties executing this Agreement that it is not intended by any of the provisions of any part of this Agreement to create in the public or any member thereof a third party beneficiary status hereunder, or to authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damage, or pursuant to the terms or provisions of this Agreement.

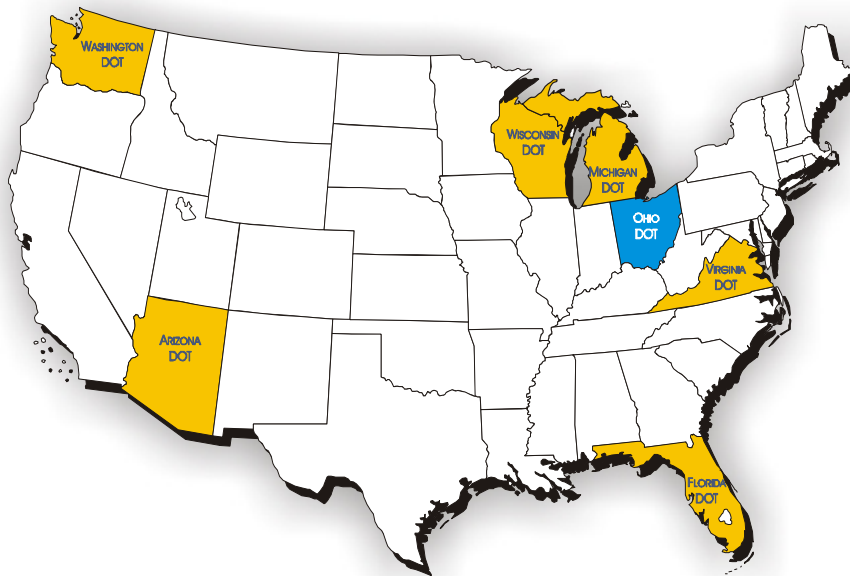
40. The Parties hereto represent and warrant that the person executing this Agreement on behalf of each Party has full power and authority to enter into this Agreement and that the Parties are authorized by law to perform the services set forth herein.

41. This Agreement constitutes the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto and the Attorney General.

FINAL REPORT



SIX-STATE SURVEY OF CONSTRUCTION ADMINISTRATION PRACTICES AND PROCEDURES



COMMISSIONED BY:

**Ohio Department of Transportation
Gordon Proctor, Director**

COMPILED BY:

***Ohio Department of Transportation and
Trauner Consulting Services, Inc.***





Dedication to DON R. CONAWAY

This report is dedicated to the loving memory of our co-worker, mentor and friend Don R. Conaway, former Deputy Director of Construction Management at ODOT. His remembered wit makes us smile, his wisdom still guides us, and his presence can be found on each page. While we are diminished by his passing, we are forever grateful that we had the good fortune to know this wonderful man and experience his many gifts. He is missed by all. We trust that this report, born from an idea long ago, helps our agency become a reflection of Don's competence and grace. He led us well.

Survey Team Members

Ohio Department of Transportation

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Assistant Director of Highway Management

Julie Brogan
Administrator of Contracts

Keith Geiger
District Construction Engineer, District 5

Gary Middleton
Roadway Services Manager, District 8

Bruce Merry
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List of Acronyms and Abbreviations Used in this Report

ADOT	Arizona Department of Transportation
ADR	Alternate Dispute Resolution
ARBA	Arizona Road Builders Association
ATI	Arizona Technical Institute
ATMS	Automated Training Management System
ATSSA	American Traffic Safety Services Association
BAM	Bid Average Method
CE	Construction Engineering and Inspection
CMS	Construction Management System
CPAM	Construction Project Administration Manual
CPM	Critical Path Method
CQC	Contractor Quality Control
CQIP	Construction Quality Improvement Program
CRS	Construction Reporting System
CTQP	Construction Training Qualification Program
D-B	Design-Build
DCE	District Construction Engineer
DFEO	District Final Estimate Office
DRB	Dispute Review Board
EBS	Electronic Bidding Software
FAST	Field Office Automation System
FDOT	Florida Department of Transportation
FOOH	Field Office Overhead
FOSSC	Field Operations Support Service Central
FTBA	Florida Transportation Builder's Association
FTE	Full-Time Equivalents
HOOH	Home Office Overhead
HTCP	Highway Technician Certification Program
I/D	Incentive/Disincentive

ITS Intelligent Transportation Systems
MDOT Michigan Department of Transportation
MOT Maintenance of Traffic
MRBA Michigan Road Builder's Association
NCHRP National Cooperative Highway Research Programs
NHI National Highway Institute
OCA Ohio Contractors Association
ODOT Ohio Department of Transportation
OSC Olympia Service Center
PE Project Engineer
PEP Partnering Evaluation Program
PS&E Plan, Specification, and Estimate
QC Quality Control Programs
QMP Quality Management Program
QPL Qualified Product List
RBC Relationship Bar Chart Schedules
RE Resident Engineer
TCP Traffic Control Plan
TCS Trauner Consulting Services, Inc.
TSCs Transportation Service Centers
VDOT Virginia Department of Transportation
VECP Value Engineering Cost Proposal
VRA Virginia Road Builder's Association
WisDOT Wisconsin Department of Transportation
WFIT Wisconsin Field Information Tracking
WSRBA Washington Road Builder's Association
WSDOT Washington State Department of Transportation
WTBA Wisconsin Transportation Builder's Association

EXECUTIVE SUMMARY

ODOT, like many DOTs across the country, has been downsized, re-engineered, and reorganized in recent years. These changes have occurred during a period when DOTs report that the traveling public has demanded an increased focus on strategies to minimize impacts to highway users during construction. The pace of technological advances in construction methods and materials has been accelerating, and DOT administrators have been charged with doing more with less.

This six-state survey seeks to determine better ways of meeting the challenges presented by this dynamic professional, political, and technological environment. The study concentrates on identifying construction contract administration practices that yield cost-effective ways of designing and building roads safer, better, and faster, with less inconvenience to road users as well as businesses and others who are affected by construction activities.

ODOT, together with FHWA, selected six states that either had similar sized programs or were known to have adopted innovative practices. After meticulously dissecting ODOT's own organization and practices, a comprehensive questionnaire was developed around seventeen aspects of construction contract administration. Administrators in the six selected states were then asked to provide written responses to the questionnaires. After the research team analyzed these responses, the team spent two-and-one-half days in each state interviewing DOT personnel to more fully understand the way they did business. The interviews were carefully designed to elicit all relevant perspectives. In addition to central office personnel, the team interviewed district and project personnel, visited representative project sites, and interviewed representatives of contractors and suppliers in each state. The result of this process is set forth in the Findings section of this report.

Finally, after exhaustive analysis and discussion, the team distilled the multitude of varying practices down to a list of Best Practices. The filters and screens used during this process included: 1) the impact that the practice has on quality, 2) the effectiveness of the practice, 3) how the cost of the practice compared to its benefit, 4) how readily the practice could be implemented, 5) was it a very common practice in the other states, and 6) was the practice truly different, or was it just a minor variation on another practice that was already in use.

The 37 practices that the team identified through this process are described in the Best Practices section of this report. Highlights of that list include:

The 37 practices that the team identified through this process are described in the Best Practices section of this report.

- Development of a core project staff with flexible skills through an expanded training curriculum that focuses on work elements of highway projects, requires certification and re-certification for certain tasks, and is tied to a career ladder.
- Requiring objective contractor evaluations by project engineers.
- Reducing required documentation through simplification of the change order process for minor changes and the use of bidding contingencies.
- Implementing a specification revision process that uses standing committees to cover functional areas, and an Executive Committee for final approval.
- Expanding ODOT's proficiency in and use of CPM schedules for managing projects and analyzing claims.
- Reducing the causes of change orders and claims through constructability reviews, greater emphasis on geotechnical design and subsurface investigations, a contractual provision dealing with the issue of home office overhead, forward pricing of changes (especially time-related changes), partnering, and publication of a claims digest.
- Revamping Maintenance of Traffic practices to enhance safety and sensitivity to the traveling public and others affected by construction.
- Transferring more responsibility for quality to contractors while establishing appropriate quality assurance measures.
- Continuing to use innovative contracting methods that are carefully designed to help meet the goal of finding more cost-effective ways of designing and building roads safer, better, and faster and with less inconvenience to road users as well as businesses and others who are affected by the construction activities.

These practices span the spectrum of implementation difficulty. Some of the practices, such as partnering, quality control/quality assurance changes, development of in-house CPM scheduling expertise, and development of a comprehensive training curriculum, will require adding

These practices span the spectrum of implementation difficulty.

skills not currently found within ODOT or making some fundamental changes in ODOT's mindset and practices. Some other practices, such as implementing a new specification revision process, constructability reviews, and innovative contracting will only require the adoption of practices found elsewhere. Still other practices, such as changes in documentation requirements, the use of contingencies, the encouragement of forward pricing of change orders, and maintenance of traffic changes are best described as minor improvements to ODOT's current practices. Finally, some practices fall into a category of requiring further study.

In summary, the report concludes that the adoption of these best practices will result in time and cost savings, improved quality and safety, and less inconvenience to road users and others affected by construction activities.

INTRODUCTION

Ohio has a very large transportation system for a state its size. According to the United States Department of Transportation, Bureau of Transportation Statistics, Ohio is the 35th largest state geographically, however, it has the 4th largest interstate network, the 10th largest overall highway network, the 5th highest volume of traffic, including truck traffic, and the 2nd largest inventory of bridges. Managing this infrastructure requires not only a dedicated and professional staff within the Department of Transportation, but also the implementation of state-of-the-art practices and procedures.

In recent years, ODOT, like many other agencies in many other states, has “downsized,” “re-engineered,” and undergone numerous other substantial staffing, procedural, and organizational changes. In addition, advances in technology, materials, construction means and methods, techniques for selling and scheduling projects, and ways of administering contracts to save time, control costs, and improve quality have all been emerging at a rapid pace. Amid such rapid-paced changes, a basic question emerged among senior managers at ODOT: How does a state Department of Transportation assure itself that it is using the best and most cost-effective contract administration practices? In July 1999, ODOT started formally contemplating this question. This soon led to many other questions:

- Is staffing “too fat” or “too thin”?
- Is ODOT allocating its human resources in the most cost effective way?
- Have management and training practices kept up with the times?
- How are states with similar annual budgets organized?
- Do states in ODOT’s geographic area manage projects differently?
- Does ODOT resolve problems in a cost-effective way?
- How do contractors feel about the way ODOT does business?
- How do contractors in other states feel about the way their state DOTs do business?
- Does ODOT’s organizational structure help do things efficiently, or does it hinder efficiency?
- Does ODOT have enough oversight to ensure quality, or does its oversight function overwhelm productivity?
- Is ODOT spending tax dollars wisely?
- How does ODOT get the answers to these questions?



Ohio is the 35th largest state geographically, however, it has the 4th largest interstate network, the 10th largest overall highway network, the 5th highest volume of traffic, including truck traffic, and the 2nd largest inventory of bridges

In recent years, ODOT, like many other agencies in many other states, has “downsized” ...



By October 1999, ODOT decided that it was going to develop a comprehensive scope of work to find answers to these questions. It elected to use the well-respected and recognized technique of benchmarking to obtain the answer to these questions. ODOT retained TCS seeking its specialized experience and background, to assist in this effort.

In this report, ODOT and TCS (The Team) not only explain the methods used to conduct this investigation, but summarize the findings as well.

In this report, ODOT and TCS (The Team) not only explain the methods used to conduct this investigation, but summarize the findings as well. The findings presented herein also set forth recommendations for contract administration procedures and practices that potentially will best serve the industry and the taxpayers of Ohio. The multi-disciplined team from TCS and ODOT worked long hours to complete this study, and strived to be open-minded, thorough, and objective.

METHODOLOGY

Selection of Six States

In an effort to identify best contract administration practices presently being used in the industry, and those most relevant to ODOT's program, ODOT identified six state departments of transportation construction programs to compare to its own. The six state DOTs identified were Arizona (ADOT), Florida (FDOT), Michigan (MDOT), Virginia (VDOT), Washington (WSDOT), and Wisconsin (WisDOT). These states were selected with the assistance of FHWA from across the entire country based upon a combination of the following diverse criteria: size of construction program, geographic size of state, number of highway miles, weather conditions, regional similarities, innovative contracting methods, partnering philosophies, recent re-organization, and variety. The following table summarizes various construction program statistics provided by the states involved in the study.

VARIOUS DEPARTMENT OF TRANSPORTATION STATISTICS FOR YEAR 2000							
	ODOT	ADOT	FDOT	MDOT	VDOT	WisDOT	WSDOT
<i>FY 2000 Budget</i>	\$2,248,055,200	\$1,577,776,900	\$4,097,915,942	\$2,829,895,700	\$3,200,000,000	\$2,058,102,000	\$3,044,325,513
<i>Lane Miles</i>	48,240	17,397	39,730	27,239		30,783	24,870
<i>Number of Bridges</i>	13,831	4,399	6,251	4,626	11,787	4,858	3,300
<i>Bridge Deck Area</i>	96,353,140	44,340,300	123,193,741	15,088,214		45,236,357	
<i>Total Employees</i>	5,900	2,315	8,854	2,509	10,000	3,928	6,142
<i>Construction Employees</i>	580	620	1,218	647		89	709
<i>Maintenance Employees</i>	3,689	918	2,574	705		250	1,344
<i>Design Employees</i>	847	724	1,300	680		95	1,434
<i>Capital</i>	\$1,476,227,163	\$1,281,803,300	\$2,204,146,674	\$1,056,700,581		\$531,891,399	\$431,200,287
<i>Maintenance</i>	\$361,614,800	\$83,033,300	\$535,996,400	\$207,529,815		\$88,590,297	\$131,939,544
<i>Administration</i>	\$125,561,200	\$39,849,500	\$123,096,173	\$30,186,141		\$119,350,831	\$119,042,720
<i>Construction Engineering</i>	\$120,439,800	\$148,049,000	\$783,624,245	\$18,552,734		\$97,946,270	\$54,018,107
<i>Projects Awarded</i>	664	196	780	776		458	
<i>Total Value of Projects</i>	\$1,093,053,337	\$476,495,037	\$1,244,769,442	\$1,106,559,785		\$605,033,803	
<i>Consultant Design</i>	49.6%	100% Urban 75% Rural	98%	70%	60%	50%	
<i>Consultant Inspection</i>	3.3%	20%	50%	25%	30%	70%	

Preparation of Questions

Following the project kick-off meeting, the survey was reorganized and expanded to seventeen categories: change orders/claims avoidance/analysis techniques, maintenance of traffic, specifications, project scheduling, inspection, testing, organization and staffing, legal requirements, documentation, partnering, innovative contracting, utilities, quality management, progress payments/finalization, safety, computerization, and construction contract administration training.

ODOT initially developed a survey outlining twelve areas of focus. These were organization, staffing, inspection, claims avoidance/analysis techniques, finalization, project scheduling requirements, legal requirements, documentation, computerization, the specifications updating process, training, and contract innovations. Following the project kick-off meeting, the survey was reorganized and expanded to seventeen categories: change orders/claims avoidance/analysis techniques, maintenance of traffic, specifications, project scheduling, inspection, testing, organization and staffing, legal requirements, documentation, partnering, innovative contracting, utilities, quality management, progress payments/finalization, safety, computerization, and construction contract administration training.

The Team ultimately organized the questions from the seventeen survey categories into matrices. The matrices were set up with the questions listed in one column, and seven columns available to the right for each of the six states and ODOT to record their answers.

Delivery of Questionnaires to the States

Gordon Proctor, ODOT's Director, sent a letter to the Directors of the six states, requesting their participation in the study. Each of the six states responded affirmatively, confirming their interest and participation in the project. Contacts were identified within each state to coordinate the visits. The Team followed up with telephone calls to schedule each visit and to elaborate on the details of the project.



Ron Williams addressing Team at the Kick-Off Meeting for the Arizona DOT visit.

Soon after scheduling the surveys, the seventeen questionnaire matrices were sent out by mail and by e-mail to each of the six states, requesting that responses be provided in advance of the Team visit. Once each state responded to the questionnaires, the matrices were updated with their responses, and the matrices were distributed to the Team members for review and analysis prior to the state visits.

ODOT's Self Analysis—Baseline

To serve as a benchmark when comparing the various programs to its own, ODOT first had to identify its own contract administration procedures. To accomplish this, the seventeen questionnaires were distributed to the appropriate personnel within ODOT's organization.

Using the completed questionnaires, TCS performed an onsite survey of ODOT's program. The agenda for the ODOT visit essentially followed the template defined in TCS's proposal. On the first day, the TCS team split up into three groups and interviewed ODOT Central Office personnel. On the second day, the TCS team visited two construction projects—an urban and a rural job--and on day three contractors, suppliers, and officials from the Ohio Contractors Association (OCA) were interviewed. After completing the visit, ODOT's answers to the seventeen questionnaires were updated, and the questionnaires finalized.

Conduct Site Visit

With the objective of the study to identify best contract administration procedures, it was imperative to obtain the in-depth perspective of personnel at all levels. The best way to achieve this was through on-site interviews with DOT and industry personnel to gain the different perspectives within each state. ODOT identified four groups to be interviewed: central office personnel, district personnel, job site personnel, and contractors. A three-step survey plan was developed to accomplish this.

With the objective of the study to identify best contract administration procedures, it was imperative to obtain the in-depth perspective of personnel at all levels.

On the first day of each state visit, the Team interviewed the central office staff using the survey questionnaires as a template for the interviews. In the evening following the central office interviews, the Team developed selected questions to be asked of the district and job site personnel the following day.

On the first day of each state visit, the Team interviewed the central office staff.

On the second day, the Team split into two groups with one traveling to an urban district and job site, and the other to a rural district and job site. During the morning of day two, interviews of district office personnel were conducted at the district offices using the questions developed the

On the second day, the Team split into two groups with one traveling to an urban district and job site, and the other to a rural district and job site.

night before. In the afternoon, the survey teams conducted interviews of the field staff at their respective job sites.

On the third day of the state visits, the survey team conducted interviews of select contractor personnel and trade association leaders.

On the third day of the state visits, the survey team conducted interviews of select contractor personnel and trade association leaders. A questionnaire, distilled from the survey, was also developed for these interviews with the emphasis on identifying contract administration procedures that each state performed well.

FINDINGS

The Team obtained a tremendous amount of information as it interfaced with the six departments of transportation and contractors associations. This information came in three basic formats: 1) written responses to the questionnaires, 2) notes taken by the Team members during the interviews that were conducted with DOT employees in their central, district, and field offices, and with contractors, and 3) manuals, reports, studies, and other documents obtained during the interviews, that were forwarded to the Team as a follow-up to the meetings.

In the pocket on the back cover of this report is a compact disc containing an electronic version of matrices for each of the state's written responses to the questionnaires. In addition, ten banker's boxes filled with manuals, reports, and other documents that were collected and reviewed by the Team as a part of the follow-up to our meetings are stored at ODOT's central office in Columbus.

This section of the report is a summary of the wide variety of practices and procedures that were encountered by the Team. The findings convey factual information and opinions or impressions derived from the interviews.

The findings are presented under four major headings, each of which contains several subheadings shown below.

<i>Basic Organization and Procedures</i>	18
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BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

General

For the purposes of this report, however, decentralization can be defined as the distribution of authority and operations to the district/regional or local authorities, with central offices serving in an oversight capacity.

All of the DOTs involved in this study, including ODOT, have not been immune to the political pressures to downsize government, and to empower districts and local authorities to control their own projects. In response, all of the states have, or are still in the process of, decentralizing and downsizing their operations. Decentralization is a relative term, and each state has pursued this in its own unique way. For the purposes of this report, however, decentralization can be defined as the distribution of authority and operations to the district/regional or local authorities, with central offices serving in an oversight capacity.



Our mission is to provide a world-class transportation system that links Ohio to a global economy while preserving the state's unique character and enhancing its quality of life.

ODOT

ODOT initiated a reengineering effort in 1995 that resulted in the elimination of six divisions and fifteen offices within the Central Office. ODOT modeled its reorganization in part after FDOT and WisDOT. ODOT's twelve district offices were also reorganized at that time with much internal consolidation. The resulting organizational structure has one district deputy director with four office administrators each responsible for one of the following areas: Planning and Programs, Production (Design), Highway Management (Construction and Maintenance), and Business and Human Resources. The intent of the reengineering effort was to decentralize ODOT operations by shifting more responsibility to the districts. Responsibilities included control over budgets, sole responsibility of plan design and review, increased contract administration, and all highway maintenance.

Decentralization has not occurred without encountering some difficulties. ODOT has monitored these, and repeatedly refined its structure in order to overcome these difficulties. This effort requires constant attention and diligent efforts by its staff.

According to ODOT, decentralization and empowerment of the districts within ODOT has yielded several benefits.

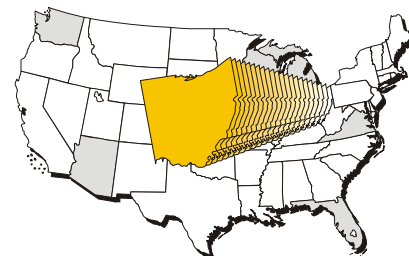
According to ODOT, decentralization and empowerment of the districts within ODOT has yielded several benefits: more innovative solutions, enhanced relationships with local governments, greater responsiveness to individual concerns, a reduction in workforce from 7,800 to 5,900, and \$400 million in actual and deferred savings since 1994 that was returned to the capital program for more construction projects. ODOT's operating expenses had been growing at nearly 6% a year from 1984 to 1994. In that eight-year period, operating expenses rose by \$150 million. Since that time ODOT has reduced its operating expenses, and held them to a 2% rate of growth.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

The Governor appoints Ohio's Director of Transportation. The Director appoints three assistant directors, each responsible for one of the following areas: 1) Finance, Facilities and Equipment Management, Human Resources, and Information Technology; 2) Planning and Production (Design); and 3) Highway Management (Construction and Maintenance).

Three central office Deputy Directors report to the Assistant Director for Highway Management. Two of these Deputy Directors support construction contract administration. These are the Deputy Director of Construction Management and the Deputy Director of Contract Administration. The Office of GeoTechnical Services, the Office of Construction Administration, and the Office of Materials Management (the Test Lab) report to the Deputy Director of Construction Management. The Office of Estimating and the Office of Contracts report to the Deputy Director of Contract Administration.



These offices move the projects through the bid letting process and provide support to the district construction personnel with policy interpretation, quality assurance reviews, training, and technical and legal advice. There are six technical specialists in the Office of Construction Administration who perform the quality assurance reviews and render technical advice and policy interpretations to the twelve districts.

Within each district, there is a District Construction Engineer (DCE) responsible for the construction program of that particular district. The DCE staffs the projects with Project Inspectors and Project Engineers.

Within each district, there is a District Construction Engineer (DCE) responsible for the construction program of that particular district.

ODOT's Project Inspectors, Series 1 and 2, and Project Supervisor series are non-engineer classifications. The Project Engineer series is officially labeled Transportation Engineer 1 through 5. Many inspectors are "1,000-hour transfers" from Maintenance. ODOT employs very few consultants for testing and inspecting on projects. However, it should be noted that consultants do not supervise construction projects.

Construction staffing levels vary from district to district with project engineers usually managing multiple projects. Each district has a number of project engineers who are responsible for several projects simultaneously.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

ODOT's District Offices also coordinate efforts with maintenance personnel in each county. These maintenance forces are managed by a County Manager who is charged with providing routine maintenance operations on interstate and state highway systems within a particular county. The county manager also participates in project scoping and is involved in the construction project. The County Manager's staff typically includes fifteen to thirty-five highway workers. Some of these highway workers (1000-hour transfers) function as inspectors during the construction season when the workload increases.



Construction projects are initiated in the districts within the Office of Planning and Programming and the Office of Production with limited coordination from the Office of Highway Management (Construction and Maintenance). Nearly 65% of the design work for ODOT's projects is accomplished with private firms. Constructability reviews are sometimes informally performed in the districts. No constructability reviews are performed after the plan package is sent to Central Office for sale.

ODOT has developed and implemented various performance measures, such as quality and timeliness of plan submittals, construction duration, construction engineering costs, a project finalization time frame, and roadway conditions (maintenance and planning areas). The performance measures are used to allocate budgets, direct personnel and equipment resources, hold managers accountable, and identify system needs (i.e., pavements, bridges, etc.). These measures are constantly under review and are subject to modification.



ADOT

ADOT's organization includes a Central Office, ten district offices that primarily perform engineering functions, and 27 construction offices within the districts that manage construction projects. Maintenance offices handle maintenance operations. The Phoenix area is the only location in the state that has a separate construction and maintenance districts.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

ADOT does not have responsibility for county or local roads. It will contribute to the upgrade or maintenance of a county or local roadway through local and federal funding when it is mutually beneficial and financially possible.

The Assistant State Engineer of Construction, who is at the same reporting level as the District Engineer, manages the Construction Office in the Central Office.

Districts are charged with initiating, selecting, and scoping projects. Both construction and design personnel are involved in the scoping process. ADOT is exploring ways to implement better communication and coordination between Central Office and the districts when the project is under review by Central Office Planning.

ADOT is developing performance measures for program delivery. Currently, ADOT has two performance measures governing construction administration. These are to remain within the 9% goal of CE cost per project, and to remain within the 5% goal for change order cost per project.

ADOT's Central Office Construction Office reviews and provides oversight of several contract administration functions performed by the districts. These include wage rate compliance, quality reviews, training, value analysis, consultant contract administration, and contractor final payment.

The determination of staffing at the project level involves consideration of ADOT's previous experience and the project's complexity, together with use of the Department's Construction Engineering Manpower Management System. This system provides a computer analysis of the Department's projects, broken down by work items performed, and assists the districts and the twenty-seven construction offices in determining who and how many construction personnel should be assigned to a particular project. Occasionally, this program has led to ADOT moving employees from one area of the state to another. It also helps ADOT identify the need for consultant assistance with inspection and project management.

Engineering Consultants Section (ECS) is dedicated to providing our stakeholders with professional administration of contracts through focus, vision, and total quality management.

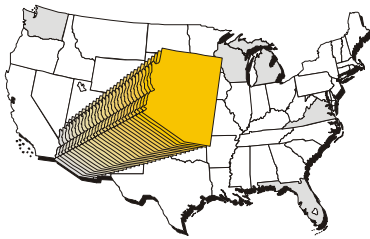
This mission requires ECS to provide equitable, efficient, and effective service, aligned with Department goals and objectives in meeting the transportation needs of the State of Arizona.

ADOT is developing performance measures for program delivery.

ADOT's Construction Engineering Manpower Management System provides a computer analysis of the Department's projects, broken down by work items performed, and assists the districts and the twenty-seven construction offices in determining who and how many construction personnel should be assigned to a particular project.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing



ADOT currently employs construction consultants to perform construction-related activities on approximately 30% of its projects. On the design side, 85% of all preliminary engineering and design work for the Department is accomplished with outside consultants. The authority to retain a construction consultant rests with the District Engineer and the State Construction Engineer. ADOT districts typically use one of three available methods for retaining consultants: 1) rent-a-technician, 2) on-call consultants (for contracts less than \$3 million), or 3) full contract administration (for contracts greater than \$3 million). These consultant contracts are cost-plus-fixed-fee and are monitored by the district staff. The contractors have not reported any significant problems in working with consultants. Many construction consultants are former ADOT employees who, like their counterparts in other states, have left state service to work in the private sector.



FDOT

FDOT's Central Office is responsible primarily for policy, quality assurance reviews, and training. FDOT was re-organized in the late 1980s and is presently being reshaped again by the Governor's mandate to reduce its staff by 25% over the next five years.

FDOT's Central Office is responsible primarily for policy, quality assurance reviews, and training.

FDOT has ten districts, and within the districts there are multiple Resident Construction Offices and Resident Maintenance Offices. The district offices have primary construction contract administration responsibilities. Specifically, the Resident Construction Offices have oversight of construction activities on state and interstate highways covering multi-county areas. Resident Maintenance Offices have maintenance and operations responsibilities also covering multi-county areas.

Throughout the design phase of a project there is considerable coordination between design and construction.

Throughout the design phase of a project there is considerable coordination between design and construction. During the early scoping and plan development process, Construction provides constructability reviews in the districts or at the Resident Engineer's offices.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

The District Construction Engineers along with the Resident Engineers make the project staffing decisions.

FDOT uses performance measures to monitor contract changes and time extensions on construction projects in order to appraise the quality of the plans and the effectiveness of its contract administration. Each district is also responsible for Quality Assurance. These performance measures are used to hold the proper parties accountable, and to take corrective action if necessary.

Currently job classifications for the district and resident engineer's construction staff are changing.

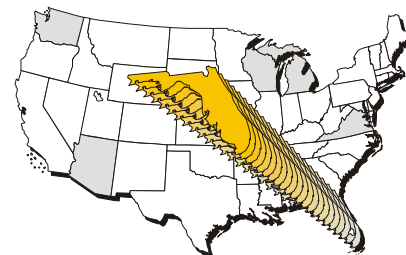


FDOT employs construction consultants on all levels on approximately 50% of its projects to augment the Resident Engineer's staff. The cost of these construction consultants totals about 80% of the project management budget. FDOT anticipates that more downsizing in the near future will cause these percentages to increase further. The districts can employ construction consultants on an as-needed basis. With the exception of minor projects, private consultants design virtually all of FDOT's roadway projects.

The Florida Transportation Builders Association (FTBA) reported that typically consultants staff projects with more personnel than does FDOT on its projects. They also indicated that at times, consultants are reluctant to make decisions, without first consulting with FDOT.

MDOT

MDOT has recently reorganized its operations, and has become smaller and more decentralized. MDOT has been given a ceiling of 2,600 full-time positions by the Governor, but only has 2,300 full-time employees at this time. The reorganization consolidated some of MDOT's regions. Region offices previously numbered nine, but there are now seven. Within the various regions, MDOT has set-up 23 Transportation Service Centers (TSCs). MDOT plans to add more TSCs throughout the state.



The Department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities.



MDOT has recently reorganized its operations, and has become smaller and more decentralized.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

Within the various regions, MDOT has set-up 23 Transportation Service Centers (TSCs).

The TSCs are sub-regional offices responsible for providing specialty expertise, and for enhancing local awareness and involvement. The specific responsibilities of a TSC include: issuing permits, designing and delivering projects to Central Office ready for bid, performing roadway maintenance, and administering construction projects. It is noted that a large portion of the roadway maintenance work is subcontracted to the counties.

The coordination between construction and design is accomplished through various meetings in which the prospective construction plans are reviewed and discussed. These so-called “errors and omissions meetings” have resulted in fewer plan errors.

Our commitment to mobility of our customers will carry us into the next century. We aggressively work with our partners in the public and private sectors to address issues of congestion management; balance growth with environmental management; and continue to develop safety features, equipment to smooth pavements that will last longer, reducing motorist inconvenience.

MDOT is currently developing general performance measures that will be implemented soon. Specific contract administration performance measures already in place include: review and evaluation for constructability and accuracy of plans and schedules; resolution of claims at the appropriate level and within established time frames; timely payments to contractors; maintaining acceptable percentages for PE and CE construction contract amounts; all project phases completed, submitted, and constructed on schedule and within budget; and performing comprehensive post-construction reviews on the major projects. These performance measures are used to spot problem areas and direct corrective action. Attention within MDOT is being focused on performance.

The Central Office’s Construction Section has fifty employees who provide technical construction expertise in several areas including concrete, bituminous, grading and drainage, and environmental. Other responsibilities of the Central Office Construction Section include construction information management, training, engineer certification, specifications, the Disadvantaged Business Enterprise program, and consultant construction engineering administration.

MDOT advertises and awards all of its projects during its first and second fiscal quarters, thereby affording the construction staff ample time to determine the staffing needs for the projects sold.

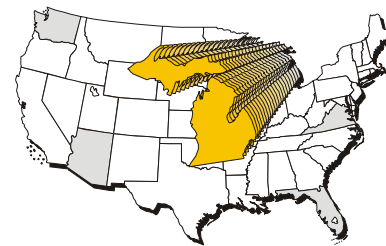
The region determines construction staffing at the project level and at TSCs, based upon the number and type of projects let. MDOT advertises and awards all of its projects during its first and second fiscal quarters, thereby affording the construction staff ample time to determine the staffing needs for the projects sold.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing



MDOT contracts out many services that the Department is required to perform such as design, construction engineering, real estate, and environmental reviews. The number of consultants employed varies with the yearly program. On the design side, approximately 65% of the projects are designed by outside consultants. For construction engineering services, including actual project management and inspection, about 2% of construction program dollars expended are spent on consultants. Consultants provide full construction engineering services including project management on only a few of MDOT's projects. MDOT employees in the regions that select the consultants and evaluate them provide oversight of the consultants. Contractors reported that initially consultants were not comfortable making project management decisions. Over time that situation has changed, however, as the consultants have grown more comfortable with their responsibilities. An MDOT employee is responsible for each MDOT construction project.



The Michigan Road Builders Association (MRBA) reported that decentralization has led to inconsistent contract administration practices across the regions and the TSCs. Contractors claim to use bidding factors to account for this inconsistency.

VDOT

VDOT is responsible for virtually all of the lane miles of roadway in the state outside of cities and towns. There is no county or township road structure. The Central Office in Richmond is responsible for establishing policy, providing technical support, and approving all budgets including those at the district and residency offices.

There are nine full-service district offices that perform functions in the area of construction, design, materials testing, traffic, safety, and environmental. Full-time permanent employees range from 900 to 1,600 per district depending on the size of the district.

Within the district structure there are forty-five Residency Engineering Offices located throughout the state. These offices report directly to the

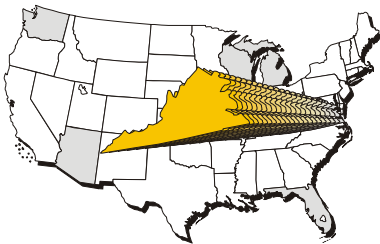


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BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

Within the district structure there are forty-five Residency Engineering Offices located throughout the state.



Using outstanding customer service, we will build, maintain, and operate a surface transportation system that represents the highest standards of safety and quality by the year 2006:

- We will maintain the public trust, and treat public dollars with utmost care.
- We will be a leader in utilizing innovation and technology to deliver our products and services.
- We will use the best business practices to get our jobs done.
- We are committed to making VDOT a great place to work.
- We will enhance economic opportunities while preserving the beauty, natural resources, and heritage of Virginia.

district offices and primarily perform construction and maintenance functions. The Resident Engineer is typically VDOT's contact agent with local governments, and this relationship is considered extremely important.



Local agencies must communicate their priorities to the Resident Engineer because VDOT maintains all roads. The construction staff at the district and the Resident Engineer's office is involved in project development from the time of scoping, through pre-bid constructability reviews and value engineering analysis.

VDOT has established several performance measures to ensure that necessary process improvements are made, work products are delivered on time, and work is of an acceptable quality. The performance measures attempt to determine, prior to letting, the accuracy and the completeness of the plans submitted by the districts for bidding by means of a contract readiness index that it has developed. This index assigns risk factors to the areas of utility relocation, bid amount, and project duration based upon an analysis of these factors and other aspects of the project by the reviewers. This information helps to establish contingency amounts, and is useful in allocating staff to projects.

Other performance measures developed by VDOT include the design quality index and the construction quality index. Construction personnel rate the designer's work product as the job is being built in order to arrive at the design quality index. Maintenance personnel perform a similar rating on the actual project one year after the work has been completed in order to get the construction quality index.

Within VDOT's Central Office, there are 72 staff members that provide policy and technical or engineering guidance in the area of construction contract administration.

At the district and residency levels there are 682 VDOT employees directly involved in construction administration, and another 200 who are indirectly involved in this function. Approximately 250 consultants augment the VDOT personnel to ensure that contractors are performing properly.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

On approximately 30% of VDOT's projects, consultants perform project management services such as testing, inspection, and contract administration services. Consultants design 60% of VDOT's projects.

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The decision to hire a consultant for construction contract administration is made by the District Construction Engineer and the State Construction Engineer. The various Resident Engineers evaluate the consultant's work and hold them accountable. These project consultants are considered part of the Resident's staff.

VDOT also uses a program that it has developed to assist in the planning and the staffing of projects. This planning system allows a manager to enter the workload, and then derive from the program the number of personnel necessary to ensure proper management and completion of the project.

WSDOT

WSDOT has a Service Center located in Olympia (the Olympia Service Center - OSC) and six regional offices geographically located throughout the state. The Northwest Region, the largest of the six, is comprised of five geographical sub-areas. The state has 48 widely distributed permanent project offices, thirty-eight of which focus primarily on construction, and the remaining ten focus primarily on design. A great deal of autonomy and responsibility are given to the regional and permanent project offices.



The Regions and their Project Offices perform a wide variety of transportation engineering, from cost/benefit analysis for programming purposes, to performing virtually all design functions (excluding bridge and structures), as well as construction inspection, and testing. Maintenance operations are also handled at the Regional level, through the Regional Maintenance Offices.

WSDOT has elected to the extent possible, to combine the design and construction functions within a given office. Frequently the same Project Engineer may design and construct a project. Maintenance functions are performed in the region under the supervision of Maintenance Superintendents. The maintenance functions are separate from

WSDOT has elected to the extent possible, to combine the design and construction functions within a given office. Frequently the same Project Engineer may design and construct a project.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

Together we efficiently build, maintain, operate and promote safe and coordinated Transportation Systems to serve our public.

construction administration functions with the exception of one Region, where they have a common point in their reporting structure. Since design and construction are so closely aligned in WSDOT, internal practices also include having construction personnel involved in project scoping and constructability reviews at various stages of plan development. According to WSDOT, these practices have resulted in a reduction of plan errors and improved plan quality.



Some of the performance measures used in the contract administration areas include tracking construction engineering costs, comparing final construction costs to bid price, and tracking change orders that add no value. Performance measures, some of which are reported to the Governor and the legislature, are used to identify trends, establish responsibility for monitoring and reporting, identify who is accountable, and allocate resources. Communicating the effectiveness of the Department's actions with solid data and taking corrective action where necessary are by products of these performance measures.

Bid solicitation, bid opening, contract award, and contract execution occur primarily in Olympia, at the Olympia Service Center, with the exception of two of the Regions. The Eastern Region performs the bid opening, awards and executes the contracts, and the North Central Region elects to open the bids. All advertisement and prequalification occur in the Olympia Service Center.

The Construction Office resides within WSDOT's Olympia Central Services Center consisting of fifteen construction positions, and seven positions in the bid advertising, award and prequalification areas. The Construction Office reports to the Field Operations Support Service Center, another component of the Olympia Services Center.

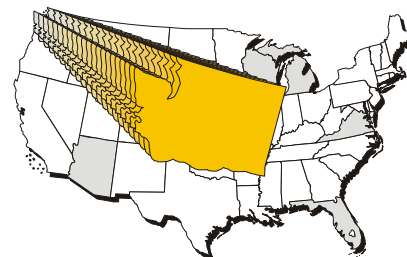
Generally, the function of the Construction Office in Olympia is to provide support and consistency to the project offices and regions.

Generally, the function of the Construction Office in Olympia is to provide support and consistency to the project offices and regions. Change order assistance and review are minimal. Resolving construction issues at the project level is encouraged. Training is a large component of Olympia's responsibility to the region and project offices.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

Construction administration staffing levels within the regional and project offices varies. Statewide there are 2,300 to 2,500 full-time equivalent positions allocated. There has not been a need to hire consultants to perform construction project management, especially in view of a major reduction in program funds. WSDOT expected to have a construction program exceeding \$1 billion for FY 2000, but a voter initiative reduced its construction program to approximately \$650 million. Therefore, staffing projects is accomplished with departmental personnel only. Engineers are classified as E-1 through E-5. E-4s and E-5s must have a Professional Engineer's license. Technicians are classified as T-1 through T-3.



Outsourcing in WSDOT is limited to design work, generally large bridge projects. A minor amount of survey work and material testing responsibilities have been contracted out. Temporary or seasonal employees are used to assist with construction administration or to perform duties at construction sites on an as-needed basis.

WisDOT

WisDOT re-organized approximately five years ago. Currently, WisDOT has six divisions and four executive offices. Construction contract administration duties primarily fall within the Division of Transportation Infrastructure Development at the Central Office in Madison, and within the Division of Transportation Districts, which is comprised of a small staff in the Central Office, and the eight district offices. The Central Office Bureau of Highway Construction has been organized into six functional sections with 89 full-time positions. The six sections are: Geotechnical (20 full-time employees), Pavements (15 full-time employees), Quality Management (21 full-time employees), Proposal Management (17 full-time employees), Standards Development (5 full-time employees), and Operations Management (8 full-time employees). There are 3 full-time employees assigned to the Director's Office. These Central Office sections provide a wide array of policy and engineering support as well as technical expertise in the area of construction management administration, materials, geotechnical services, claims resolution, etc. This bureau also reviews and finalizes the bid proposals and conducts the highway bid lettings.



WisDOT re-organized approximately five years ago. Currently, WisDOT has six divisions and four executive offices.

At the district level, the construction contract administration responsibilities have been assigned to the Project Development section

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

that encompasses both design and construction. The district's Project Development section is charged with delivering both in-house and consultant-designed plans, PS & E preparation, the affirmative action/equal employment opportunity, and labor compliance oversight for all construction projects within its district. A primary goal of the merger of design and construction is to have each staff member with an engineering background perform design work 50% of the time and construction administration the other 50% of the time. Additionally, WisDOT requires those who primarily do design work in the districts to spend a full year in the field to gain construction experience.

WisDOT contracts with county governments to perform the bulk of the maintenance work on State, US, and Interstate roadways. District maintenance personnel perform some maintenance functions and identify the work to be completed by the county forces. Typically, county forces perform pothole patching, guardrail repair, and snow and ice removal. WisDOT does not own a snowplow. Funds for these county contracts and services are provided by the legislature within the WisDOT budget allocation.

To provide a forum for state Departments of Transportation to identify and improve the methodologies concerning program and project management through the exchange of ideas and best practices. The successful implementation strategies will be documented, benchmarked and shared to continuously improve project and program delivery.

When initiating a construction project, the district consults with the County Highway Commissioners in order to receive input at the local level. Then, District Planning develops the Concept Definition Report, which is used by Project Development in the district to establish the project scope. A memorandum of understanding that sets forth the scope of each project must be written and approved by District Planning. This document also contains a delivery schedule and preliminary construction cost estimate.

WisDOT does not have a formal constructability review process, but some districts review plans at 90% completion. On complex projects, WisDOT often hires consultants to perform a constructability review prior to the letting.

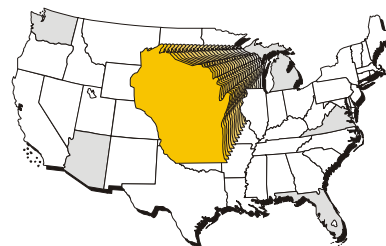
WisDOT uses performance measures to measure timeliness of design, cost of design, quality of design, and quality of construction.

WisDOT uses performance measures to measure timeliness of design, cost of design, quality of design, and quality of construction. The data for the above measures are gathered at the division and district levels. The measures assist in gauging the effectiveness of project management, and are also used to hold managers accountable. WisDOT believes that performance measures have contributed to

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

raising the awareness of the employees to meet customer expectations. Customer expectations include effective cost management, delivery of quality products and services in a timely manner, and being responsive to the traveling public. WisDOT indicated that performance measures have been in place for seven years in various forms and clearly the measures are accepted by its employees more now than in previous years.



The district offices are organized in the following manner: Business Services Section (Communications, IT, Human Resources), Systems Planning and Operations (Maintenance, Traffic, Planning), Project Development (Design and Construction), and Technical Services (Environmental, Geotechnical, Real Estate, Survey, Utilities).

There are approximately 550 full-time employees assigned to the Project Development sections in the eight districts. They are charged with developing and constructing approximately 600 projects annually costing in excess of \$600 million.

WisDOT is subject to a legislative mandate limiting the number of full-time employees. WisDOT reported that this limitation caused districts to retain consultants for both design services and for construction contract administration services. On the design side, private consultants perform slightly more than 50% of the work. This work includes: environmental and planning studies, and preliminary and final design. On the construction side, consultants perform up to 70% of the contract administration duties on WisDOT projects. These duties range from material inspection to full project management on jobs. Project Development supervisors in the districts are responsible (along with the advanced level engineer) to coordinate project staffing, which includes hiring and evaluating consultants for project construction contract administration services.

WisDOT is subject to a legislative mandate limiting the number of full-time employees.

On the construction side, consultants perform up to 70% of the contract administration duties on WisDOT projects.

The in-house project staff has been affected by the retirement of senior-level personnel during the last few years, leaving voids that have been filled by the consultants.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

The Project Development Supervisors and the advanced level engineers consider the following when staffing a particular project: complexity of project, type of project, availability of internal staff, budget constraints, contractor's prior performance, contractor's schedule, and project completion date.

Construction Contract Administration Training

TRAINING



ODOT defines "Construction Contract Administration Training" as the training deemed necessary in order for its personnel to provide oversight and administration of the Department's construction contracts, including inspection, testing, and quality control.

General

ODOT defines "Construction Contract Administration Training" as the training deemed necessary in order for its personnel to provide oversight and administration of the Department's construction contracts, including inspection, testing, and quality control. An "institutionalized training curriculum" is a training curriculum that is set down in writing, funded, and is currently active.

ODOT

ODOT initiated a contract administration training effort for project engineers and project inspectors three years ago. During the first year of ODOT's training program, senior construction personnel worked with a consultant to develop a comprehensive contract administration workbook. This workbook emphasized the importance of thorough and accurate contract administration practices, and provided detailed instructions on how to properly administer a construction contract. This course was then taught by a consultant to over 1,000 of ODOT's construction personnel.

ODOT offered three additional classes for project personnel during the second year of this training initiative. The subjects covered were scheduling, negotiations, and claims avoidance. Each course was offered at various sites around the state and each class lasted 1½ days. The consultants that developed the manuals taught the classes.

This year was the third year of ODOT's initiative, and four additional courses were offered: an Advanced Damages course, Primavera Scheduling, Partnering, and an Asphalt course. A consultant will teach each of these courses, and the class lengths will vary from one to two days.

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

The only certifications that are currently required by ODOT are in the areas of bridge painting, nuclear testing equipment, and asphalt testing. ODOT's training is not currently tied to career ladders. Open positions within ODOT are filled by matching an applicant's experience to the specific requirements of the position.

ODOT averages approximately \$150,000 per year in outside construction administration training costs, and offers an average of two to three new courses per year.

ODOT hired TCS in 2000 to develop a more comprehensive training curriculum. Due to the downsizing ODOT has experienced over the last several years, it has lost valuable experience. Additionally, contractor personnel have become more sophisticated. Therefore, ODOT has determined that it needs to start replacing that lost experience, and provide new and better training for its personnel.

ADOT

ADOT does not have an institutionalized contract administration training curriculum at this time. ADOT is in the process, however, of institutionalizing training for inspection and testing, and currently has a number of management courses, in addition to classes offered for construction technician certification. ADOT's classes include: Highway Plan Funding, Pay Item Documentation, Field Account Documentation, Construction Office Quantities, Supplemental Agreements, Asphalt Price Adjustments, Certified Payrolls, and Computerized Contractor Estimates.

ADOT personnel work with consultants to develop the training classes. Consultants typically conduct the training for two years, and during this two-year period, the consultants will "Train the Trainer," so that ADOT personnel can take over as instructors for the classes.

Certification is required only in certain areas, primarily in the testing area. ADOT, in conjunction with Contractor Supplier Associations, created a nonprofit organization called the Arizona Technical Institute (ATI) to oversee training in the construction testing area. Both ADOT and industry pay for, and attend, the courses offered by the Institute. ADOT funded much of the initial set up cost for ATI, and also donated a

ADOT, in conjunction with Contractor Supplier Associations, created a nonprofit organization called the Arizona Technical Institute (ATI) to oversee training in the construction testing area.

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

large portion of the laboratory to start the program. Industry as well as ADOT believe that this method of training has helped both ADOT employees and industry employees become more proficient in their jobs. This organization schedules and trains personnel. Certification is granted based on a passing score of 80% on 40 questions.

ADOT's inspection certification program is available to any employee in the construction office. Inspectors must pass a specific course in order to be promoted to the next level. This promotion concept only exists in the inspection series at the entry levels. It does not extend to the class series, nor does it apply to other class series.

FDOT

FDOT does not have an institutionalized contract administration training curriculum for project engineers and inspectors at this time. FDOT has a two-week Project Engineer School that is offered once a year. During the first week of the course, the focus is on managerial topics. The second week focuses on technical issues. This class is limited to 20 employees each year, and employees must be recommended by the District Construction Training Engineers in order to attend. Because of the limited space available, FDOT fills the class with employees who are newly promoted or have management potential. This class is held offsite and an overnight stay for the two weeks is required. There are many assignments given that the students must complete at night as group activities.

FDOT also offers many managerial classes each year. These classes include, but are not limited to: Communication Skills, Teamwork/Team Building, Conflict Resolution, and Personality Profiling.

Many technical classes are offered each year through a self-study program, including: Asphalt, Concrete, Earthwork, Testing, Geotechnical, and Construction Claims.

Many technical classes are offered each year through a self-study program, including: Asphalt, Concrete, Earthwork, Testing, Geotechnical, and Construction Claims. FDOT personnel can take these classes at any time. They are required to call the training office and schedule a time to take the examination.

To comply with CFR637, FDOT now requires that its technical staff be "qualified" to inspect or to conduct testing. Its staff attains this

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

qualification by taking the appropriate courses through FDOT's Construction Training Qualification Program (CTQP). FDOT contracts with the University of Florida to teach all of its CTQP courses. FDOT has found that this type of training through the University of Florida is more expensive than previous training. FDOT is required to pay the University of Florida a fee per class per individual. The Districts commented on this expense and the burden it was placing on their budgets. Exams are given for all qualification courses. Some qualification courses require proficiency exams.

FDOT supervisors meet with employees once a year to evaluate performance and to discuss training needs for the upcoming year. In addition, training coordinators are located in each district to help with the employees' training needs as well. FDOT does not have a formal career ladder in place that is tied to training; however, it was reported that employees have a better chance to advance if they have the requisite training.

FDOT supervisors meet with employees once a year to evaluate performance and to discuss training needs for the upcoming year.

MDOT

MDOT does not have an institutionalized contract administration training curriculum at this time. Courses are provided as needed, at the request of management personnel, staff engineers, or field personnel. Some of the courses offered are: Project Documentation, Progress Scheduling, Critical Path Method Scheduling, Claims Avoidance, Surveying, Plan Reading, Aggregate Testing, and Inspection.

Both MDOT personnel and consultants developed the courses. The classes are taught by MDOT personnel and by consultants depending on the topic.

Training for project engineers is not currently tied to career ladders; however, there is a Work Element Program in place that is used for construction technicians. There are approximately 100 work elements in the plan currently. The intent of this program is to:

Training for project engineers is not currently tied to career ladders; however, there is a Work Element Program in place that is used for construction technicians.

- Be fully coordinated with both the state civil service system and the state employee relations policy.
- Be fully work-related.

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

- Promote the efficient use of personnel by reducing reliance on specialists.
- Require satisfactory individual performance and provide for no automatic promotions.
- Have clearly defined career progression paths and requirements.
- Encourage the development of employees to the journeyman level to enhance employee utilization, improve job interest, and reduce costs.
- Include permanent and temporary employees.

This program is in the process of being revamped internally to reflect MDOT's current work elements.

Technicians working on the NHS must be trained and qualified in concrete, bituminous, aggregate, and density testing and inspection. They must also be certified in Radiation Safety. Certification renewal intervals range from one to five years.

The training for inspectors and technicians is all funded through the Federal Training Budget. The Deputy Director/Chief Engineer and Chief Operator's Office then approve this budget.

VDOT

VDOT does not have an institutionalized training curriculum. It does provide a number of different courses, however, to its employees.

VDOT has an on-the-job Mentor/Protégé Program.

In place of an institutionalized training curriculum, VDOT has an on-the-job Mentor/Protégé Program. It is the responsibility of the protégé to secure a mentor, as there is no formal application process. According to VDOT personnel, this program is widely known and used throughout the Department.

VDOT offers the following classes to its employees on an as-needed basis: Personnel Development, Roadway Construction Surveying, Major and Minor Structures, Documentation, Record Keeping, Computerization, and Environmental Safety Compliance.

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

VDOT also offers classes that can be taken at Virginia Technical and other community colleges. These classes include: Basic Plan Reading, Remedial Math, and Remedial English.

There are no training-based career ladders within VDOT at this time; however, certification is required for those responsible for materials such as concrete and asphalt. The annual evaluation process includes a requirement to determine the classes that an employee needs to take during the upcoming year.

There are no training-based career ladders within VDOT at this time; however, certification is required for those responsible for materials such as concrete and asphalt.

Training is partially funded in both the district training budget and the Central Office Construction Division budget. The budget for training has to be approved by the Budget Division and the Executive Leadership team.

WSDOT

WSDOT has a comprehensive institutionalized training curriculum for its project inspectors and project engineers. WSDOT uses a computer program called Automated Training Management System (ATMS) to assist those who manage the training in an effort to determine training needs for its personnel. The program is designed to identify training needs of individuals, schedule individuals for training, register employees for training, confirm attendance at classes, and produce a report that rates the results of the training.

WSDOT has a comprehensive institutionalized training curriculum for its project inspectors and project engineers.

Project Engineers have a number of classes available including Supervision and Management modules, Conflict Management, Partnering, Claims Avoidance and Analysis, Change Order Administration, FHWA Stewardship Reporting, and various environmental subjects. Inspectors have available a Construction Inspection Miscellaneous Documentation Course, in addition to 13 other classes that deal with inspection and materials testing.

All of WSDOT's construction, design, and planning personnel are eligible for technical training. Much of the inspector training is required for advancement in the technician grades.

Each region has a training coordinator who helps employees with their

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

training needs. Once an employee and a supervisor select the class, the request is entered into the ATMS System. When enough personnel are registered for a class, the class is then scheduled. The employee and supervisor each receive a “Class Registration Notice” when the class is scheduled detailing all of the information needed.

WSDOT soon will be requiring that all of the inspection and materials testing classes have a practical or written exam at the end of the course, and attendees will be required to get 70% of the answers correct to pass. The Kirkpatrick training evaluation model is also being implemented throughout WSDOT. The Kirkpatrick model is a multi-tiered evaluation system that assesses the effectiveness of training in four dimensions. At the second level of assessment, it evaluates knowledge gained in training.

WisDOT

WisDOT is developing a “Just-in-Time” training program.

WisDOT does not have an institutionalized contract administration training curriculum at this time. WisDOT is developing a “Just-in-Time” training program to identify training needs, and then offer training based on the need of the individual and the project to which that person is being assigned. WisDOT’s philosophy is that it is not productive to train people if they do not put the training to use immediately following the class.

WisDOT has developed several in-house technical courses. Designated trainers have taught the in-house classes from each of the eight districts after a consultant puts on a “Train-the-Trainer” session for the in-house personnel.

WisDOT also has some training for sampling and testing that is provided through the University of Wisconsin–Platteville. This program is called the Highway Technical Certification Program.

WisDOT also has some training for sampling and testing that is provided through the University of Wisconsin–Platteville. This program is called the Highway Technical Certification Program. Certification is required in certain areas of sampling and testing. This program was established as part of WisDOT’s new quality control and quality assurance program. WisDOT is now placing the responsibility for quality control on the contractor. Quality control includes routine sampling and testing. WisDOT is responsible for verification testing. WisDOT verifies compliance with the specifications. The purpose of the Highway Technical Certification Program is to certify individuals who have a demonstrated ability in sampling and testing.

BASIC ORGANIZATION AND PROCEDURES

Construction Contract Administration Training

WisDOT supervisors discuss employee performance on a yearly basis and, at that time, training needs are discussed. District training coordinators compile this information and then look for classes to meet the employees' needs. Promotions are generally not tied to training courses; however, being certified in a specific area helps when being considered for a promotion. There is an automatic annual progression for the first three years from entry-level inspector to senior Engineering Specialist.

Training is funded through the division and the individual training budgets are developed for each functional area within the districts and the Central Office. Occasionally, Central Office will pay for training of the district staff.

Computerization

General

All of the states surveyed have developed means of communicating by the Internet and the Intranet for external and internal users with no access restriction to the Internet. As privileged information becomes available on their websites, secured sites will be implemented. All of the states use a computerized construction management system, which they believe has reduced the number of days it takes to pay contractors, streamlined processes (making the staff more efficient), and improved quality of processing information.

ODOT

ODOT has developed both Internet and the Intranet communications for external and internal customers. Currently, there are no access restrictions to the Internet, but as ODOT moves to provide key contractor and testing information on the Internet, ODOT plans to develop password restrictions.

Information available on ODOT's website includes: Plans for viewing and downloading (to encourage this process, the downloading of the plans is free), plan holder's lists, award sheets, proposal notes, supplemental specifications, bid tabulations, award meetings, and

TECHNOLOGY



BASIC ORGANIZATION AND PROCEDURES

Computerization

standard drawings. Currently, contractors, subcontractors and bonding companies have access to all contractor payment information. Projects are advertised on the Internet, but all formal advertisements also appear in the newspapers.

Projects are advertised on the Internet, but all formal advertisements appear in the newspapers.



ODOT's Construction Management System (CMS) is a mainframe system that fully integrates construction and testing management. ODOT staff access project data by using CMS interface, GQL, or XISQL.

Four programmers and twelve District Data System Managers support CMS. It should be noted, however, that the District Data System Managers also support the district servers, assist in PC set-up and maintenance, and write programs for the district offices.

The majority of construction job site documentation has been computerized. Hand held devices, such as Palm Pilots, are being used by inspectors on a trial basis to record data in the field; however, the expanded use of these devices in the field is under review by ODOT pending the outcome of their trial use.

ODOT believes that it has experienced several benefits from having a computerized construction management system including: reducing the number of days it takes to pay contractors, streamlining processes making staff more efficient, improving communication between all levels at ODOT and with the contractors, and improving the quality of the construction process.

In-house computer training is offered to ODOT employees for CMS and other software applications as needed.

BASIC ORGANIZATION AND PROCEDURES

Computerization

ODOT upgrades its computer hardware every three to five years, and its software every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

ADOT

ADOT has developed both the Internet and the Intranet for external and internal customers. Currently there are no access restrictions to the Internet.

Information and services available on ADOT's website include: titles and registration renewals, driver's license replacements, current traffic conditions, construction project status, road closures, construction bidding process (pilot), ADOT standards and specifications, plan holders lists, bid tabulations, bid opening schedules, contractor prequalification application forms, and stored specifications. Documents are hyperlinked where appropriate.



Current and future projects are advertised on the Internet, all formal advertisements also appear in the newspapers. ADOT is in the process of implementing electronic bidding using AASHTO's "Expedite" software.

ADOT is in the process of implementing electronic bidding using AASHTO's "Expedite" software.

ADOT's Field Office Automation System (FAST) was designed in-house to integrate construction and testing and monthly pay estimates. It is a client server with a centrally located SQL database.

ADOT has established procedures whereby consultants and other local government entities may obtain a license to use ADOT's custom software.

Currently, two programmers and four full-time staff support ADOT's construction system.

BASIC ORGANIZATION AND PROCEDURES

Computerization

The majority of construction job site documentation has been computerized. Panasonic laptops are used in the field to access a field module of FAST.

ADOT reportedly has experienced several benefits from its computerized construction management system, including: reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process.

In-house computer training is offered for ADOT's system and other software applications as needed through professional training services.

Computer hardware upgrades take place every three to five years, and software upgrades occur every three to four years. ADOT plans to use cost benefit analyses to determine the cost impact of upgrades.

FDOT

FDOT has developed both the Internet and Intranet for internal and external customers. Currently, there are no access restrictions to the Internet.

Information available on FDOT's website includes: contract lettings, design-build project development, current project status, plan holders lists, awarded contracts, specifications, addendum notices, bid tabulations, fuel indices, and wage rates. Documents are not hyperlinked.



FDOT is in the process of developing an in-house system to provide electronic bidding.

FDOT is in the process of developing an in-house system to provide electronic bidding.

FDOT is currently implementing Site Manager from AASHTO as its construction management system. This will replace its in-house

BASIC ORGANIZATION AND PROCEDURES

Computerization

developed Construction Reporting System (CRS). This new system will use client server technology. Site Manager does not integrate construction and testing. Currently four programmers from Office Information and three end user offices support FDOT's construction system.

Electronic bidding software is shared with the contractors.

Most construction job site documentation has not been computerized. FDOT is exploring the use of Palm Pilots or an equivalent hand held device to record field data.

FDOT, as do the other states surveyed, believes it has experienced several benefits from having a computerized construction management system, including: reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process.

In-house computer training is offered for FDOT's programs and other software applications as needed.

Computer hardware upgrades take place every three to five years, and software upgrades occur every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

MDOT

MDOT has developed both the Internet and Intranet for external and internal customers. Currently, there are no access restrictions to the Internet, although the plan is to introduce passwords when contractor-privileged information is provided.

Information available on MDOT's website includes: standard plan and specifications, up-to-date information on construction projects, bidding and letting documents and data, bid results, live shots of project sites on high-impact construction projects, average daily traffic, plan holders, DBE directory, prequalified contractors directory, electronic bidding files, electronic bidding software, addendum, bid tabulations, manuals,

BASIC ORGANIZATION AND PROCEDURES

Computerization

and contractor payment status reports. Standard specifications, plans, and special details are available in an indexed PDF format. Users can search using specific terms and the results provide an index to access the documents. Documents are hyperlinked where appropriate.



MDOT currently offers electronic bidding on an optional basis to contractors. The focus is to implement a total electronic bidding and letting process. MDOT uses AASHTO's Expedite software.

MDOT uses FieldManager and FieldBook to electronically record project information in the field. MDOT uses FieldManager by InfoTech to manage and track projects. FieldManager fully integrates construction and testing. It enables MDOT to track work item progress, prepare daily reports, prepare daily diaries, manage stockpiles, generate contractor payments, manage change orders, track test results, and prepare over 60 standard reports. MDOT requires its engineering consultants and local government agencies to obtain a license for FieldManager from InfoTech for all projects let. MDOT is studying the possibility of requiring contractors and subcontractors to also access FieldManager, by obtaining licenses from InfoTech. Currently two people support FieldManager.

FieldBook is a component of FieldManager that is designed to operate on a laptop computer so that information can be recorded at the construction site. MDOT is testing FieldPad, which is completely integrated with FieldManager and operates on hand-held devices. All of an inspector's daily reports can be recorded using FieldPad and downloaded into FieldManager by cable or by infrared technology.

MDOT estimated that Field Manager saves the state \$16.8 million in reduced time to manually produce reports in addition to reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process.

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BASIC ORGANIZATION AND PROCEDURES

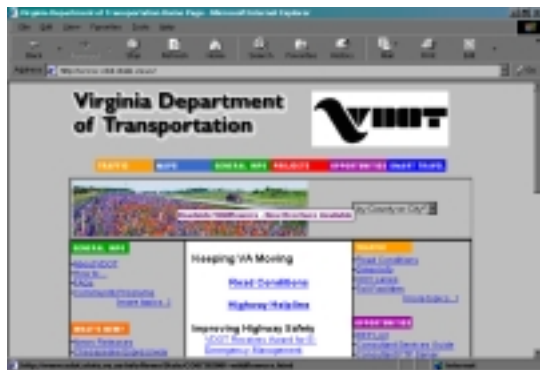
Computerization

In-house computer training is offered to MDOT employees for FieldManager and other software applications as needed.

MDOT upgrades its computer hardware every three to five years, and its software every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

VDOT

VDOT has developed both the Internet and Intranet for external and internal customers. Currently, there are no access restrictions to the Internet. Different categories of data are available on the Intranet versus the Internet.



Information available on VDOT's website includes: specifications, construction division memoranda, forms, project descriptions, requests for proposals, plan holders list, pre-qualification list, certification list, debarment list, six-month advertisement schedule, price sheets for advertised projects, revision

announcements, bid results and tabulations, standard and non-standard item code tables, price and fuel adjustment indices, division directories, short lists, and selected forms.

VDOT is planning to implement electronic signatures and electronic submission of data by external and internal customers.

Projects are currently advertised on VDOT's website.

VDOT is in the process of implementing AASHTO's SiteManager as its construction management system. Currently VDOT uses AASHTO's TRNS*PORT.

BASIC ORGANIZATION AND PROCEDURES

Computerization

Currently, four programmers, four district personnel, and five personnel within the Division of Construction support VDOT's construction system.

The majority of construction job site documentation has been computerized.

Technology currently being considered or tested by VDOT includes: SitePad hand-held device for project data collection, electronic submission of bids from contracting industry, wireless Local Area Network/Wide Area Network (LAN/WAN), electronic notepad technology, and electronic document management system.

VDOT, as do the other states surveyed, believes that it has experienced several benefits from having a computerized construction management system, including reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process. In-house computer training is offered to VDOT employees for its construction management and other software applications as needed.

VDOT upgrades its computer hardware every three to five years, and its software every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

WSDOT

WSDOT has developed both the Internet and Intranet for its external and internal customers. Currently, there are no access restrictions to the Internet. Different categories of data are available on the Intranet versus the Internet.

Information available on WSDOT's website includes: construction progress status and bid status, bid tabulations, and results of award meetings. Specifications and bids are not available online, nor are the data available by hyperlink. Projects are advertised on WSDOT's website.



BASIC ORGANIZATION AND PROCEDURES

Computerization

WSDOT's construction management software is a mainframe system that tracks a wide variety of contract information including key dates, contractor identification, subcontractors, EEO information, change orders, item quantities, and weekly statements of working days. Inspector diaries are not kept on the system. Contract payments are done through another system. All files are stored on the mainframe, and reports can be generated from a SQL database using Access or Excel.

WSDOT has not shared its construction management software with contractors.

Currently, four programmers and three workstation support staff support WSDOT's construction system.

The majority of construction job site documentation is not computerized. Hand-held devices such as Palm Pilots are under consideration at this time.

WSDOT believes that it has experienced several benefits from having a computerized construction management system including reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process.

In-house computer training is offered to WSDOT employees for its construction management system, and other software applications as needed.

WSDOT upgrades its computer hardware every three to five years and its software every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

WisDOT

WisDOT has developed both the Internet and Intranet for external and internal customers. Currently there are no access restrictions to the Internet. Different data are available on the Intranet versus the Internet.

BASIC ORGANIZATION AND PROCEDURES

Computerization

Information available on WisDOT's website includes: all pre-bid and post-bid information, and bid files for electronic bidding. Specifications and drawings are not available online, nor is the data available by hyperlink.



WisDOT mandated the use of electronic bidding in October 2000.

WisDOT mandated the use of electronic bidding in October 2000. WisDOT uses a secured website "BidExpress" where it puts all pre-and post-bid information, and make bid files available for the electronic bid software Expedite.

Projects are advertised on WisDOT's website.

WisDOT currently uses AASHTO TRNS*PORT/CAS and FieldManager for progress reporting, estimates, and contract modifications. WisDOT uses Wisconsin Field Information Tracking (FIT) to track various status dates, performance measures of design quality index, and construction on time. WisDOT uses Enterprise Wisconsin Project Tracking System to create management reports. Lastly, WisDOT uses Wisconsin Materials Information Tracking to track testing performed in the field. This system feeds a program called Materials Tracking, which tracks central and district lab testing and generates reports.

WisDOT has shared AASHTO Expedite with contractors at no cost. Licensing and support is handled through AASHTO.

Currently, three programmers and eight district personnel support WisDOT's construction system.

FieldPad is being used in the field in conjunction with FieldManager. Consideration is being given to using Palm Pilots in the future.

WisDOT has experienced several benefits from having a computerized

BASIC ORGANIZATION AND PROCEDURES

Computerization

construction management system, including reducing the number of days it takes to pay contractors, streamlining processes, and improving the quality of the construction process.

In-house computer training is offered to WisDOT's staff for its various software applications as needed.

WisDOT upgrades its computer hardware every three to five years, and its software every three to four years. A cost benefit analysis is performed to determine the cost impact of the upgrade.

Documentation/Finalization/Progress Payments

General

Most states surveyed had documentation requirements similar to ODOT's with respect to quantity and survey calculations, supporting documents, and narratives concerning the work performed. Each of the states had manuals detailing its documentation requirements.

Some states such as Arizona, have relaxed documentation requirements, citing smaller inspection resources as the reason behind the relaxation.

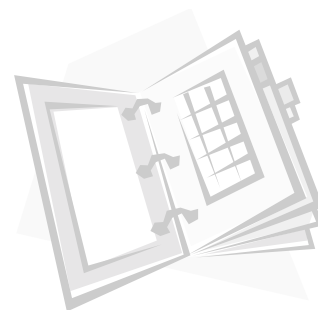
In all states, the primary source of field documentation is the inspector's diary.

ODOT

ODOT generates progress payments twice monthly. All or part of a payment may be withheld due to a lack of material documentation, failure to submit payrolls, or other performance problems. Payment bond and prompt payment rules protect subcontractors. ODOT has no retainage against progress payments.

ODOT's diaries are handwritten in the field, and the information in the diaries is subsequently entered into ODOT's computerized CMS.

DOCUMENTS



ODOT has no retainage against progress payments.

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

The districts perform some interim reviews of project record keeping and documentation in an effort to enhance uniformity. ODOT selects 25% of their projects for review as part of the final audit.

The quality of the plans and design are reviewed and assessed at the end of each project by ODOT's Project Engineer. Post-construction meetings are sometimes held with the contractor and the designer to develop lessons learned. Change order reasons are compiled. The minimizing of preventable change orders is a district performance measure.

Within ODOT, the project engineer is responsible for determining the final quantities on a project. ODOT's goal is to have 90% of construction projects finalized including all required documentation, completed within six months of completion of the work in the field. Timely finalization is a district performance measure.

As a part of the Finalization process, ODOT's project engineer evaluates all contractors and subcontractors.

As a part of the Finalization process, ODOT's project engineer evaluates all contractors and subcontractors. Evaluations are sent to the contractors and the subcontractors when approved. Contractors have the right to appeal. Low evaluations can result in a reduction of a contractor's bidding limit. Low evaluations must be accompanied by specific documentation prepared by the project engineer.

ADOT

ADOT generates progress payment estimates monthly. Progress payments can be withheld or reduced due to payroll problems or material deficiencies. Specifications protect subcontractors. DBE payment affidavits provide additional protection for DBE subcontractors.

Within ADOT, all diaries are generated on laptops by ADOT inspectors. These inspectors also have a calculation program available to them on their laptops to assist in quantity calculations. The Field Reports Section reviews documentation on each ADOT project.

The design for each project is reviewed by Construction and all change orders are categorized as to cause. This information is provided to the



Site visit to Rt. 202 Extension Project in the Phoenix Construction District, Maricopa County. \$60 million contract for +/-3.2 miles of highway and structures.

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

designer for informational purposes, and for use on future projects. Design feedback is also provided through ADOT's partnering process.

Once a final payment package is prepared by ADOT's project engineer, it is sent to the Field Reports Section for review. A survey is done on all diaries, calculations, and material reports. No data was available about actual finalization time but ADOT tries to finalize in 45 days.

Contractors are not evaluated by ADOT due to an Arizona Attorney General's opinion that precludes such evaluations.

FDOT

FDOT generates progress payment estimates monthly. Progress payments can be withheld or reduced due to payroll problems or material deficiencies. Subcontractors are protected by the contractor's certification of payment to all subcontractors and material suppliers.

All diaries are handwritten, and diary information is then summarized and put into FDOT's computer system. The Final Estimates Engineer discusses documentation requirements with the contractor at the pre-construction meeting.

The Final Estimate Office reviews the documentation on all projects both while work is proceeding, and once it is completed. FDOT's project engineer evaluates all project designs, and provides feedback to the designer.

Within FDOT, the project engineer prepares the finalization package. The District Final Estimate Office (DFEO) reviews all projects while the work is proceeding. FDOT's goal is to have the project substantially finalized when the work in the field is completed. This "preliminary" final package is then submitted to the DFEO within 20 days of completion of work in the field. Every project is then reviewed.

A secondary goal of FDOT's is to submit the final quantities to the contractor within 75 days of the work being complete in the field. An estimate that is based on the submitted final quantities is then paid to the



At a consultant - managed FDOT project in rural district

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

contractor in order to avoid interest payments.

FDOT's project engineer, as a part of the finalization process, evaluates all contractors. The evaluations can affect the contractor's bidding limits for FDOT work.

MDOT

MDOT generates progress payment estimates twice monthly. Progress payments can be withheld or reduced due to payroll problems and/or material deficiencies. Prompt payment statutes and special provisions in the contract protect the subcontracts.



Michigan DOT Concrete pavement resurfacing project

Within MDOT all diaries are generated on laptops by MDOT's inspectors on the project. Information from the diaries is then downloaded into the MDOT's FieldManager system. MDOT's documentation is totally electronic. The only paperwork is backup information.

The Resident Engineer Certification Program periodically evaluates and certifies both MDOT and local government engineers. Once an engineer is certified, final estimates can be processed without an independent project review. For uncertified engineers, all projects must be reviewed before final estimates are processed. MDOT's Resident Engineers are certified after formal reviews of project records. The Commission Audit Team also performs final audits on selected projects.

Plan and design evaluations are regularly performed by the Region's design division and by personnel at the Transportation Service Center. Low evaluations can affect the consultant's rating.

MDOT's goal is to finalize all projects within 120 days of completion of work in the field. MDOT meets this goal on 80% of its projects. Timely finalization is a performance goal for the Regions and Transportation Service Centers.

MDOT's Construction Management System monitors finalization.

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

Contractors are evaluated by MDOT's Resident Engineer as a part of the finalization process. Low evaluations can lower a contractor's bidding limits for MDOT work.

VDOT

VDOT generates progress payment estimates monthly. Progress payments can be withheld or reduced due to payroll problems or material deficiencies. Subcontractors are protected by prompt payment statutes, and must be paid within seven days of the prime contractor being paid.

VDOT's diaries are handwritten. Diary information is then transferred to the Construction Workbook (computer). The documentation on each project is reviewed by the District Location and Design unit (L&D).

VDOT construction personnel evaluate the design on each project, and feedback is provided to the designer. VDOT district and residency personnel do constructability reviews. Within VDOT, Construction and Design hold monthly meetings to provide feedback.

VDOT's Resident Engineer's office is responsible for determining the final quantities for a project. The final package is submitted to the district where all diaries, calculations, materials, and reasons for differences are reviewed by L&D.

A final estimate is then generated for review and approved by the Central Office Construction Division. The goal for finalization is 90 days after completion of the work in the field. VDOT's Construction Division performs random project documentation reviews as work is proceeding.

VDOT's Resident Engineer evaluates contractors during each project and at the end of each project. These evaluations are then summarized in the Central Office. If a contractor receives three scores of 70 or less, or one score less than 60, that contractor can be removed from the bidders list. A contractor's average evaluation score will affect a contractor's bidding limit for VDOT work.



Virginia DOT Fredericksburg District Rt. 3 Project

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

WSDOT

WSDOT generates estimates monthly. Payment can be withheld due to payroll problems or material deficiencies. Payment bonds and prompt payment statutes assure that subcontractors are paid in a prompt and timely manner.



Washington DOT New 4-Lane Relocation

WSDOT's diaries are handwritten. WSDOT also uses "pay notes," which document completed pay items. Information from the diaries is entered into a computer program mostly for payment purposes.

WSDOT regional personnel review project records when 50% of the work is complete and after the project is complete.

Plan and design quality issues are reviewed and discussed with the designer. The reasons for change orders are also compiled and discussed with the designer.

WSDOT's final quantities and reports are developed by the Project Engineer who then certifies the results. The region reviews projects when they are 50% complete and when they are 100% complete. The region also performs process reviews at the project. WSDOT's goal is to finalize each project within six months of completion of work in the field. The Olympia Service Center reviews projects for proper paperwork only. The Olympia Service Center also does process reviews at the regions.

WSDOT's Construction Contract Information System monitors the progress of a project toward finalization.

WSDOT's project engineers evaluate all contractors. Poor evaluations can result in the reduction in the size and type of contract that a contractor may bid.

WisDOT

WisDOT generates estimates twice a month. Payments may be withheld due to payroll problems, specification non-compliance or

BASIC ORGANIZATION AND PROCEDURES

Documentation/Finalization/Progress Payments

material deficiencies. Prompt payment statutes and special provisions protect subcontractors in WisDOT contracts. WisDOT also posts the estimates in the project office so that subcontractors may review them.

Some WisDOT diaries are handwritten. The information is then transferred to WisDOT's Field Manager computer system. Otherwise, diaries are maintained electronically using Field Manager software. The district reviews all project records as part of its finalization process.

After the project is constructed, WisDOT's Project Manager and the contractor rate all plans and develop a Design Quality Index. This evaluation is given to the designer for information and for use on future projects. In addition, the quality of construction is rated by WisDOT's District Area Engineer and WisDOT's Maintenance personnel to develop a Construction Quality Index.

Within WisDOT, the Project Manager determines the final quantities. WisDOT's goal is to submit the final quantities to the contractor for review within 90 days of acceptance of the work in the field. When the project manager submits a tentative final estimate, the contractor is allowed up to 90 days to accept or reject WisDOT's tabulated final quantities. WisDOT attempts to finalize prior to the beginning of the next construction season.

The Project Manager or district produces a material test report concerning the disposition of all materials on WisDOT projects. The district's Project Development Section checks all finals.

All contractors (prime and subcontractors) are evaluated by the WisDOT Project Manager. The evaluations may affect a contractor's bidding limits.

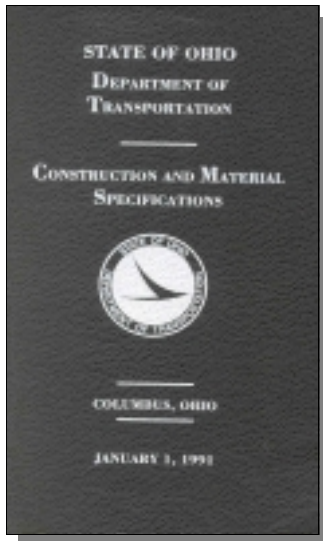


Wisconsin DOT District 2 site visit to G/I-94 Interchange Project

CONTRACTING PRACTICES

Specifications

SPECS



General

FDOT is the only state visited that has a written policy defining specification development. The states reported updating the specifications every two to eight years, and there is a trend toward active voice, imperative mood, and Quality Assurance end-result specifications.

ODOT

ODOT has a specifications committee that consists of the Deputy Director of Construction Management (chairman), the Administrators for the Offices of Construction Administration, Maintenance Administration, Materials Management, Traffic Engineering, Pavement Engineering, two District Construction Engineers, a District Production (design) Administrator, and the Engineer of Specifications Development serves as secretary. The Deputy Director of Contract Administration serves as ex-officio legal advisor. This committee meets monthly to review and approve new or revised specifications. Also represented on this committee, but not as voting members, are representatives from the FHWA, Ohio Contractor's Association, Flexible Pavements Association, Ohio Ready Mix Concrete Association, Ohio Industrial Mineral Aggregate Association, American Concrete Pavement Association, and department technical experts from various areas such as structures, traffic, pavements, soils, and hydraulics, as needed.

ODOT personnel, contractors, trade associations, and any political entity can initiate a new specification or a revision. An idea for a new or revised specification is transmitted to the specification committee secretary, who then brings it to the committee for review of the merits of the idea; and to decide whether or not to move forward with the draft or to take no further action. If it is decided to move forward, the specification language is normally drafted by a department technical expert from the area involved, with a subcommittee, if necessary, of contractors, trade associations, FHWA, and other department personnel.

The draft is then sent both electronically and by hard copy to the specification committee, districts, various Central Office departments, contractors, trade associations, and FHWA for review and comment. There is no time frame set for this process.

CONTRACTING PRACTICES

Specifications

The draft specification and review comments are then discussed at a specification committee meeting, where a decision on the comments is rendered, and where a decision is made regarding whether further action is required. This procedure is repeated until the committee reaches a consensus. The final draft of the revised specification is then sent to FHWA for final approval.

There are five levels of the specifications: the Standard Construction and Material Specification, the supplemental specifications (including Special Provisions), proposal notes, plan notes, and construction drawings. The supplemental specifications are individual documents describing construction and material specifications for items whose requirements are changing year to year, are still in the developmental or experimental stage, or are used only occasionally. Supplements provide necessary information not properly covered by the specifications book, usually for laboratory testing methods and certification procedures for materials. Proposal notes are used to correct errors in or to make changes to existing specification items until such time as they can be updated in the specification book. They are also used to implement various bidding requirements. Plan notes are used to describe non-standard pay items that deviate from the specification book, the supplemental specifications, or the standard construction drawings.

ODOT has no written policy defining the specification revision process. FHWA has voiced concern over the current process for drafting, review, approval, and distribution of new and revised specifications. When changes are made to an existing specification, a typical problem is that the changes may not be obvious and many times are missed by ODOT field personnel and contractors. Furthermore, there are no performance measures in place to evaluate how the department is doing with this process.

In the past, the specification book was updated every two years, with the last update in 1997. Currently, ODOT is rewriting the specification book to active voice, imperative mood, incorporating all applicable supplemental specifications, proposal notes, and policies, and clarifying or updating all existing specifications using technical committees for each section. The next issue will be released in 2002.

Currently, ODOT is rewriting the specification book to active voice, imperative mood.

CONTRACTING PRACTICES

Specifications

The specifications, supplemental specifications, and proposal notes are maintained on both the Intranet and the Internet.

ODOT uses end-result specifications for asphalt density, and for asphalt and concrete smoothness. Asphalt and concrete smoothness have an incentive/disincentive (I/D) for smoothness, and an I/D is currently being developed for asphalt density. An end-result specification for concrete strength is also being developed. The contracting industry generally favors specifications with I/D, and ODOT believes both quality and ease of inspection have improved as a result.

ODOT does not perform cost-benefit analysis prior to specification revisions.

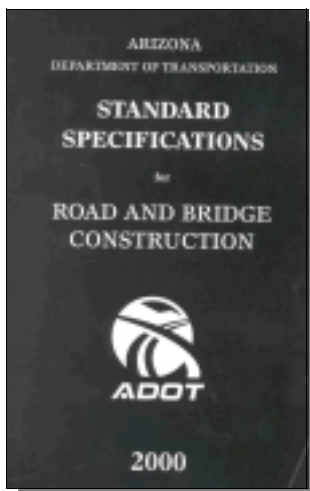
ADOT

ADOT has no formalized specification review and approval committee. The Office of Contracts and Specifications makes routine changes to the specifications. Joint industry/ADOT committees develop new specifications and revisions. These joint committees work behind the scenes with various ADOT offices to develop and update the specifications. When the joint committees have reviewed a draft specification or revision, it is sent to the district engineers for concurrence.

After the State Construction Engineer/Senior Design Engineer approves a new or revised specification, they become stored specifications, and can become part of each individual contract by special provision in the proposal. Stored specifications are reissued three to four times a year. The standard specifications book is updated with the stored specifications additions every three years.

ADOT does not use plan notes to modify existing specifications, but include these in each proposal as project supplemental specifications. There is latitude in using these supplemental specifications with no central office review or oversight.

Changes to a specification by a stored specification or by supplemental specifications are not highlighted. This leads to misinterpretation by both ADOT field personnel and contractors. There are no guidelines



CONTRACTING PRACTICES

Specifications

for the process of drafting, reviewing, approving, and distributing of new and revised specifications. Arizona Associated General Contractors (Arizona AGC) would like all changes made to the specifications underlined for each job.

The standard specifications are only available in hard copy and they are not maintained on the Internet. The stored specifications are maintained on the Internet because they become part of each proposal.

ADOT uses end-result specifications with I/D for asphalt and concrete pavement smoothness. They also use I/Ds for traffic control such as paying contractors based on travel times through work zones during construction compared to travel times prior to construction.

ADOT uses quality control/quality assurance for concrete and asphalt pavement, structural concrete, sub-base, and aggregate. While contractors are responsible for quality, the Department still performs acceptance testing for payment purposes. ADOT does not believe that its quality control/quality assurance specification requirements are effective in reducing DOT staffing levels on projects, nor have they permitted personnel to focus on other areas. This appears to be a result of ADOT performing the acceptance testing independent of the contractor's quality control acceptance testing.

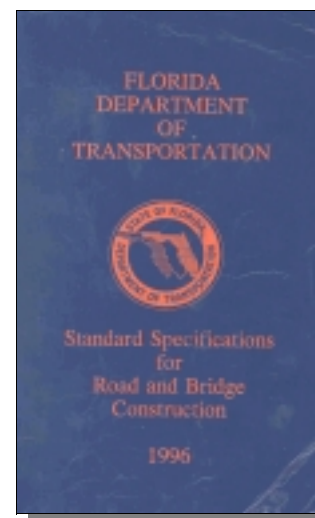
FDOT

FDOT has a State Specifications Office with a staff of five. This office has four sections—Specification Development, Product Evaluation, Quality Assurance and Product Processing, and District Specifications Offices. The Specification Development section publishes the standard specifications, the implemented modifications, and processes the specifications from proposed modifications to adopted standards. The Product Evaluation section has a staff of six, which reviews and evaluates transportation-related products, and maintains the qualified products list. The Quality Assurance and Production Processing section has a staff of two and is responsible for assisting the districts with quality assurance activities, and processes plans and specifications submitted by the districts. The District Specifications Offices, with a Specification Engineer and a staff of three, prepare the proposal and specification packages for each contract.



Arizona DOT Rural project site visit. Bridge construction on a new alignment.

ADOT uses quality control/quality assurance for concrete and asphalt pavement, structural concrete, sub-base, and aggregate.



CONTRACTING PRACTICES

Specifications

FDOT is the only DOT of the six visited by ODOT during this study that has a written policy for specification development. The policy, Topic No. 630-010-001-9, has an effective date of 11-20-98, and is available on the Internet at www.dot.state.fl.us/specificationoffice.

All FDOT employees, FHWA, contractors, and material suppliers can request revisions to the standard specifications, special provisions, or supplemental specifications. Contractors and material suppliers need a department sponsor to actually submit and support a proposed revision. FDOT defines special provisions as specific clauses that are added to, or that revise, the standard specification or supplemental specification for a specific project. A supplemental specification is an addition or revision to a standard specification, applicable to all department contracts.

The originator or department sponsor of a proposed revision prepares the draft, using the standard specifications as a formatting guide. The draft must be in active voice, and include the usage note or the conditions under which the specification will be used. The proposed revision is submitted to the State Specifications Engineer, who evaluates the draft along with the Office of Design Director, and the State Construction Engineer. This committee then refers the proposed revision to the Specification Development Review Committee, where the proposed revision is either approved for further processing or returned to the originator rejected. The Specification Development Review Committee is chaired by the State Specifications Engineer, and includes individuals from Design, Construction, Materials and Research, General Counsel, FHWA, and industry.

The State Specification Engineer determines which specifications are minor or mandatory and establishes the effective letting date for the revisions. A mandatory change is a revision required due to changes in federal or state statutes, rules, or technological changes. A minor change is a revision to provide clarification, typographical, and grammatical corrections.

If it is determined that a rewrite is necessary, the revision is sent back to the originator, who has two weeks to perform this. Once the rewrite is complete, the specifications office electronically transmits the proposed

CONTRACTING PRACTICES

Specifications

specification via FDOT's website for an industry review. The reviewers include all key FDOT offices (thirteen total), the FTBA, trade associations, and FHWA. The reviewers have four weeks to complete their reviews.

All review comments are collected by the Specifications Office and returned to the originator. The originator must review the comments and compile a summary of responses, make the necessary changes, and return the proposed specification to the Specifications Engineer within two weeks. The Specifications Engineer then forwards a copy of the summary of responses to the individuals who made the comments.

The State Specifications Engineer reviews the final draft recommendation with the Office of Design Director and the State Construction Engineer, who either recommend implementation as a special provision, reject it, or refer the recommendation to the Specification Development Committee. Unless FDOT determines that a revision will not be used until formal approval by FHWA, the new special provision is included in the next workbook. The workbook is a collection of all approved special provisions and supplemental specifications that the District Specifications Engineers use when compiling the specifications packages for each contract. It is updated every six months.

If FDOT determines that a proposed specification revision, or an existing special provision, require formal FHWA approval, they are submitted by the State Estimates Engineer. Once FHWA approval is obtained, the revision is implemented as a supplemental specification in the next workbook.

The Product Evaluation Section establishes procedures for review and evaluation of transportation-related products and materials, and maintains a qualified products list (QPL). The QPL reduces field personnel time and effort for material approval. This is discussed in more detail in the testing section of this report.

FDOT is presently initiating a requirement that the design consultants compile the specification packages for each contract. The District Specification Engineer would then be responsible for quality assurance.



Florida DOT District 3 site visit to bridge replacement project.

CONTRACTING PRACTICES

Specifications

FDOT uses end-result specifications with I/Ds for asphalt density and smoothness, in addition to concrete pavement smoothness.

MDOT

There are generally four levels of specifications: special provisions for a specific project, frequently used special provisions, supplemental specifications, and the standard specifications book.



The Project Manager, who is either from Central Office, the region, or is the consultant lead designer, decides on the need for special provisions. The Construction and Technology Division reviews all special provisions to ensure that new special provisions are in proper format, not redundant, or in conflict with existing special provisions. They also are reviewed for clarity and constructability. Whenever possible, previously approved special provisions are used.

There is no industry involvement in writing most special provisions or frequently used special provisions, although they are distributed to industry after approval. Special provisions are not distributed; they are part of each contract's proposal. Prior to a frequently used special provision becoming a supplemental specification, there is a 60-day industry and FHWA review period.

The specification book is typically updated every five to eight years. Consequently there are a large number of special provisions and supplemental specifications that become part of the proposal.

The Engineer of Specifications provides oversight to nine specification committees, one committee for each of the nine specification sections. These committees are made up of central office and region personnel, as well as FHWA. The committee chairs are from the regions and have experience and knowledge in their particular specification section. They control all changes within their section of the specification. There is no overall specification committee. It was reported that it is difficult for field personnel to manage and track all of these changes.

Any unresolved issues on a proposed revision go to an Impasse Panel for a final decision. The Impasse Panel is made up of the Deputy

CONTRACTING PRACTICES

Specifications

Director of Bureau of Highway Technical Services, the Design Engineer, the Construction and Technology Engineer, and a Region Engineer.

MDOT has used quality control/quality assurance specifications extensively for eight years on structural concrete, concrete pavement, and asphalt. It uses I/D payments for concrete pavement and structural concrete based on compressive strengths, and asphalt pavement based on density and mixture. It is also using I/D payments for asphalt and concrete pavement smoothness.

The concrete industry is a strong proponent of the quality control/quality assurance process, while the asphalt industry has shown resistance. MDOT believes that quality has improved as a result of the I/D specifications. With the contractor quality control/quality assurance process, MDOT's inspection staff has been able to concentrate on other areas of the projects.

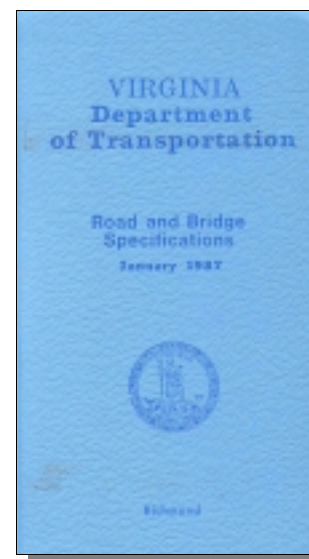
VDOT

VDOT has a specifications section within the construction division with a staff of six engineers, headed by the State Specifications Engineer. Their role is to oversee all new and revised specifications, and to review the specifications package for each contract. In addition to the Specification Section, there are ten subcommittees made up of technical experts from all functional areas within VDOT, including asphalt, concrete, grading, structures, drainage, etc. These subcommittees are responsible for drafting specification language for new specifications and revisions.

VDOT has a specification committee consisting of staff from technical areas to sign off on most specification changes; however, there is no formal specifications committee. Any issue pertaining to a new or a revised specification is finally approved by the Central Office Construction Division Engineer, the Chief Engineer, and FHWA. There is a joint committee made up of the Chief Engineer, Construction Division Engineer, District Administrator, FHWA, and five industry representatives. Their role is to provide policy input for new and innovative specifications. Virginia Roadbuilder's Association (VRA) believes this joint committee is effective in getting all parties involved with the process. VRA also noted that this committee is effective because it has authority.



Michigan DOT Concrete Pavement for a New Interchange Project



CONTRACTING PRACTICES

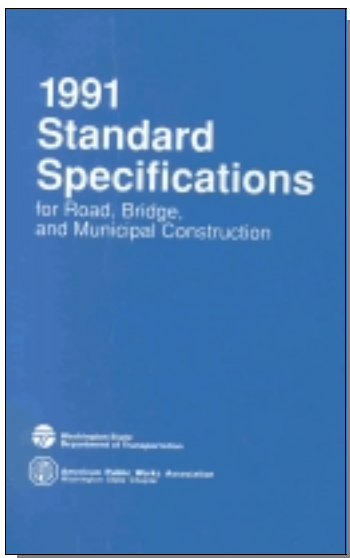
Specifications

The Central Office Construction Division Engineer meets with district construction staff twice a year for a week to discuss specification-related issues, and possible new specifications to be considered by the subcommittees.

VDOT has no written policies or guidelines for the drafting, review, approval, and distribution of specifications. New or revised specifications become supplemental specifications and if appropriate or widely used, are incorporated into the specification book every four years. VDOT performs a cost benefit analysis prior to some specification changes.

VDOT's only performance-based specification is an end-result specification for asphalt pavements using I/D payments for pavement smoothness. Others are being developed.

While contractors perform quality control testing on concrete and asphalt pavements, and on structural concrete, VDOT still performs acceptance testing.



WSDOT

WSDOT has no formalized process for new or revised specifications, and has no formal specification committee. A multi-discipline team is developing a formalized process.

The Specifications Engineer in the Olympia Service Center (OSC), and the Division of Construction, coordinate all new or revised specification requests. The OSC Specification Engineer and the Construction Engineer, Administration perform an initial review. During this initial review, they determine whether there is adequate information, if there is a need, if it is time critical, whether design support is needed, what the current practice is, if management supports it, whether it is legal, and if there are conflicts with current policies or other specifications. Based on this initial review, the proposed change is either rejected, approved with no further review required, or designated for a more detailed review.

CONTRACTING PRACTICES

Specifications

The OSC Construction Engineer coordinates or assigns the coordination of the detailed review with input from the regions, industry, technical experts, FHWA, policy, AGC, and design. Issues that are reviewed include cost, staffing, time, equipment, and training. The OSC Specification Engineer prepares a draft specification, coordinates the review and comment period, incorporates comments, assigns specification type and number, and reviews existing specifications for conflicts. The final approval of the new specification, or revisions to an existing specification, is by the OSC Construction Engineer.

Three times per year, on a fixed schedule, new or revised specifications are implemented through the plans branch of the OSC. Revisions to an existing specification are incorporated into the bid documents as “pink” sheets; revisions to general and special provisions are incorporated as “white” sheets. The standard specifications are updated every two years.

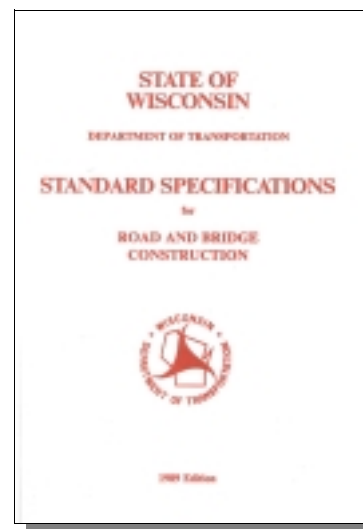
Contractors, in general, believe that they have sufficient input into the review of new or revised specifications, and are given sufficient notice of the revisions.

WisDOT

Within the Bureau of Construction of WisDOT, there are standing committees for asphalt, concrete, grading, and structures that meet quarterly to discuss specification-related issues. These standing committees are made up of representatives from the various sections within the Bureau of Construction, the WisDOT transportation districts, contractors, trade associations, FHWA, consultants, and other interested and expert personnel.

Subcommittees or workgroups are assigned the task of taking the standing committees’ policy decisions and drafting them into specification language. The Standards Development section generally is included during this initial draft stage. The full committees then review and approve the draft specification and forward it to the Standards Development section for final editorial work and any additional reviews as required.

A new specification or revision can be submitted by industry or department personnel to the standing committee chair for inclusion at the



CONTRACTING PRACTICES

Specifications

quarterly meetings. The standing committees have the final approval for any new specification or revision.

Industry is represented on each of the standing committees and is thus intimately involved throughout the specification development and review process. The Standards Development section also consults with industry during the final editing stage and the final review process.

Industry is represented on each of the standing committees and is thus intimately involved throughout the specification development and review process. The Standards Development section also consults with industry during the final editing stage and the final review process.

New specifications are published annually statewide as supplemental specifications. If a new specification is needed prior to the annual release of the supplements, an interim supplement can be issued. For new provisions that are unique, pilot specifications are issued as special provisions on selected projects only for one to two construction seasons before adopting them statewide as part of the annual supplement. Industry-wide changes that have to be implemented before the annual supplements are issued can be implemented through Project Special Provisions or through policy directives called Construction Notes. The standard specifications are updated every six years and they are currently being rewritten into active voice, imperative mood.



Wisconsin DOT District 2 Site Visit to G/I-94 Interchange Project

WisDOT has no formal policies or guidelines for drafting, reviewing, approving, and distributing specifications. Each new edition of the standard specifications, supplements, and interim supplements, are mailed to each pre-qualified contractor and eligible consultant. No formal subscription service is available, and there is currently no Internet access for any of these. WisDOT plans to provide a “non-contractually binding” electronic version of the standard specification on the Internet.

WisDOT uses Quality Assurance (QC/QA) specifications through a program known as the Quality Management Program (QMP). It uses I/D for asphalt density, concrete pavement compressive strength and smoothness, and for structural concrete compressive strength. It is developing a specification for asphalt pavement smoothness and subgrade density. The contractor performs the quality control for these areas, and they must be certified through WisDOT’s Highway Technician Certification Program.

Contractors favor quality assurance specifications and WisDOT believes that they have had a positive impact on quality. The adoption

CONTRACTING PRACTICES

Specifications

of I/D pay adjustments has made contractors more conscious of quality. With the QMP process, WisDOT is developing a reliable database of key quality-related parameters, which will make it possible to objectively assess quality in the future.

As a result of the QMP process and I/D pay adjustments, fewer WisDOT inspectors are required in the field. Consequently, the role of the inspector is changing. Contractors must also add to their bids the cost of the additional testing now required.

WisDOT does not perform a cost benefit analysis prior to a specification change.

Project Scheduling

General

All states surveyed refer to some historical data to set the contract time in the bid documents. For larger and more complex projects, the trend continues to be toward more effective use of critical path method (CPM) schedules, though this trend is slowed by the need for training in the software programs used for the schedules. It seems that the lack of training leads to a lack of confidence in the schedules and suspicions that contractors are able to manipulate schedules to their advantage. Both contractors and DOTs noted that this can lead to posturing for claims and a reluctance to “accept” or “approve” schedules.

All states surveyed, except ODOT, issue Notices to Proceed to contractors.

ODOT

Most ODOT contracts are fixed completion date contracts. ODOT also uses a contract provision that specifies that the work shall be performed within a window of “x” days, with the provision that it must be completed no later than a specified date.



Wisconsin DOT Bridge Construction on the G/I-94 Interchange Project

SCHEDULING



CONTRACTING PRACTICES

Project Scheduling

Experience and some historical data are used by ODOT to establish contract completion dates. Preliminary internal schedules are not developed by ODOT prior to putting a project out for bids.

The start of work is typically determined at the discretion of the contractor unless there are specific provisions to the contrary in the contract. ODOT does not issue a notice to proceed to the contractor.

ODOT typically uses one of three different types of progress schedules: 1) the standard general specifications require a bar chart schedule, 2) Proposal Note 102 requires a relationship bar chart schedule showing interdependency between activities and the project's critical path, and 3) Proposal Note 107 requires a CPM schedule. The bar chart schedule is used most often, and is only updated when requested by the Project Engineer. The relationship bar chart schedule and the CPM schedule are used for larger or more complex projects and require monthly updates.

OCA believes that schedules are good informational tools; however, it does not want schedules to be used to penalize contractors.

OCA noted that schedules are typically used on the big jobs, but not on the smaller jobs. It reported that when schedules are submitted, they are generally not well thought out, and are only submitted because the specifications require it. OCA believes that schedules are good informational tools; however, it does not want schedules to be used to penalize contractors. On projects where there is plenty of time in the schedule to get the work done, the benefit of using a schedule is questionable. OCA questioned why certain expensive scheduling software is required by ODOT in its specifications, when less expensive software is available to perform the required functions.

ADOT

ADOT uses working day, calendar day, and fixed completion date formats to establish contract time. Working day contracts are used most often. The designer initially establishes the proposed project duration. This proposed duration is then reviewed by ADOT's District Office and the actual contract duration is established.

ADOT issues the contractor a notice to proceed. A weekly notice is issued by ADOT's project personnel to the contractor advising it of the

CONTRACTING PRACTICES

Project Scheduling

number of working days used during that week and for the project to date.

ADOT's standard scheduling specification requires that the contractor submit a bar chart schedule. ADOT also has an optional special provision that requires a CPM schedule. The CPM schedule is generally required for projects greater than \$10 million. The CPM specification is comprehensive and requires monthly updates of the CPM schedule as well as weekly submittals of bar chart schedules of the work proposed for the next two-week period. Payments are withheld if the contractor fails to submit updated schedules.

ADOT always gets a two-week schedule from the contractors in accordance with its scheduling specifications. Arizona AGC supports the use of these schedules because it helps the contractors keep track of the work.

FDOT

FDOT typically uses a calendar day format to establish contract time. Each district has a scheduling engineer who works in the Construction Office. In general, the scheduling engineer establishes the proposed project duration for a project by entering historical production rates into a CPM schedule. This is an FDOT construction department responsibility.

FDOT issues a notice to proceed to contractors. Its standard scheduling specification requires a bar chart schedule. A CPM schedule is generally required for projects greater than \$5 million or for complex projects. The CPM specification requires monthly updates. Payments are withheld if a contractor fails to submit updated schedules.

FTBA noted that schedules are frequently used for supporting claims or defending against claims.

MDOT

MDOT uses working day, calendar day, and fixed completion date formats to establish contract time. It is the responsibility of the Resident Engineer to establish the performance time or completion date for a



Arizona DOT Newly Widened and Re-surfaced Rural Road

A CPM schedule is generally required for projects greater than \$5 million or for complex projects.

CONTRACTING PRACTICES

Project Scheduling

project. Duration and dates are generally set by reference to historical data. CPM schedules that use generic production rates derived from a database developed by MDOT are used to determine performance rates or completion dates for complex projects. A study is being performed by MDOT to determine production rates for work performed under expedited conditions. When this study is completed, MDOT intends to use it to establish contract time and completion dates for expedited projects.

CPM schedules are required on complex projects and on all A+B and I/D projects.

MDOT issues the contractor a notice to proceed. Its standard scheduling specification requires as a minimum a list of controlling work items for completion of the project. MDOT also uses linear schedules, bar charts, CPMs and a schedule format that simply lists the critical activities with the start and finish dates. A new CPM specification is currently under development. CPM schedules are required on complex projects and on all A+B and I/D projects. CPM schedules typically must be updated monthly.

As provided in the specifications, schedules must be approved prior to award, and the approved schedule then becomes a contract document.

MRBA representatives reported that the State Transportation Commission pre-approves most projects and the schedule duration for each project. If a bid is rejected, or if there is only one bidder for a job over \$500,000, or if the bid is 10%+ over the Engineer's estimate and over \$500,000, the Commission must re-approve the project. Because the Commission only meets once a month, the award of a contract can be delayed if it has to go back before the Commission. The vast majority of contracts do not need Commission reviews after approval. For urgent projects, the Chair of the commission has the authority to waive Commission review if it is in the best interest of MDOT after reviewing the details pertaining to the urgent project.

In general, MDOT has 49 days to award a contract. MRBA noted that extending the award can also delay a contractor's schedule because the contractor does not typically build this time into the schedule.

MRBA supports the fact that MDOT lets 90% of state projects by the end of the first quarter of each calendar year.

MRBA supports the fact that MDOT lets 90% of state projects by the end of the first quarter of each calendar year. This enables contractors

CONTRACTING PRACTICES

Project Scheduling

to plan their schedules and allocate their resources in advance of the season.

VDOT

VDOT uses either a calendar day or fixed completion date format to establish contract time. VDOT also uses what it calls “dual date contracts.” Dual date contracts require, for example, that the contractor must complete the work in 90 calendar days, but no later than November 1. VDOT issues a notice to proceed to the contractor. VDOT’s standard scheduling specification requires a CPM-type schedule; however, all types of schedules are actually used. Resource-loaded CPM schedules are required on large or complex projects to determine contract durations and contract completion dates. The durations for activities and the completion dates for projects are determined by judgment and experience.

VRA reported that special provisions may vary regarding schedules. On small projects a meeting to discuss the sequence of work may be the only requirement. CPM schedules may be required on others.

WSDOT

WSDOT typically uses a workday format to establish contract time. WSDOT generally develops an internal schedule during the design phase to establish the original contract duration.

WSDOT issues a notice to proceed to the contractor. At the end of each week, the Project Engineer advises the contractor in writing of the number of workdays actually used that week and for the project to date.

WSDOT’s standard scheduling specification requires a CPM schedule. The specification also requires the contractor to submit a preliminary schedule showing the first 60 working days. Additional schedule updates are required when requested by the Project Engineer. Special provisions in contract documents may change this standard requirement on smaller projects.

Washington State AGC noted that on larger jobs, the detailed CPM schedule is required. Contractors reported that reaction to their schedules

CONTRACTING PRACTICES

Project Scheduling

varies from job to job. The only consistency was WSDOT's refusal to "approve" a schedule. On more complex jobs, updates and recovery schedules are an integral part of project management.

WisDOT

WisDOT uses working day, calendar day, and fixed date completion date formats to establish contract time. Most contracts are working day contracts. Designers estimate original durations based on experience and historical data.

WisDOT issues a notice to proceed to the contractor. WisDOT's standard scheduling specification requires a bar chart schedule; however, it is piloting the use of relationship bar chart (RBC) schedules in 2000 and CPM schedules in 2002. These new schedule provisions will require schedule updates and the RBC and CPM schedules will be pay items in WisDOT's contracts.

Wisconsin Transportation Builder's Association (WTBA) noted that scheduling is in the developmental stage at WisDOT. Some contractors have experience with scheduling because many private owners require it. Because of this the transition may be easy for some contractors. Contractors believe the use of schedules will help when they try to negotiate time extensions due to owner-caused delays. Contractors do not believe that the use of RBC or CPM schedules is necessary on smaller jobs, when bar charts could be just as effective.

Contractors noted that schedule updates every month are fine; however, more frequent updates may be necessary in some cases. WisDOT requires that contractors submit revised baseline schedules when the work falls behind schedule by 14 days.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

General

Administration of change orders in the states surveyed was similar with respect to the ultimate documentation required, but the Team encountered significant variations in methods available to respond quickly to changes on a project. FDOT's use of a contingency item in the contract seemed to permit the quickest response to smaller changes. Dollar limitations on field level authority also varied significantly from state to state.

All states surveyed noted the need for more constructability review and implementation of lessons learned from earlier projects. ADOT's Value Analyses Section, MDOT's Quality Assurance and Lettings policy, VDOT's mandatory pre-bid on-site showings, and WisDOT's pre-bid reviews by the construction personnel who will be administering the contract, are all procedures designed to avoid changes and claims.

A spectrum of Alternate Dispute Resolution (ADR) techniques was encountered. WSDOT's and FDOT's use of Dispute Review Boards (DRBs), are among the most aggressive attempts at reducing claims.

FDOT and ADOT have or are about to implement contractual answers to the questions concerning payments of home office overhead claims that the courts have been unable to resolve over the years.

ODOT

Most change orders are initiated at the project level. For unit-priced highway construction contracts, change orders are most commonly required to make adjustments to the original contract quantities for established items of work. This is the most common type of change order. Approval by two people within the District above the project level is required to change quantities.

An extra work change order is required to add new items of work to a project. The dollar value of any new item of work is subject to a statutory limitation of: the lesser of 5% of the contract value or \$100,000. If the value of the extra work change order is within the statutory limitations, it can be approved at the District level. If the value is beyond the statutory limitations the change order must be submitted to the State Controlling Board (a legislative body) for approval. Approval

CHANGE ORDERS



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CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

by the State Controlling Board is not required for a new item of work if the Director of Transportation has declared an emergency.

If a claim issue is not resolved at the District level, it is ultimately elevated to the Director's Claim Board.

ODOT's claim process requires early notice by the contractor. If a claim issue is not resolved at the District level, it is ultimately elevated to the Director's Claim Board. This board is comprised of two Assistant Directors and a District Construction Engineer from a district different than the District in which the claim originated. The decision of the Director's Claim Board represents ODOT's final position on the claim in the department's administrative process. If a contractor does not accept the decision of the Director's Claim Board, it can file suit in the Ohio Court of Claims. Decisions of the Director's Claim Board are written and published in a Claims Digest, which is distributed throughout ODOT for information and reference, and is made available to the public. The Claims Digest also contains information on claims settled by mediation or by arbitration.

Claims avoidance techniques used by ODOT have included constructability reviews by construction personnel, pre-bid meetings, acceptance of and response to pre-bid questions, contract administration training of construction personnel, and the sharing of the Claims Digest.

ODOT has used mediation and arbitration as ADR techniques.

ODOT recognizes home office overhead (HOOH) costs for delay claims. The Central Office reviews all HOOH claims. Such costs are determined by a modified Eichleay method.



The Ohio Contractor's Association (OCA) believes that the claims process works. It was noted that, because of the contractual notice provisions, contractors must file claims so that its rights are reserved should the issue not be resolved. OCA believes that approving of change orders at the District level (if the work is within the statutory limits of \$100,000 or 5% of the contract value) helps avoid claims.

ADOT

Most change orders are initiated at the project level. Quantity adjustment change orders are required when quantity changes exceed 25% of the original quantity. The Project Engineer has approval

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

authority up to \$50,000 (designer concurrence is needed when a change is greater than \$25,000). The District Engineer has change order approval authority up to \$250,000. The State Engineer has change order approval authority up to \$500,000. The Statutory Limits for any one change order is 10% of the original contract amount. Concurrence by the State Construction Engineer is required for approval of changes after the net value of changes plus the original bid amount of the project exceeds 105% of the original bid amount.

Scope change is the most common factor cited to justify a change order. ADOT's policy permits a project's physical limits to be extended by as much as 20% as long as the parameters set forth above are not exceeded (105% of bid cost).

ADOT's specification for pricing extra work is simple and straightforward. Whenever possible, unit prices are used for change orders. The Resident Engineer is required to do an independent estimate, compare that estimate with the contractor's request, and then negotiate the price with the contractor. Previous prices for similar work are considered. Force account is the method of last resort.

ADOT's claims specification requires that the contractor provide written notice; however, constructive notice is frequently accepted. Reportedly, ADOT's extensive use of partnering has resulted in few formal claims. Arizona AGC reported that the most common dispute is when ADOT fails to accept how a contractor planned to do a job, versus how ADOT conceived the job would be built.

ADOT's extensive use of partnering has resulted in few formal claims.

Claims avoidance techniques used by ADOT include constructability reviews on specific projects and an on-going change order review process for all projects by the Value Analysis Section. All change orders are reviewed by the Value Analysis Section to determine what is causing change orders. Findings of the reviews are communicated back through ADOT in an effort to prevent similar mistakes on future projects. Pre-bid meetings have been used but are considered ineffective when contractors do not ask questions.

Arbitration has been used as an ADR technique. Arbitration is binding only if both parties so agree.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

HOOH claims are considered in only a few instances. ADOT is considering implementing a HOOH specification to address this contentious issue but is awaiting the results of National Cooperative Highway Research Programs (NCHRP) report on this issue before doing so.

FDOT

Most change orders and supplemental agreements are initiated at the project level. Florida uses change orders to modify contract requirements. Supplemental agreements are used to add work items to a project. Adjustments to the original contract quantities do not require the processing of a change order or a supplemental agreement, unless a major item of work has a variation in quantity of more than 25%.

To facilitate the administrative requirements for changes, a contingency pay item is included in most contracts. This item is a lump sum set by the DOT.

FDOT is required by law to encumber the funds necessary to make payment prior to instructing a contractor to perform additional work. To facilitate the administrative requirements for changes, a contingency pay item is included in most contracts. This item is a lump sum set by the DOT. Use of this contingency item allows FDOT to fund supplemental agreements and to instruct the contractor to perform additional work without going through the process that would otherwise be necessary to encumber additional funds. The amount of the contingency pay item is usually about 5% of the contract value up to a maximum of \$150,000. FDOT may also use this contingency item to fund a unilateral payment to the contractor. Unilateral payments are payments made pursuant to unilateral supplemental agreements at an amount determined by FDOT. Such unilateral supplemental agreements enable FDOT to direct a contractor to perform work even when a price cannot be agreed upon. A contractor may contest the price established by FDOT, but until final resolution of the issue the contractor is obligated to perform as directed.

Each District Construction Engineer has approval authority up to \$100,000. The District Secretary must approve supplemental agreements greater than \$100,000. An FDOT attorney reviews nearly all supplemental agreements.

FDOT's policy is to recoup additional construction costs caused by design errors from design consultants. This occurs when the additional costs caused by such errors exceeds \$25,000. It is a District

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

responsibility to pursue collection of these costs from the design consultant.

FDOT is implementing a new claims specification. It requires that the contractor provide detailed notice. Once a claim is submitted, a contractor cannot allege new issues or increase the amount of its claim. An officer of the contracting company must certify, under penalty of perjury, that the reasons cited as causing the claim, and the amount being sought are true and accurate. Costs for acceleration are recoverable only when the acceleration is ordered by the DOT. The new specification also contains a single, simplified calculation for computing all overhead costs associated with delays, including both field and home office costs. This new specification also provides that there is no reimbursement for delay overhead until the total of all delays for the project have exceeded 10 days.

Claims avoidance techniques used by FDOT include pre-bid meetings, constructability reviews, and partnering. The Specifications Engineer who is a Construction Office employee performs constructability reviews when the plans are about 90% complete in the district. In addition, a scoping meeting is held for every project and is attended by both Construction Department and Maintenance Department personnel.

FDOT uses mediation, arbitration, and DRBs as ADR techniques. All claims under \$250,000 must go to the State Arbitration Board. Claims greater than \$250,000 may go to the State Arbitration Board if both parties agree. The decision of the State Arbitration Board has the same binding effect as a decision issued by a court. A decision of the State Arbitration Board may be appealed to the Florida Court of Appeals. In addition to DRBs for specific projects, FDOT is establishing standing DRBs that will serve a number of projects within certain geographic areas. They are also developing standing DRBs for certain complicated types of work.

FTBA supports DRBs, and believes that they will replace State Arbitration Boards. Contractors support FDOT's new claim specification.



Florida DOT District 3 site visit to bridge replacement project.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

MDOT

MDOT classifies modifications as “changes,” “extras,” and “adjustments.” Changes are amendments to existing items. Extras are new items of work. Adjustments are always in dollars and involve existing items. An MDOT Region approves all contract modifications. State Administration Board approval is required beyond certain monetary limits. Sign-off and approval is required by two different engineers. The MDOT Commission is also involved with contract modifications over certain monetary limits. A modification goes to the MDOT Commission before it goes to the State Administration Board.

MDOT has a defined claims process, concluding with the Central Office Review. The Central Office Review Panel consists of three project engineers, one being a Region Engineer. The Panel is selected on a rotating basis with members from Regions different than the Region where the claim originated.



Michigan DOT Rural Project Visit to an Interstate Reconstruction Job

Claims avoidance techniques used by MDOT include pre-bid meetings, partnering, and plan review processes. MDOT has a constructability review process that is defined in a written policy. The process begins when the plan is completed to a required level as described in the policy and is submitted to Quality Assurance and Lettings. Quality Assurance and Lettings schedules a plan review meeting about 4 to 5 weeks after the submission and distributes copies of the plan to the proposed meeting attendees as listed in the policy. This list includes personnel from maintenance and construction, including the Delivery Engineer (Project Engineer). After the plan review meeting, the Quality Assurance Engineer resolves all issues raised and the Project Manager reviews and updates the original scope, estimated costs, and schedule. In addition, an Omission/Errors Check meeting is held for every project about one week prior to advertisement. The purpose of this meeting is to review the bid documents for missing, incorrect, or conflicting data prior to advertising and letting. The process and attendees of the Omission/Errors Check meeting is also set forth in a written policy.

MDOT will pay claims for HOOH when there are long extensions of time. The Eichleay formula is considered in evaluating such claims, but Eichleay is used only as a guide.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

MRBA reported that MDOT's reluctance to approve changes and extras is the most common source of claims. Contractors believe that MDOT's constructability reviews have helped reduce the number of claims; however, contractors typically do not participate in these reviews because this may disqualify them from bidding on the work. MRBA would like MDOT's claim review boards to be made up of non-MDOT personnel.

Contractors believe that MDOT's constructability reviews have helped reduce the number of claims;

VDOT

Changes are generally initiated by VDOT personnel at the project site to address a need. Change orders are not required for minor quantity adjustments. Within VDOT, the Resident Engineer may approve change orders up to \$100,000 for projects on the secondary road system only. VDOT's District Administrators may approve change orders up to \$200,000 for projects on any system. VDOT's State Construction Engineer may approve change orders up to \$500,000 for projects on any system. The Chief Engineer must approve change orders over \$500,000.



Virginia DOT Launching gantry at Pocahontas Freeway Project

VDOT has a specification defining its claims process. That specification provides that a contractor may only make an official claim after final payment has been issued. The Chief Engineer is the only one authorized to make an offer on an official claim. If the contractor rejects the Chief Engineer's offer, the claim goes to the Commissioner for a hearing. The time prior to a formal hearing may be as much as 12 months. Virginia has limited sovereign immunity and, if the contractor rejects the decision of the Commissioner, it can then bring suit against the state but only after obtaining the approval of the State Attorney General. A settlement at the Commissioner's level requires approval of the State Attorney General and the Governor. Very few claims go this far.

Claims avoidance techniques used by VDOT include partnering, constructability reviews, training, and pre-bid showings. Pre-bid showings are held for all projects at the project site. Attendance at the pre-bid showing is required in order to submit a bid for some projects.

VDOT is trying a DRB on one project as an ADR technique. The DRB's decision is non-binding on the parties.

The Construction Engineer usually negotiates HOOH. VDOT believes that HOOH should be a maximum of 8.5% and FOOH a maximum of

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

7.5%. If VDOT and the contractor cannot come to an agreement, an audit of the contractor's records will be performed.

VRA reported that right-of-way and utility interferences are the most common claim issues. It supports constructability reviews with contractor participation in the process.

WSDOT

Changes are generally initiated by personnel at the project site to address a need. Change orders are not required for measured variations in quantity of planned work that do not exceed 25%. Within WSDOT, a Project Engineer may approve change orders up to \$50,000. The Project Engineer also must make a written recommendation concerning approval for change orders greater than \$50,000. Regions execute change orders with a value up to \$200,000. Larger changes are executed at the Olympia Service Center. It is WSDOT's goal to have several people review all change orders whether their approval is needed or not. Discussion and consultation with Region Engineers or Olympia Service Center (OSC) experts prior to or during change order negotiation is strongly encouraged. The Project Engineer is responsible for substantiating the prices that are agreed upon. Whenever possible, WSDOT uses forward pricing to establish costs for new items of work, acceleration, and changed conditions. Forward pricing emphasizes the negotiation of agreed upon unit prices or lump sums prior to performance of the work, rather than using time and materials (force account) methods. WSDOT at all levels support forward pricing as the process enables it to put issues aside and concentrate on building the best job.

because of its use of partnering and DRBs, WSDOT reportedly has very few claims.

WSDOT has a specification that defines its claims process; however, because of its use of partnering and DRBs, WSDOT reportedly has very few claims. Claims avoidance techniques include constructability reviews, pre-bid questions and meetings, and partnering. The constructability review process used by WSDOT is performed primarily by WSDOT personnel who will be involved in the construction of the project. The constructability review process is described in a manual recently developed by WSDOT.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

ADR techniques employed by WSDOT include mediation (infrequently), arbitration, and DRBs. Arbitration is required for claims under \$250,000 by contract and is binding. DRBs are used on certain projects as specified by a special contract provision. The decision to use this special provision on a project is made by the Region.

HOOH is considered only when the contractor can provide convincing evidence. The calculation of HOOH is made by the Project Engineer in consultation with OSC experts. Eichleay is used as a guide. Revenue from change order work is included in the calculation to offset unabsorbed costs.

Washington State AGC reported that most disputes get resolved at the Project Engineer level; however, for claims that do not, the DRB process is helpful.



Washington DOT Rural site - emergency project to repair road damaged by landslide.

WisDOT

Changes are generally initiated by personnel at the project site to address a need. Change orders are only required for new work and are not required for quantity changes. Within WisDOT, a Project Engineer may approve change orders up to \$10,000. Area Supervisors can approve change orders up to \$50,000. The District Chief must approve change orders over \$50,000. The Legislative Survey Bureau has contract change order oversight privileges but is not included in the approval process.

WisDOT has developed a new claims process and specification. This new claims specification requires that contractors provide notice of intent to file before commencing any work that is the basis for a claim. WisDOT strictly enforces this provision. A Claims Appeal Board that includes three WisDOT Administrators is the last step in the claims process. Wisconsin has sovereign immunity and a contractor must obtain permission from the legislature to litigate a claim.

Wisconsin has sovereign immunity and a contractor must obtain permission from the legislature to litigate a claim.

Claims avoidance techniques used by WisDOT include constructability reviews by WisDOT construction personnel, pre-bid meetings, negotiation training, and partnering. Constructability reviews are generally performed by the construction personnel who will be administering the project and prior to PS&E.

CONTRACTING PRACTICES

Change Orders/Claims Avoidance/Analysis Techniques

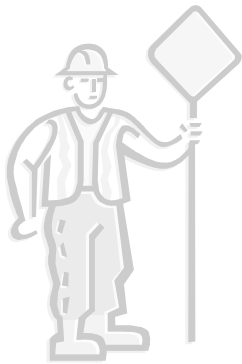
WisDOT also uses standing neutrals to hear disputes and issue opinions as an ADR technique. Standing neutrals are commonly used for claims greater than \$500,000 or for complex issues.

WisDOT only considers claims for direct costs. HOOH, extended jobsite overhead, inefficiency, and other impact-related costs are not recoverable.

WTBA noted that most disputes get resolved at the project or district level. It reported that the state's sovereign immunity affects the claims resolution process by providing a very real incentive to resolve claims at the project or district level.

Maintenance of Traffic

TRAFFIC CONTROL



General

Maintenance of Traffic (MOT) and minimizing the impact of construction on the traveling public is an important issue with all of the DOT's visited. On complex jobs, specific Traffic Control Plans (TCP) are typically developed. Various innovative contracting methods have also been used for MOT.

ODOT

Minimizing the impact of construction work on the public is among ODOT's primary goals. The Governor recently mandated that no fewer than two lanes of traffic in each direction be open on interstates during construction. In addition, ODOT has design criteria for its TCPs stipulating that delays through a work area due to construction have to be five minutes or less. As required by Ohio statute, contracts typically include job-specific MOT plans that are prepared during the design process in accordance with the specific requirements defined in the plans and specifications.

The Governor recently mandated that no fewer than two lanes of traffic in each direction be open on interstates during construction.

ODOT's Office of Traffic is preparing a policy requiring that a work zone impact study be performed prior to design to specify queue thresholds. ODOT's Production (Design) Office is responsible for

CONTRACTING PRACTICES

Maintenance of Traffic

identifying MOT requirements; and invites the public to offer comments during the preliminary design phase. Contractors do not play a role in the development of the original TCP; however, they frequently recommend changes during construction.

If a TCP is modified prior to letting, it can be modified by addendum. After a contract is awarded, and a TCP is modified, a change order is issued if costs or time are affected. If costs and time are not affected, the changes can be documented in job diaries or letters. Usually these changes do not go back to design, but they do get reviewed by the Traffic Management Specialists in the district office.

Traffic flow is managed in a variety of ways, including the use of highway advisory radio systems, changeable message signs, off-peak work hours, limited hours for lane closures (coupled with liquidated damages), public information campaigns, coordinated use of local streets, ramp closures, and ramp metering. Innovative contracting methods have also been used including A+B bidding and I/Ds tied to interim completion dates.

The majority of contracts have lump sum pay items to pay for MOT; however, ODOT does occasionally use unit prices.

Contractors that fail to follow the TCP are subject to breach of contract provisions (suspension of work, termination, etc.), and liquidated damage assessments tied to lane access. ODOT evaluates contractor compliance with the MOT provisions in its contract. This evaluation can also affect a contractor's pre-qualification status.

ODOT monitors workzone safety and enforces posted (reduced) speed limits through the use of police details, fine doubling, and reviews of the project work by the Project Engineer.

The OCA voiced the opinion that night work adversely affects quality because it is difficult to see the pavement during final paving. OCA was also concerned about the safety of its workforce, due to the effects of artificial lighting and sleep deprivation on its personnel.

CONTRACTING PRACTICES

Maintenance of Traffic

ADOT

ADOT uses TCPs for discrete sequences of work on projects and on projects that have long-term road closures. Small projects do not have TCPs. The contractors are required to submit plans for each closure. Project-specific MOT requirements are detailed in the plans or special provisions.

The Traffic Designer identifies MOT requirements. The engineer responsible for the construction adds notes for MOT based on experience. Contractors are not involved in the original development of the MOT design. It is common, however, for contractors to recommend changes to the TCP following contract award. After contracts are awarded, TCP's can be modified by change order to reflect cost or time changes or savings. Minor changes are documented by daily diary entries. For scope of work changes involving a change in the TCP, a change order is required. Approval by the Project Engineer or designer is required for contractor proposed TCP changes.

Traffic flow is managed by a number of different means and methods. These include night and weekend work, changeable message signs, limited work hours (non-peak), public information campaigns (i.e., newspapers, Internet, etc.), and construction hotlines. Various innovative contracting methods are also used including A+B bidding, lane rental, I/Ds, and liquidated damages. ADOT also monitors the effectiveness of the TCP by comparing pre-construction travel times through a work zone with travel times during construction.

ADOT usually pays for traffic control with unit prices. On small projects lump sums are used for traffic control items, with some projects using pre-determined prices (approximately 90% of project traffic control is contractor bid, with 10% lump sum and pre-determined pricing). Contractors that fail to follow the TCP requirements receive formal notification and are subject to progress payments being withheld.

The TCP is monitored in a variety of ways including project staff inspections, law enforcement officers enforcing speed limits and serving as flaggers, full-time traffic control personnel pursuant to the

CONTRACTING PRACTICES

Maintenance of Traffic

specification, and monthly meetings regarding traffic safety held at the project office. ADOT has new legislation to have fines double in work zones when workers are present.

Contractors reported that traffic should only be restricted when work is actually being performed. Contractors typically implement MOT provisions even when work is not ongoing resulting from payment by unit prices. Arizona AGC likes lane rental and believes that the ADOT lane rental specification is an effective tool for minimizing impacts on the traveling public.

ADOT lane rental specification is an effective tool for minimizing impacts on the traveling public.

FDOT

FDOT's primary goal is to move traffic through work zones without reducing speeds any more than necessary, and without causing driver confusion. TCPs are detailed in the contract plans, standard index plans, roadway and traffic standards, and the specifications. Standard index series 600 through 665 provides approved standard signs.

The Production Department (Design) identifies MOT requirements. The Construction Department reviews the TCPs at 30%, 60%, and 90% production stages for comments on the proposed plan. The Project Engineer (PE) reviews the TCP during the final design stages for completeness.

Contractors are not involved in original TCP design or development. The contractor can elect to use the TCP shown in the plans or submit a proposal for FDOT review. After the contract is awarded, TCPs can be modified per specification 102-2.6. All proposed alternate TCPs must have a Specialty Engineer's seal and signature. FDOT's Resident Engineer must approve the modifications to the TCP in writing.

A value engineering cost proposal (VECP) can be initiated for TCP modifications. Changes to the TCP that alter traffic patterns are submitted to FDOT for approval pursuant to Construction Project Administration Manual (CPAM) section 6-1-1. A professional engineer's seal and signature are required on all MOT changes.

Weekday and nighttime inspections are required of the contractor. The

CONTRACTING PRACTICES

Maintenance of Traffic

PE reviews these reports and the project staff conducts independent field inspections. Law enforcement officers also monitor the work zones and enforce speed limits.

To analyze traffic flow in an effort to avoid delays, FDOT uses a lane closure analysis sheet that takes into account a number of factors.

To analyze traffic flow in an effort to avoid delays, FDOT uses a lane closure analysis sheet that takes into account a number of factors, including, but not limited to, seasonal and directional considerations, peak hour volumes, obstruction factors, and lateral clearance.

FDOT manages traffic flow by using highway advisory radio systems, temporary pavement detours, limited work hours (non-peak), public information personnel, and law enforcement officers. FDOT also requires that the same number of lanes open prior to construction be open during construction. Emergency evacuation procedures must also be in place. FDOT also uses innovative contracting methods such as A+B bidding and lane rental as a means to minimize impacts to traffic flow.



Florida DOT Urban District Construction Project that was Consultant Managed.

To manage traffic flow through construction zones FDOT uses speed limit signs in the advance warning area of the work zone, intelligent transportation systems (ITS), motorist awareness systems (rural-high speed), changeable message signs, and the signing of business entrances.

Contractors that fail to follow TCP requirements are subject to breach of contract, lane rental charges, evaluations that could impact bidding capability, project shutdowns, and disqualification of the work site traffic supervisor.

FDOT pays for traffic control measures with unit prices (item and day units of measure). Lump sum payment covers very few items. Consideration is being given to having separate bid items for truck-mounted attenuators. Currently, they are considered incidental to the work.

FTBA likes bidding MOT using unit prices, and supports FDOT's requirement that the worksite safety supervisor be certified in MOT.

CONTRACTING PRACTICES

Maintenance of Traffic

MDOT

TCPs are noted as special provisions in each contract. The special provisions include general information about the project, construction influence area descriptions, traffic restrictions, construction staging, traffic control devices and pavement markings, and specific details of the traffic control measures. Specific MOT requirements are detailed in the plans and specifications.

The Transportation Service Centers identify TCP requirements. Public input is solicited early in the design process. Potential business impacts are also analyzed and considered. For instance, between Memorial Day and Labor Day efforts are made to keep all north-south routes open during weekends.

On complex projects, contractors are occasionally involved in the original TCP design to comment on staging sequences. Generally, however, contractors are not involved in the development of the original TCP special provision. If a TCP is modified prior to bid, the change is handled by addendum.

Contractors may, and usually do, recommend changes to the TCP following contract award. After the contract is awarded, TCPs can be modified with agreement from the Resident Engineer (RE). The RE issues a work order for the change followed by written authorization/approval to validate the contract change. The contractor usually wants to change the staging sequence in order to expedite the work on the project. Modifications are documented in daily diary entries, inspector's daily reports, and work orders issued by the RE and the Transportation Service Center Manager during the authorization process.

Traffic flow is managed by requiring night and weekend work using changeable message signs, limiting non-peak work hours, initiating public information campaigns (brochures, radio, telephone hotlines), and through lane and ramp rental for limited closure times. MDOT also uses innovative contracts to manage traffic flow such as A+B bidding and I/D contracts with interim completion dates.

In addition, MDOT is using techniques such as the Indiana Lane Merge, law enforcement, doubling fines in work zones, and completely closing



Michigan DOT concrete pavement resurfacing project.

CONTRACTING PRACTICES

Maintenance of Traffic

roads for limited time frames. MDOT experimented with the Indiana Lane Merge, shifting all traffic to the right. In the event of a right lane closure, traffic is merged into the right lane such that a shift to the left can be accomplished well in advance of the closure point. This eliminated driver confusion regarding which lane they were to merge into during lane closure conditions.

If a contractor fails to follow the TCP, it is subject to suspension of work, negative assessments for lane/ramp rental, pre-qualification impacts, and liquidated damages or disincentives pursuant to the contract provisions.

Typically, the project staff monitors the work zone through inspections. On complex projects, the contractors are required to employ a worksite traffic supervisor to oversee the work zone. Occasionally, radar trailers are used in work zones to indicate actual speeds.

Traffic control measures are typically paid for by unit prices. Preventive maintenance projects, however, use lump sum pay items.

The MRBA prefer total road closure with detours; however, it realizes that this is typically not practicable. It is difficult for contractors to bid A+B contract work using an innovative MOT technique because they do not know whether MDOT will approve the innovation. Also, contractors do not want the competition to learn of the innovation prior to the bid.

Some contractors have adapted to night work and some have not. MRBA believes MDOT goes too far in minimizing impacts on the public. With so much work being done during a short construction season, coupled with restrictive TCPs, contractors and MDOT staff work too many hours over short periods. Consequently, they get burned out. MRBA is trying to pilot a program where MDOT projects would be shut down on certain weekends during the season with no schedule implications on the contractor.

CONTRACTING PRACTICES

Maintenance of Traffic

VDOT

TCPs are detailed designs. Specific MOT requirements are detailed in the contract documents, but can change based on field conditions.

Design Units, Traffic Engineering, and the field units identify MOT requirements. Public Hearings are conducted for input on the TCP during design. VDOT construction personnel perform constructability reviews in an effort to minimize impacts to the traveling public. Contractors are not involved in the original TCP design; however, contractors do suggest alternate staging and TCPs after contract award. VDOT staff must approve all TCP change requests.

TCPs may be modified without a change order, unless additional bid items are required or the bid quantities change significantly. If a change order is not required, TCP modifications are documented by daily diary entries or plan revisions.

VDOT manages traffic flow by using advisory radio systems, changeable message signs, public information campaigns (brochures, radio, and telephone hotlines), limiting work hours and lane closure hours with associated liquidated damages, and closing ramps and using local streets. VDOT also uses innovative contracting methods such as A+B bidding and I/D contracts with interim completion dates.

On one project where the contractor was replacing bridge spans, two-directional traffic was shifted to one side of the Interstate so that multiple composite deck sections could be replaced in one night.

Contractors that fail to comply with the TCP requirements are subject to work suspensions, default, loss of bidding privileges, and disincentives or liquidated damages.

The project staff monitors the TCP with inspections. Law enforcement officers enforce speed limits with fines doubling.

Traffic control items are paid for by unit prices or lump sum bid prices.

CONTRACTING PRACTICES

Maintenance of Traffic

VDOT and the police teach work zone safety training classes in high schools. Virginia contractors do not favor certifications because it believes that the certifications then become an excuse to not monitor traffic control.

WSDOT

Specific MOT requirements are detailed in the plans and specifications depending on the project's complexity. Less complex projects rely on the standard specifications.



Washington DOT rural site - an emergency project to repair road damaged by landslide

Design standards require a comprehensive work zone Plan, Specification, and Estimate (PS&E). The Design Office is responsible for preparing the PS&E and for coordination with the Traffic and Construction Offices. Strategy meetings are held internally and with the public early in the design process. The expected outcome of the strategy meetings is to identify maintenance of traffic issues/conflicts and incorporate solutions into the project design. Specialized teams are sometimes used to assist with PS&E development and/or modifications during construction.

TCPs give consideration to typical contractor operations and production rates; however, the contractor does not play a role in the development of TCPs prior to bid and award. Work zone design is based on acceptable traffic restrictions from the driver's perspective. MOT plans give reasonable accommodations to traffic maintenance through the work zone. Urban projects may require a compromise between traffic flow and expediting progress of work on the project.



Washington DOT rural site - an emergency project to repair road damaged by landslide

MOT requirements are seldom modified from the time plans are sent out for bid and the award of the contract. Contractors must formally accept the contract MOT traffic control plans in writing or propose modifications and submit a request for approval. Generally, the proposed modification must meet the original contract requirements. The PE and Traffic Engineer are expected to consult and agree changes to the TCPs before the Department approves the Contractor's request.

Traffic is managed through public information, advanced signing, work hour and workday restrictions with hourly liquidated damages, law

CONTRACTING PRACTICES

Maintenance of Traffic

enforcement officers, and alternate routes. Innovative techniques to improve traffic flow through work zones include high impact short term closures, zipper barriers, innovative staging, advance notice/alternate routes, consideration of materials and procedures that save time or money or allow for restrictive work zones, and complete interstate closures for limited time frames.

A contractor's failure to follow MOT requirements will result in contract provision enforcement up to and including breach actions, liquidated damages, and unfavorable contractor evaluations.

Contractors are required on most jobs to have an ATSSA-certified person designated as its traffic control specialist. This person is paid for on a unit price basis. The Project Engineer and a Traffic Control Manager designated by the Contractor also perform work zone monitoring. Law enforcement officers enforce work zone speed limits. Regional Traffic Departments review projects as needed for conformance to the Highway Work Zone Review Policy. Annual reviews by Olympia Service Center and FHWA are also performed.

Contractors are required on most jobs to have an ATSSA-certified person designated as its traffic control specialist.

Methods of payment for MOT include individual bid items with unit prices, and lump sum for less complex projects.

WisDOT

TCPs are required on all projects. Standard drawings serve as the TCP on some projects. Detailed staging or project-specific traffic control plans are required for projects with unique features, complex stages, or open to traffic. Contract documents specify TCP requirements by means of standard drawings, project-specific plan details, and special provisions.

Project Development (Design), with input from Traffic Operations, identifies TCP requirements. Occasionally, contractors make recommendations during the design process to change traffic staging; however, contractors typically suggest alternate staging and TCPs during construction. Public information meetings are also conducted to gain input from the public on the TCP during design.

CONTRACTING PRACTICES

Maintenance of Traffic



Wisconsin DOT District 2 site visit to G/I-94 Interchange Project.

TCPs can be modified by addendum prior to bid, based upon comments from contractors or the public. After the contract is awarded, the Project Engineer can modify the TCPs by a change order with input from the Project Designer and the Traffic Engineer. In some cases TCP change orders are processed as a cost reduction incentive or to shorten contract time. Modifications are documented by the contractor's proposal detailing changes and impacts.

Traffic flow is managed by limiting the time for lane closures and work operations to off-peak or night work using changeable message signs, highway advisory radio, signs to divert traffic during emergencies and heavy congestion, ramp closures or metering at select times, public information campaigns (brochures, radio, TV, telephone hotlines, and internet display of freeways), state patrol surveillance/advance warning for congested areas with backups/alternate routes, Park-and-Ride, staggered work hours, and subsidized transit service.

Innovative techniques to improve traffic flow in construction zones include interim completion dates with I/Ds, fines doubling for moving violations, lane rental, A+B bidding, towing service during peak hours, and complete road closures for limited time frames.

Work zone safety is monitored by project staff inspections and documentation, law enforcement officers with the use of uniformed or plain-clothes officers, public information campaigns, and radar-activated speed display boards.

Consequences for a contractor failing to follow TCP requirements include work suspension, liquidated damages, and withholding estimates. Traffic control items are itemized for individual devices. Lump sums are used for surveillance and are also used on small or less complex projects.

In general, contractors believe MOT is not a problem. Night work is used frequently in urban areas and the contractors feel that the quality of the pavement is better because of the cooler temperatures at night.

QUALITY OF WORK

Materials/Quality Management

General

All of the states surveyed have a four-tiered approach to assuring material quality. There is a general movement towards using the contractor's quality control test results for acceptance and payment; however, ADOT, for instance, still performs all acceptance testing independently of the contractor's quality control test results.

ODOT

Materials Control Concept and Roles

ODOT's materials acceptance is based on ODOT controlling both the quality of the process and the final product. While QC/QA uses contractor quality control programs for acceptance of asphalt materials, other materials are prescribed by ODOT. ODOT uses a four-tiered approach to assuring materials quality:

1. The contractor is directly responsible for quality control of asphalt with ODOT only performing random quality assurance.
2. The Project Engineer is responsible for all other materials, quality control including sampling, testing, acceptance, and final materials documentation.
3. District laboratories support the Project Engineer by performing acceptance testing for asphalt and aggregates; approving documentation for other materials; and performing independent assurance sampling, testing, and procedure verification.
4. ODOT's central laboratory performs aggregate quality tests and oversees the aggregate quality program; approves asphalt mix designs; performs concrete compression testing; and controls the approved materials list (or qualified products list). A plant sampling and testing program is also operated that includes pre-sampling and testing. Quality assurance reviews are performed depending on the material acceptance procedure. Geotechnical design and subsurface investigation functions are the central laboratory's responsibility.

MATERIAL QUALITY



ODOT's materials control concepts are based on ODOT controlling both the quality of the process and the final product.

QUALITY OF WORK

Materials/Quality Management

Major Materials Acceptance Methods

Contractors supply asphalt pavement under QC/QA, which requires prior acceptance of the contractor's quality control plans by ODOT's central laboratory. Contractor test results are used for acceptance and payment if verified by ODOT testing. Pavement and structure concrete mixes are prescribed in the specifications. ODOT performs all concrete testing for quality control purposes. Payment for concrete is not tied to compressive strength results. Aggregate is accepted from pre-qualified sources based on acceptable ODOT gradation tests.

Pre-manufactured Materials Acceptance

Pre-manufactured materials, such as precast concrete, pipe, guardrail, and reinforcing steel are accepted by ODOT's central laboratory based upon sampling, testing, and certified data supplied by the manufacturers who are part of ODOT's plant sampling and testing program. While this pre-approved program is not required, it has become the standard, and is the most economical way to do business. Suppliers who are not part of the program generally are limited in the amount of work they receive because of the sampling and testing delays created on the project. Contractors almost exclusively use program suppliers so as to avoid sampling and testing delays. ODOT maintains approved lists for some products.

Materials Acceptance Responsibility and Documentation

The Project Engineer is responsible for control, documentation, and acceptance of materials. The District Testing Engineer certifies materials based upon surveys of the Project Engineer's documentation. The CMS computer program includes materials tracking modules for control of quantities and acceptance.

Personnel, Staffing, Training

ODOT, the Ohio Ready Mix Concrete Association, the Ohio Aggregates & Industrial Minerals Association, and the Ohio Flexible Pavements Association co-sponsor training programs for both ODOT and industry materials personnel. The training is required for ODOT personnel and is either desired or required for industry personnel depending on the material. District laboratories have approximately eight full-time equivalents (FTE). The central laboratory has 52 FTEs

QUALITY OF WORK

Materials/Quality Management

performing construction materials acceptance and eight FTEs in a geotechnical design or foundation investigation role.

Local Agencies

Some ODOT warranty specifications have lowered the frequency of testing; however, materials specifications are the same as non-warranty projects.

ADOT

Materials Control Concepts and Roles

ADOT materials acceptance practices and policies are built around quality control/quality assurance concepts. ADOT currently performs all acceptance testing independently of the contractor's quality control results. ADOT's physical materials testing structure includes a central laboratory, four regional laboratories, and some testing capabilities at the project level. ADOT assures materials quality by assigning roles to four different groups:

ADOT currently performs all acceptance testing independently of the contractor's quality control results.

1. Contractors and producers are responsible for the final product and QC.
2. The Project Engineer is responsible for materials quality and acceptance testing, oversight of the contractor's QC, and final materials acceptance for a project. Some physical testing may be performed at the project level.
3. Regional laboratories support the Project Engineer providing acceptance test results for projects, providing concrete mix design approval, performing aggregate soundness testing, and performing asphaltic cement acceptance. Regional laboratories typically serve multiple ADOT districts.
4. The central laboratory approves HMA mix designs, performs reinforcing steel testing, and performs the preliminary geotechnical investigation and testing. ADOT's materials group includes a materials quality assurance staff of 14 ADOT employees who are responsible for laboratory certification, testing personnel qualification and certification, and certification documentation

QUALITY OF WORK

Materials/Quality Management

acceptance. Laboratory certification includes the round robin testing of contractor/private laboratories.

Major Materials Acceptance Methods

The mission of the ADOT Structural Materials Testing Section is to provide accurate and timely testing analysis and evaluation of materials used in highway construction and maintenance in the most efficient and effective manner.

Concrete and asphalt pavement, structure concrete, sub-base, and aggregate are delivered to projects pursuant to the contractor's personnel running QC tests to assure quality. Acceptance testing is still performed by ADOT. ADOT does not require submittal and approval of a formal contractor quality control program. ADOT includes a quality control bid item in its contracts. This item covers both materials and construction methods. Weekly project meetings are held on the project and quality control requirements are discussed during these meetings. If the quality control requirements are not met, payment is withheld.

Statement taken from Arizona DOT Web Site

Pre-manufactured Materials Acceptance

Pre-manufactured materials used on ADOT projects, such as precast, concrete, pipe, guardrail, and reinforcing steel are accepted based on a combination of ADOT testing, test witnessing, and certified test data. ADOT does not have one standard acceptance procedure for all pre-manufactured products. Acceptance is sometimes based on certification and limited to a specific quantity of the certified materials that can then be delivered as accepted to an ADOT project. Sometimes ADOT may test the specific quantity of the product being used. ADOT also has approved certified products lists for some items.

Materials Acceptance Responsibility and Documentation

ADOT's Project Engineer is responsible for the project certification and documentation records. Material quantities are controlled and tracked against bid items. ADOT has a computerized construction field records system. Material tracking is included, as part of this computer system, but it does not control payment to the contractor. The computer program was developed in-house. The project's final materials certification package is sent to the central office for certification by the State Materials Engineer through the materials quality assurance group.

QUALITY OF WORK

Materials/Quality Management

Personnel, Staffing, Training

Construction materials quality management training is generally performed by ATI. This is an independent training center jointly developed by ADOT and the construction industry to perform training for ADOT and construction personnel. ADOT, contractors, consultants, and laboratories each pay ATI for specific training, which makes ATI self-sufficient. Concrete training is provided through American Concrete Institute training programs. Certification is required for the contractor and ADOT personnel who are performing the materials testing. Career ladders for ADOT's transportation construction technicians are tied to completion of training and certification. Project offices have material personnel handling field testing, records, acceptance testing of some materials, and sampling. The four regional labs and the central materials lab include 130 FTEs.

ATI is an independent training center jointly developed by ADOT and the construction industry to perform training for ADOT and construction personnel.

Unique to ADOT is a recently developed program in the Phoenix District that provides pay incentives to ADOT personnel based on the project team's performance in saving construction inspection costs, through reducing overtime, initiating value engineering ideas, and other factors. The program is limited to \$100 per month; and is based on a rate of approximately \$1 in the fund for every \$22 of savings. This program was netting ADOT employees about \$60 to \$80 per month.

ADOT has established a "Lessons Learned" program within the construction value engineering section. Approved construction value engineering changes are directed to either design, for modification of a design practice, or specifications, for revision of the specification, so future ADOT projects can achieve direct savings through the standard bid process.

Local Agencies

A local agency can administer its own projects by qualifying through ADOT's local agency certification program. Agencies may become certified by submitting their proposed construction and testing administration programs to ADOT for approval. Certified agencies administer their projects in compliance with their program, which may have different requirements than ADOT's standard specifications. Local agencies without certification have its projects administered by ADOT in compliance with the standard specifications and Federal requirements.

QUALITY OF WORK

Materials/Quality Management

Construction Quality Management

ADOT has a formalized construction quality management program in the construction operations section. This is a QA inspection program incorporating 40 specific checklists that are used by the Field Quality Assurance Inspectors. This information is statistically used to evaluate conformance, performance, areas of need, and process changes. ADOT has presented papers at TRB on its Construction Quality Management program. ADOT's formal materials quality management program has 14 FTEs.

FDOT

Materials Control Concept and Roles

FDOT is transitioning from complete materials acceptance oversight to a materials acceptance program where the contractor's quality control results, verified by FDOT, are the acceptance criteria for the materials. FDOT's new program is called QC2000. This program will mandate contractor quality control programs and revise FDOT's own frequency of testing and acceptance procedures. As in other surveyed states, materials quality assurance is based upon at least four levels.

1. The contractor is responsible for QC with this function now being specifically defined in the quality control programs.
2. The Project Engineer has primary responsibility only for materials acceptance and documentation.
3. District laboratories support the PE with acceptance testing of asphalt, concrete, and aggregate. It also approves concrete mix designs and has a geotechnical group that is responsible for exploration, sub-base acceptance testing, and structural foundation testing and acceptance. District laboratories also have a quality assurance group that evaluates project materials records, final materials certification, contractor personnel, consultant personnel, and qualified laboratory facilities.
4. FDOT's state materials laboratory performs acceptance testing of materials where the economics warrant it, or when special expertise is required. The laboratory also performs the testing and the

FDOT is transitioning from complete materials acceptance oversight to a materials acceptance program ...

QUALITY OF WORK

Materials/Quality Management

evaluation of new products, approves asphalt mix designs, tests and accepts asphaltic cement, tests and administers the aggregate program, performs geotechnical testing, investigates subsurface conditions, and performs foundation testing evaluations. An extensive quality assurance program is performed by in-depth inspections of district laboratories, project laboratories, and the final acceptance of state materials for final certification.

Major Materials Acceptance Methods

Concrete and asphalt pavement, structure concrete, sub-base, and aggregates are delivered to projects based on the contractor's personnel running QC tests to assure quality. The requirement that a formal quality control program be submitted and approved has been eliminated. FDOT is shifting to its QC2000 program where contractor quality control tests will be used for acceptance with a lower frequency of verification testing performed by FDOT at the field and district laboratories.

Materials and Research

The mission of our office is to provide the testing, research, inspection, evaluation, recommendations and training in materials composition, use and performance for Florida's transportation system.

Florida DOT

Pre-manufactured Materials Acceptance

Pre-manufactured materials, such as precast concrete, pipe, guardrail, and reinforcing steel, are currently physically tested by FDOT. QC2000 will change FDOT's acceptance role. FDOT's qualified product list includes items such as concrete sealer, admixtures, grouts, rebar splices, and other similar products.

Materials Acceptance Responsibility and Documentation

FDOT's Project Engineers have approval and acceptance responsibility for materials. Final acceptance documentation is compiled by the engineer, and is checked and accepted by the District Testing Engineer's quality assurance group. Final documentation acceptance is performed by FDOT's materials laboratory through a random survey. FDOT performs surveys at 30%, 60%, and 90% of the project's completion, both as a quality assurance function, and to speed the acceptance of the final project documentation.

Personnel, Staffing, Training

FDOT, contractor, and consultant materials personnel are required to be certified through FDOT's CTQP. Each group pays the University of Florida a fee per student. Self-study courses are also part of CTQP, and

FDOT, contractor, and consultant materials personnel are required to be certified through FDOT's CTQP.

QUALITY OF WORK

Materials/Quality Management

FDOT, consultant, and contractor personnel take the courses and are certified through a written examination. While not directly tied to promotions, FDOT personnel with more certifications can be used more effectively and are thus considered first for promotions and raises.

District material laboratory staffing levels vary. An urban district had 72 FTEs, with that district processing \$500 million in open contracts. The state materials laboratory has a staff of approximately 160 FTEs.

Local Agencies

FDOT either directly handles the construction administration for local agency projects or the local agency performs its own construction administration by having its construction administration program approved by FDOT. Most local agencies conform to current FDOT construction and materials requirements by using consultants for construction administration.

Construction Quality Management

FDOT has an extensive construction quality management program, which is defined in its Construction Project Administration Manual. In addition to the materials and testing quality assurance functions discussed previously, FDOT's program also defines responsibilities for QA at the project, the district, and the central office level.

FDOT has structured its overall quality management program to generally conform to the Sterling business model. The Quality Initiatives Office provides training in the use of this total quality management model. In addition, this office is responsible for value engineering, alternative contracting, partnering, and quality assurance.

MDOT

Materials Control Concept and Roles

MDOT's approach is developed around standard QC/QA principles. MDOT currently mandates QC/QA programs for concrete and asphalt projects. For other materials, most contractors and suppliers use QC/QA programs. The benefits realized by these contractors and suppliers include lower testing frequencies, less inspection, and more business. MDOT and contractors both realize faster project delivery and improved quality.

QUALITY OF WORK

Materials/Quality Management

MDOT's materials administration structure includes a central laboratory, regional laboratories, and TSCs. MDOT's structure is similar to other states in that its material acceptance has a four-tier structure:

1. Contractors and suppliers are primarily responsible for quality control, including quality control programs, qualified personnel, and certified test results.
2. Project Engineers from the TSC are responsible for certification, acceptance, and approval of all materials on their projects. TSC's may perform gradation tests on fine aggregates. Project Engineers have complete authority on a project. Regional or central laboratory test results are for acceptance with the ultimate acceptance decision by the Project Engineer.
3. Regional laboratories support the Project Engineers by performing acceptance testing on asphalt, concrete, and aggregate, and performing a quality assurance function on project records, contractor quality control programs, and certified suppliers programs. Structural steel materials certifications are reviewed and approved.
4. The central testing laboratory performs acceptance testing of materials where the economics warrant it, or where special expertise is required. The central laboratory approves asphalt and concrete mix designs; oversees certified supplier programs; and performs quality assurance evaluations of regional, contractor, and supplier laboratories. The central laboratory also performs new materials evaluations, develops specifications, and conducts in-house research.

Major Materials Acceptance Methods

Concrete and asphalt pavement, structural concrete, and aggregate generally are delivered under MDOT's QC/QA requirements. The contractor's quality control plans are reviewed and accepted at the TSC level. Contractor test results are used for acceptance and payment if verified against MDOT verification tests. The regional laboratory tests concrete cylinder strengths with the contractor being responsible for delivery of the cylinders to the laboratory. Asphalt cores are taken by the

QUALITY OF WORK

Materials/Quality Management

contractor and are supplied to the engineer for shipment to the laboratory for verification testing by MDOT technicians.

Pre-manufactured Materials Acceptance

MDOT has a general certification program for pre-manufactured materials such as precast concrete, pipe, guardrail, and reinforcing steel that has various requirements for each material based on a supplier's quality control program and demonstrated ability to conform. The certification program includes a probationary period to assure that a supplier's QC program and test results are acceptable. The certification program is not mandatory. Suppliers that are not certified can furnish pre-manufactured materials, but testing by either the region or central lab is then required. Contractors almost exclusively use certified suppliers due to the potential of schedule impacts with uncertified suppliers. MDOT's Internet site includes its certified products list.

Materials Acceptance Responsibility and Documentation

The Project Engineer is responsible for control, documentation, and acceptance of materials. Project Engineers, who have been certified in construction documentation, have finalization authority for their projects. A survey/review is performed on the engineer's documentation. When Project Engineers have not been certified in construction documentation, their project undergoes a complete certification survey prior to finalization. MDOT's construction management computer program includes tracking of materials, quantities, and acceptance. Regions perform the surveys for final certification. MDOT's Central Office is responsible for certification of Project Engineers.

Personnel, Staffing, Training

MDOT's work element program ties training courses to promotional opportunities for its employees. Training and certification in materials areas are generally supplied through industry associations. MDOT and industry supported materials training courses are required for all MDOT, contractor, supplier, and testing laboratory personnel performing materials testing on MDOT projects. Central laboratory testing functions are structured under different sections of MDOT's Construction and Technology Division. Region laboratories include testing and geotechnical functions.

QUALITY OF WORK

Materials/Quality Management

Local Agencies

Local agency projects are required to meet state construction and material requirements. Staffing restrictions have resulted in MDOT limiting or eliminating its role in construction administration of local agency projects. Local agencies administer their projects with MDOT performing a final acceptance inspection to assure specification compliance and to perform FHWA oversight.

VDOT

Materials Control Concept and Roles

VDOT's materials acceptance program is based upon the concept of controlling the materials system, rather than individual project material acceptance. VDOT started its current quality control/quality assurance approach in the early 1980s, and through the years, it has developed confidence in its system-level approach. QC/QA concepts are firmly entrenched in VDOT with both DOT and contractors appearing confident in their roles and responsibilities. VDOT materials acceptance structure includes the four-level approach seen in other states:

VDOT's materials acceptance program is based upon the concept of controlling materials systems, rather than individual project material acceptance.

1. Contractors and suppliers are responsible for the quality control function and have been performing this role for a period of years.
2. The Project Engineer is responsible for quality and acceptance of materials. The Engineer has final documentation responsibilities.
3. VDOT's district laboratories support the project with acceptance testing for concrete (strength) and asphalt, and perform a quality assurance role on materials including documentation. This QA role includes not only the contractor's field testing but also some pre-manufactured materials suppliers located within its district. District labs also approve concrete and asphalt mix designs and perform aggregate quality testing.
4. VDOT's central laboratory is responsible for the state-level quality assurance including training, random surveys, certification programs, materials test result evaluations, specifications, and policy. Additional central laboratory functions can include geotechnical design, site investigation, and district-level acceptance testing for districts depending on its proximity to the central laboratory.

QUALITY OF WORK

Materials/Quality Management

Major Materials Acceptance Methods

VDOT concrete and asphalt pavement, structural concrete, and aggregate are delivered under quality control programs developed by the contractor to assure material quality control. Aggregate is accepted by the contractor's quality control test results. Concrete and asphalt acceptance testing is performed by district field or test lab personnel. Asphalt is accepted under an incentive/disincentive pay structure. Contractor quality control programs are required.

Pre-manufactured Materials Acceptance

Pre-manufactured materials such as precast concrete, pipe, guardrail, and reinforcing steel are accepted under certification programs based on a supplier's acceptable quality control program. VDOT district and central lab personnel assure program compliance by verification testing, random inspections, quality assurance testing, training requirements, supplier QC personnel certification, and testing laboratory evaluation and acceptance. Suppliers are responsible for compliance with specifications and re-certification is required. Some warehouses have certification authority based on their own quality control program.

Materials Acceptance Responsibility and Documentation

The Project Engineer is responsible for project materials certification. A materials book is used to track acceptance. The district testing engineer performs a review of the Project Engineer's certification. Once a month the Central laboratory performs surveys of random project's materials certification. While materials quantities and acceptance are documented, a contractor's payments are not directly tied to the amount of approved materials.

Personnel, Staffing Training

VDOT has an extensive in-house training program that includes nine different training manuals. VDOT and industry have worked to develop the training manuals and combine to perform the training. Contractor, supplier, and private laboratory personnel are required to receive the same training and certification level as VDOT personnel. Certification is required for anyone performing inspection, sampling, and testing on a VDOT project.

QUALITY OF WORK

Materials/Quality Management

Each district has a geotechnical drilling crew and geologist as part of its materials testing division, with the exception of the districts located near the central lab where the geotechnical function is provided by the central laboratory. VDOT's central laboratory includes both materials and geotechnical design and site exploration functions. Current central lab staffing is approximately 80 FTE with approximately 35 FTEs in the geotechnical area. A single district's laboratory table of organization showed approximately 20 FTEs.

Local Agencies

Local agency projects have the same materials requirements, testing frequencies, and acceptance standards as VDOT projects. All VDOT construction administration and materials acceptance testing costs are paid for by the local agency pursuant to contract agreements. Because VDOT is responsible for construction and maintenance of almost all of Virginia's roads, there are few local agency projects.

Construction Quality Management

VDOT's formalized construction quality management program is called the Construction Quality Improvement Program (CQIP). This program performs surveys on about 130 to 150 projects per year covering about 170 construction-related activities. These in-depth project reviews provide data for yearly reports and quantify the percent of specification and construction administration compliance. VDOT has historic data starting from 1988-89 that is used to establish trends and define areas of need for additional compliance, and specifications training. These surveys have additional functions, including some field training, construction personnel training, and data gathering to evaluate where and when additional training or re-training is required. Materials quality management reviews are part of CQIP.

VDOT's formalized construction quality management program is called the Construction Quality Improvement Program (CQIP).

WSDOT

Materials Control Concept and Roles

WSDOT's materials acceptance program is based on controlling the quality of the final product. In three major areas (Fabrication, Asphalt Cement Production and Traffic Control Hardware,) formal QC/QA controls are required of the Contractor as part of an overall Quality Systems Plan, which must be approved and reviewed regularly. In other

WSDOT's materials acceptance program is based on controlling the quality of the final product.

QUALITY OF WORK

Materials/Quality Management

areas, QC/QA controls are neither expressly required nor submitted, but are implicit in the language and tone of the contract. WSDOT's materials testing structure includes the Field Operations Support Service Central (FOSSC) materials laboratory, regional laboratories, and various testing capabilities at the project level. As in the case of all surveyed states, material quality is assured through the following four-level approach:

1. The contractor is responsible for the furnished product with both expressed and implied quality control roles, depending on the type of work.
2. The Project Engineer has acceptance and approval responsibility. Some acceptance testing is performed by project materials personnel including aggregate, subgrade, asphalt density, and acceptance of concrete mix designs.
3. The district (region) materials laboratories perform acceptance testing for asphalt and concrete, and asphalt mix verification. The independent assurance testing role includes responsibility for training under the construction tester qualification program, and on-going random review of personnel to assure sampling, testing, and procedure compliance.
4. FOSSC materials laboratory approves asphalt mix designs; performs geotechnical investigations and designs; establishes acceptable aggregate sources; establishes the Qualified Product List (QPL); and establishes acceptance, control, and frequency of testing. FOSSC also oversees material specifications and the construction tester qualification program.



Washington DOT Materials Laboratory

Major Materials Acceptance Methods

Contractors supply concrete and asphalt pavement, structure concrete, sub-base, and aggregate to WSDOT in conformance with WSDOT specification requirements. Contractor QC testing procedures for asphalt are required by contract. WSDOT performs all acceptance testing with contractor quality control results not factored into payment.

QUALITY OF WORK

Materials/Quality Management

Pre-manufactured Materials Acceptance

Pre-manufactured materials such as precast concrete, pipe, guardrail, and reinforcing steel are accepted based on a combination of WSDOT testing, test witnessing, and certified test data. WSDOT's QPL not only provides a list of certified materials, but also documents additional sampling, required testing, and criteria for approval. Suppliers pay for testing to get their products onto the QPL.

Materials Acceptance Responsibility and Documentation

The Project Engineer is responsible for final documentation and certification on the project. Contractor progress payments are controlled by the quantity of material approved. The Engineer may request a reduced testing frequency based on field testing results and consistency of product. FOSSC randomly performs compliance reviews of projects.

Personnel, Staffing, Training

WSDOT personnel performing materials testing must be qualified under WSDOT's construction tester qualification program. The program includes modules for aggregate, asphalt, concrete, embankment, and asphalt pavement density. Employees may become certified in a module, in an individual test of a module, or even receive an interim certification.

Local Agencies

Local public agencies have adopted WSDOT specifications. Construction management may be performed by WSDOT. A local agency may either perform its own testing, hire a consultant, or hire WSDOT.

Construction Quality Management

There are several sections within WSDOT that are responsible for quality. The Office of Development Services oversees the overall quality effort at WSDOT, including training, Baldrige assessment and the employee satisfaction survey. The Quality Systems Manager, working from the State Materials Laboratory, administers and oversees the Quality Systems Plan for the Lab. The Quality Systems Manager oversees the laboratory accreditation program both in the central lab and

QUALITY OF WORK

Materials/Quality Management

in the six regional labs. The Materials Engineer and the Construction Materials Engineer are in charge of the QA/QC program. These QA/QC reviews cover both material and inspection documentation, and are performed by both the Region Office and Project Office.

WisDOT

Materials Control Concept and Roles

WisDOT's current materials acceptance program is being re-engineered. The re-engineering effort has further implemented decentralization concepts initiated in the early 1990s, and has been influenced by limited manpower, increases in construction program size, and loss of experienced personnel. For many materials, WisDOT has restructured its materials acceptance policies based upon QC/QA concepts. They have a four-tiered materials acceptance system:

1. The contractor/supplier is responsible for quality control, including the development of a quality control program that provides qualified personnel, procedures, equipment, and results.
2. The Project Engineer is responsible for acceptance and certification of project materials. Quality control programs, materials certifications, and documentation are submitted to, and accepted by the Project Engineer.
3. District laboratories support the PE by performing quality assurance on contractor quality control programs, sampling materials if tested by central laboratory, and performing a quality assurance review of a project's materials acceptance.
4. The central laboratory performs testing on materials when district testing would be more expensive, and when materials are unique, or when Specialized equipment is needed. Central lab establishes approved materials lists; evaluates mix designs for asphalt and concrete; manages certification programs for suppliers and testing laboratories; establishes policy requirements for contractor's quality management programs; and performs other quality assurance reviews and functions to assure certification programs, testing procedures, and sampling methods are adequate and consistent.

QUALITY OF WORK

Materials/Quality Management

Major Materials Acceptance Methods

Concrete and asphalt pavement, structure concrete, subgrade, and aggregate are delivered to WisDOT through quality management programs (QMP) that place the responsibility for materials quality control on the contractor. While some materials are currently delivered without the QMP system concept, WisDOT is moving toward QMP for all state projects. The contractor's results are used for acceptance and payment. Current specifications have either disincentives, or have incentive/disincentive pay structures. The general view from the state is that incentive/disincentives would be used more in the future as it appears to yield a better product. Contractors support incentive/disincentive pay structures.

Pre-manufactured Materials Acceptance

Many pre-manufactured materials such as pre-stressed concrete members, precast concrete, and steel pipe, guardrail, and reinforcing steel are accepted under certification programs based on a supplier's quality management program and state quality assurance. Initially, materials are selected to be certified based on the state's previous testing history of the product. WisDOT materials personnel assure program and materials compliance through verification testing, random inspections, quality assurance testing, training requirements, re-certification inspections, laboratory acceptance programs, and statistical evaluation of contractor tests results.

Materials Acceptance Responsibility and Documentation

Final materials acceptance is the Project Engineer's responsibility. District testing performs documentation survey reviews. The central laboratory performs some random QA surveys. Computer systems for materials tracking are being evaluated but are not yet in full use by WisDOT. Contractor payments are indirectly tied to the quantity of materials approved.

Personnel, Staffing, Training

WisDOT's re-engineered materials acceptance procedures required re-education and re-direction of testing personnel. Training was developed to enhance not just technical understanding, but writing, communication, and computer skills as well. Certification for sampling and testing specific materials is required for anyone responsible for such work on a

An 11 member committee consisting of WisDOT, contractor, consultant and industry representatives was formed to develop the contractor/consultant portion of the Laboratory Qualification Program. The committee combined experience, logic and business principles in assembling a strong centrally-controlled Satellite Laboratory Qualification program that it felt best suited state, contractor and consultant material quality objectives as well as satisfied the federal regulation directive. The committee's goals were to keep the program as simple as possible by avoiding unnecessary complexity, assure uniformity of application statewide and minimize sampling and testing variability through qualified labs and personnel.

Statement taken from WisDOT Web Site

QUALITY OF WORK

Materials/Quality Management

The Highway Technician Certification Program (HTCP) provides material acceptance training, with the program being run through a state university.

WisDOT project. Contractor, supplier, and private laboratory personnel are required to receive the same training and certification as WisDOT personnel. The Highway Technician Certification Program (HTCP) provides material acceptance training. The program is run through a state university. The Department provides construction inspection and non-technical training to its employees.

WisDOT staffs its materials groups with engineers and technicians. The technician series includes five levels. The first three levels are automatic upgrades based on time and capabilities, with the top two levels based upon position need along with technician capability. Materials and geotechnical, design, and site exploration are separate functions at WisDOT. WisDOT has four central office drilling crews that are considered WisDOT's primary source for geotechnical exploration, with consultants used as needed. Current staffing of the geotechnical design and site exploration positions is 20 FTEs while Quality Management (Materials) currently has 21 FTEs.

Local Agencies

Local agency projects are administered in the same fashion as WisDOT projects.

Construction Quality Management

WisDOT does not have a specific office for quality management; however, it believes that QMP fills a partial role for construction quality management. WisDOT also performs materials quality management through its extensive system of assurance reviews of private and state laboratories, producers, and contractors.

Inspection



General

Each of the states surveyed has undergone some form of reorganization in the recent past. These reorganizations all involved decentralization to varying degrees and were motivated by a variety of factors. Among these factors are changes in the size of the construction program, a desire to move decision-making responsibilities closer to the project,

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Inspection

and a desire to make the department more responsive to its customers. With regard to inspection, each of these reorganizations resulted in a move away from the standard practice of full-time inspection on all items.

The central office in each state functions in a support role for the districts/regions, while retaining some oversight and promoting uniformity in contract administration procedures and practices. The comfort level with the re-organization as far as central office personnel are concerned varies, although it seems to increase with the length of time that the reorganization has been in effect. Their concerns focus on the effectiveness of their reviews and on the growing lack of uniformity among the regions.

Personnel at the lower levels, where much of the authority has been shifted, are generally quite comfortable with the reorganizations and their new roles. Most believe that they are now in a better position to be responsive to their customers, and to better serve the traveling public's needs.

Contractors seem to generally favor decentralization but complain about the lack of uniformity between districts/regions. Some go so far as to say that they have included bid factors for similar work because of these differences.

All of the states surveyed have adopted similar philosophies concerning inspection. Each understands that leaner resources mean that some items must go uninspected or partially inspected. Factors influencing decisions on the issue of inspection include risk to the owner/public, the availability of personnel, the ability to adequately evaluate the work at a later date, and the ability and reputation of the contractor performing the work.

All states supplement the inspection staff with consultants or temporary workers; however, Ohio is the only state to supplement its inspection staff with 1,000-hour transfers. States using consultants are comfortable with them in part because many are ex-DOT employees. Another positive note concerning the use of consultant inspectors is the ability to choose among available people and reject or dismiss inspectors who are

leaner resources mean that some items must go uninspected or partially inspected.

All states supplement the inspection staff with consultants or temporary workers; however, Ohio is the only state to supplement its inspection staff with 1,000-hour transfers.

QUALITY OF WORK

Inspection

not performing well. On consultant managed projects, most states reported that consultants are sometimes reluctant to make decisions without getting the approval of the DOT representative. This can cause delays in the decision-making process on projects.

Most of the states surveyed have attempted to increase the versatility of its retained staff by increasing the availability of training, and implementing certification or qualification programs. Most have also rewritten specifications to reduce the amount of inspection required and to incorporate QC/QA concepts.

ODOT

ODOT monitors its construction engineering and inspection (CE) costs in an attempt to measure the impact of its reorganization efforts. During the past nine years, ODOT has seen these costs drop from 10.5% of its construction budget to approximately 7% as of June 2000. Reduction of these costs has been a district performance measure, and reduction in staffing levels and tighter control of overtime are among the reasons for the decrease.

ODOT's asphalt concrete specifications have evolved into QC/QA specifications, and resulted in reductions in personnel requirements at plant sites, as well as at the district and central office laboratories. Contractor quality control results in fewer ODOT inspectors performing tests at the site, and frees those inspectors to inspect the placing operations.

ODOT has also developed warranty specifications for asphalt concrete, concrete pavement, bridge deck overlays, superstructure, bridge painting, and micro-surfacing. It is anticipated that as these specifications evolve and become more widely used, the need for full-time inspection will be further reduced.

ODOT uses 1,000-hour transfers (maintenance workers who, among other things, plow snow during the winter) to supplement its engineering and inspection staff. ODOT is currently developing a statewide training curriculum in an effort to enhance the skills and the versatility of its work force.

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ADOT

ADOT estimates that 30% of its inspectors are consultants; many of whom are ex-ADOT employees.

ADOT has developed QC/QA specifications for concrete, asphalt, and embankment operations.

ADOT has developed QC/QA specifications for concrete, asphalt, and embankment operations.

ADOT categorizes its projects by size and type and monitors its CE costs for each category. These costs are used as a performance measure for the resident engineers and the districts. These figures are reported monthly. The Phoenix Construction District uses these monthly reports to manage manpower, predict staffing requirements, and evaluate its Project Engineers.

FDOT

FDOT has recently decentralized even further than it had during an earlier reorganization. Its recent changes, however, have also included steps to develop statewide policies in an attempt to promote uniformity among its districts.

In order to increase the versatility of its workforce, FDOT has developed a formalized training program for all of its inspectors and engineers. FDOT now requires specific training and certification for its inspectors before they can inspect certain items, and both training and experience are linked to career ladder advancement.

FDOT has developed a formalized training program for all of its inspectors and engineers.

FDOT addresses inspection and staffing requirements in its Construction Project Administration Manual. FDOT uses consultants widely, and noted that it is constantly losing inspectors to consultants because the consultants are better paid. In fact, FDOT uses more consultants than any other state surveyed, and FDOT uses them not only for inspection, but also to manage projects—consultants manage 50% of FDOT's projects.

Consultants usually manage larger projects. They are contracted on a project-by-project basis, or sometimes for a group of projects. FDOT has noted that this method of contracting sometimes limits its flexibility, and

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Inspection

it is experimenting with the idea of entering into contracts for consultants to cover a geographic area rather than specific contracts. Other issues noted by FDOT with respect to consultant-managed projects are that they tend to have higher levels of staffing than FDOT-managed projects, and decision-making is often slower presumably due to concerns over potential liability. Contractors in Florida also noted that consultants are often reluctant to make project-level decisions, resulting in the problem being passed along to the next higher level, which usually is an FDOT engineer.

MDOT

MDOT has developed a formalized training program for all of its inspectors and engineers, and has linked this training, plus experience, to advancement.

MDOT uses consultants to both inspect and manage projects. Some of MDOT's consultant inspectors are ex-MDOT employees. MDOT is comfortable using consultants in this role because the inspectors are familiar with MDOT procedures and practices. MDOT noted that when consultants manage its projects, they are often reluctant to use their judgment and take responsibility for decisions concerning the need for inspection. The MRBA noted this same phenomenon.

MDOT developed QC/QA specifications for concrete and asphalt.

In order to reduce inspection costs and decrease the need for MDOT inspection, MDOT developed QC/QA specifications for concrete and asphalt.

MDOT categorizes its projects by size and type, and monitors its CE costs (which it defines to include direct charges only, with no markups) in each of its 33 different categories of projects. On smaller projects, MDOT's CE costs amount to about 8% to 9% of the overall project cost. On its larger projects, CE costs are about 4% to 5% of the overall cost.

VDOT

VDOT relies heavily on consultants to supplement its workforce; currently about 30% of VDOT's inspectors are consultants. VDOT's experience is similar to MDOT's in that they noted that consultants are reluctant to take responsibility for making decisions in the field.

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In order to reduce the need for on-site testing and to better use its staff, VDOT has developed QC/QA specifications for concrete and asphalt.

VDOT has developed QC/QA specifications for concrete and asphalt

VDOT has also experimented with Contractor Quality Control (CQC). This has been used on seven projects, with mixed results. On CQC projects, the contractor is responsible for all testing, inspection, and reporting in accordance with VDOT standards, and VDOT simply monitors the contractor's progress, the test results, the documentation, and performs a periodical QA review. Such an approach minimizes VDOT's involvement. Thus far, however, VDOT reports that it is not completely satisfied with this approach and believes that its success requires a contractor commitment to quality that it has not found on every project.

VDOT uses its Construction Phase Inspection Manual to forecast project staffing requirements. This manual details the inspection frequency and the major objectives of each inspection activity.

VDOT's Statewide CE cost average is between 10% and 12%. VDOT's CE figures include direct charges plus mark-ups for overhead.

WSDOT

WSDOT is the only state among those surveyed that performs all of its inspections with its own in-house, full-time staff. The availability of such resources is explained, in part, by the fact that WSDOT's program size was recently reduced significantly.

WSDOT has an extensive training program for its inspectors, and requires certification or qualification for many inspection activities. WSDOT also links training and experience to a career advancement ladder.

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WSDOT's CE figure includes all expenses required to support a project engineer's office, including direct and indirect payroll expenses, rent, utilities, equipment, supplies, vehicles, fuel, etc. This figure varies widely depending on the nature, size, and location of the project. Current CE ratios run from 12% to 20%.

QUALITY OF WORK

Inspection

WISDOT

Almost 50% of WisDOT's inspectors are consultants, many of whom are ex-WisDOT employees who have joined the consulting firms in part because they are better paid as consultants.

WisDOT has implemented a Quality Management Program (QMP). This program, which applies to asphalt, concrete (structure and pavement), base and subgrade items, shifts the inspection and testing responsibilities to the contractor. WisDOT personnel are only required to perform QA reviews and tests. This has permitted more efficient use of WisDOT's project staff and greatly reduced the number of inspectors required. District personnel liked the QMP specifications and expressed the opinion that the quality of the work has increased with its implementation.

WisDOT has also let some warranty asphalt projects on two-lane roads.

WisDOT has also let some warranty asphalt projects on two-lane roads. When this specification is used, WisDOT performs minimal inspection. WisDOT has developed QC/QA specifications for concrete and asphalt.

WisDOT assembled a process improvement team to study inspection requirements. This team has developed a Critical Inspection Report

In order to clearly define inspection guidelines, promote uniform inspection standards statewide, and provide staffing level assistance, WisDOT assembled a process improvement team to study inspection requirements. This team has developed a Critical Inspection Report that analyzes 34 different construction operations with respect to the risk assumed by the owner if inspection is not provided. From this analysis, the frequency of inspection and the level of inspection were developed. Although this report was not finalized at the time of our visit, it appears that this methodology and study will provide WisDOT with an excellent management tool to aid in its efforts to reasonably reduce inspection costs.

WisDOT uses CE costs as a performance measure for its resident engineers and districts. As they define CE, it includes direct salaries, mileage, and expenses. Target values are established based upon project size and type. The budget target is established at the start of a project and monitored throughout its duration.

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Innovative Contracting

General

In order for state transportation agencies to meet the needs of the traveling public, changes have occurred in the contracting process. Some of these changes have been mandated by the taxpayers of America to meet the growing needs of social and economic growth. For instance, the traditional design-bid-build format for project delivery is very time consuming and may not be able to keep up with the growth in an area. Other changes in the contracting process seem to be driven by the reduction in the size of staff and by technological advances that enable greater productivity.

Regardless of the cause, innovative contracting methods were being used in every state surveyed. FDOT and MDOT were most aggressive with their innovations. FDOT uses some form of innovative contracting on approximately 66% of its projects, and MDOT is using at least one or more of these methods on approximately 50% of its projects.

innovative contracting methods were being used in every state surveyed.

Among the innovative contracting methods used in the states surveyed were design-build, A+B bidding, lane rental, warranty, value engineering, Incentive/Disincentive, bid average method, no excuse bonus, liquidated savings, and lump sum bidding. A brief explanation of each of these methods and an analysis of findings on how the surveyed states have implemented these methods in their construction programs is set forth below.

DESIGN-BUILD

Definition

Design-build (D-B) is a process by which a single entity provides both design and construction under a single contract between the agency and the D-B contractor. D-B is used to accelerate completion of a project by allowing construction to begin before the final design is completed.



Objectives of Design-Build

- A. **Time Savings:** Compared to traditional contract procurement, time is saved when the project construction begins prior to completion of the design. When the design and construction periods overlap, redesign periods and bidding periods are greatly reduced or eliminated.

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Design-build brings together designer and constructor to foster creative new ways of advancing innovation on Projects.

Quote taken from Testimony of Rex Huffman speaking on behalf of the Design-Build Institute of America

B. Administrative Savings and Other Benefits:

1. Design-build assigns the design and construction to a single party, allowing some construction work to begin before the final design is completed.
2. Design-build gives singular responsibility (single point of contact for quality, cost, and schedule).
3. Design-build reduces administration and inspection costs.
4. Design-build reduces or eliminates change orders and claims due to errors and omissions.
5. Design-build allows the contractor increased flexibility in the selection of innovative designs, materials, and construction techniques.
6. Design-build provides expertise not available in-house, for example, design and installation of intelligent transportation systems.
7. Design-build-warranty provides a warranty provision that promotes quality/performance during and after construction.

Design-Build Findings

ADOT, FDOT, MDOT, WSDOT, and WisDOT evaluate proposals and award design-build projects by using a two-step process. In the first step the technical proposal is evaluated and given a numeric score. In the second step, the overall rating of a proposal is determined by dividing the price proposed for the project by the technical evaluation score. FDOT and MDOT require that the contractor separately submit technical proposals and pricing proposals. On projects where the DOT has little experience, or where innovative technology is required, ADOT, FDOT, MDOT, WSDOT, and WisDOT, use a technical review

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committee to select a shortlist of three to five firms based upon qualifications. Short-listed firms then submit more detailed technical proposals that the review committee evaluates. Finally, the selection committee selects firms based upon an adjusted score.

ODOT uses a one-step, competitive low bid only format to determine the successful proposal. Approximately 15% of ODOT's annual program is done design-build. ODOT's first six pilot design-build projects were let in 1995. ODOT's second pilot program was in 2000 and included 27 projects with a total value of \$230 million. ODOT uses design-build when time savings is required.

Stipends are paid by FDOT, ADOT, and WSDOT to short-listed firms that submit detailed proposals. Generally, Value Engineering is not used on design-build projects.

ADOT sometimes uses A+B bidding in combination with design-build when time is particularly critical. The terms of the procurement usually provide that the shortlist technical proposals (3 to 5 firms) become the property of the DOT, and thus ideas contained in these proposals may later be incorporated into the project. ADOT pays a stipend equal to 2% of the proposed contract amount to unsuccessful proposers.

ODOT generally assumes the risk of differing subsurface conditions and third party (utility) coordination problems. Other states transfer all or part of the risk associated with these issues to the design-build contractor. Generally, even when the design-build format is used, right-of-way, environmental clearance, and railroad agreements are done by DOT's.

FDOT attempts to measure the effectiveness of its design-build contracting by measuring contract time, cost savings, and benefits to the public. These measurements are compiled in FDOT's Alternative Contracting Program Preliminary Evaluation, which is prepared by FDOT's Office of Quality Initiatives.

A 1991 evaluation of FDOT's design-build program by the University of Florida generated the following summary of data: 1) average design-build costs were 4.59% greater than the average design-bid-build costs, 2) average design-build total time (from scoping through completion)

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was 35.7% less than the average design-bid-build time, 3) average design-build contract change order totals were 1.9% as measured against the original contract price, whereas, average design-bid-build contract change order totals were +8.78%, and 4) 74 percent of the surveyed participants in FDOT's design-build program indicated that the program should be continued with minor changes.

Last year, FDOT awarded three major design-build projects. These include a \$72 million replacement project on St. George Island Bridge (Bryant Patton Bridge). All three projects are ongoing. In addition, three prominent bridges (I-4 St. John's River Bridge, Thomas B. Manual Bridge, and Peace River Bridge) are scheduled for design-build contracting by FDOT in FY 2000-01.



Virginia DOT Pocahantas Freeway -
Design-Build, Finance & Operate -
Privatized Project

A new law passed in 2001 will allow Virginia to do more design-build contracts. VDOT currently only has one design-build project. The only way to propose a design-build project in Virginia is pursuant to the Public-Private Transportation Act of 1995. This allows any private entity to submit an unsolicited proposal to VDOT to build or maintain a project on the highway system.

MDOT presently has a moratorium on design-build projects because it has experienced excessive cost overruns due to a lack of proper scope definition in its procurements.

WSDOT has only one design-build project. Special state legislative exception was needed for this two step RFQ/RFP process. This project, which is located in Vancouver, began in the winter of 2000-01. WSDOT now has design-build authority for all projects greater than \$10 million.

WisDOT has only one design-build project. Special state legislative exception was needed for this two-step RFQ/RFP process. This project, which is located in Milwaukee, began in the summer of 2000.

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A+B BIDDING

Definition

A+B bidding is a cost-plus-time bidding procedure. The low bidder is selected based on a combination of the contract bid items (A) and the time (B) needed to complete the project or a critical portion of the project. The contract bid items (A) and the time to complete the project (B) are assigned a monetary value.

Objectives of A+B Bidding

- A. Minimize the amount of construction or road closure time.
- B. Encourage innovative construction practices and enhance the level of effort put into scheduling.

A+B Bidding Findings

ODOT presently uses A+B bidding frequently on smaller projects that require total road closures. ODOT is also considering the use of something similar to Kentucky's Optional Pavement Warranty, or "A+B-C." In this format, the "A" and "B" portions are the same as above; however, the "C" component involves credit based upon the number of years of optional pavement warranty proposed.

VDOT is also considering the use of an "A+B+Q" method. The "A" and "B" portions are the same as above. The "Q" component involves the quality rating given to contractor's work by the "C-36" report card used by VDOT for such purposes.

WSDOT has recently awarded two smaller projects using this method of bidding. In the first case, A+B had no effect on the bidding and no observable effect on the progress of work. The second, just underway, experienced an award to the second low bidder, who included a smaller number of days.

MDOT has used A+B bidding for several years on a variety of projects and reported that A+B bidding resulted in significant time-savings.

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ADOT presently has eight A+B projects, some have an incentive provision in the contract to encourage the contractor to complete even earlier.

FDOT's use of A+B bidding has significantly increased in recent years (FY 1996-97, seven projects; FY 1997-98, thirteen projects; FY 1998-99, twenty projects). Out of these 40 projects, ten had been completed by July 1, 1999. An analysis performed in 1999 compared the completed total bid days, to FDOT's maximum contract time and showed a savings in construction time of 37%. A comparison of total bid days to days used noted an additional 1% decrease in time. On these same projects, FDOT indicated that costs had been successfully maintained. That is, cost overruns as measured by FDOT (present cost totals compared to amount contained in the bid totals) were approximately 4%. This 4% average cost increase on these A+B projects is significantly less than the Florida Transportation Commission's reported average total cost adjustment increases of 14% for all completed projects in FY 1998-99.

In general, contractors and DOTs felt that the A+B bidding technique positively impacted the quality of planning and decision-making by contractors. In addition, most noted that A+B created a pro-active approach for the contractor to accelerate the project time and to achieve the incentive.



Lane Rental Project at Night Over the James River, Virginia

LANE RENTAL

Definition

Lane rental provisions assess the contractor daily, or in some cases hourly, rental fees for each lane, shoulder, or combination of lanes and shoulders closed to traffic during a project. The lane rental fee is typically based on road user costs and daily costs incurred by the agency.

Objectives of Lane Rental

- A. Transfer costs incurred by the traveling public to the contractor. Lane rental allows the costs associated with delays, detours, and accident frequencies to be considered in the development of the project schedule. The costs of keeping a lane closed are then

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transferred to the contractor by having costs assessed for late openings.

- B. Encourages the contractor to use innovation in planning, scheduling, and performing its work to minimize lane/shoulder closures

Lane Rental Findings

All seven of the surveyed states use lane rental on select projects. Formats and formulas varied from state to state.

FDOT has begun to develop a database relating to its lane rental projects. Statistics gathered so far indicate that ten out of FDOT's 17 lane rental contracts have been completed. On those contracts, creative strategies were implemented to reduce lane closures. In fact, a comparison of FDOT's official lane rental days, to the number of lane rental days bid, indicates a 73% decrease in the time lanes were out of service. A comparison of total lane rental days bid to the actual lane rental days reflected a 29% decrease in lane closures. Cost adjustments for lane rental contracts are comparable to the department's overall average cost adjustment increase of 14%.

MDOT uses a variation that it calls a ramp rental. Under this format, the contractor is given an incentive to shut an entire ramp, completely redo it, and open it to traffic within an accelerated time period.

Contractors, in general, reported that they liked the lane rental incentives.

WARRANTY

Definition

A warranty or guarantee contract requires that the contractor guarantee the integrity of its product for a period of time, and makes the contractor responsible for the cost of replacement or repair of deficiencies in its work during that time. Warranties are common with manufactured products. Highway construction warranties, however, are applied to a specific product or work item. Generally, highway warranties provide for a two-to-seven-year warranty period, and cover only those items for which the contractor has full control. Routine maintenance associated with normal wear and tear is not included.

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Objectives of Warranty

- A. Warranties lower the owner's risk by providing assurance that the contractor will correct early failures that are due to poor materials or workmanship that may have gone unnoticed during construction. This eliminates or reduces costs related to early maintenance.
- B. Performance based criteria encourage contractors to choose an optimal product and design.
- C. Warranties encourage the development of innovative technologies in materials, equipment, and construction processes.
- D. Sureties generally appear to be willing to offer longer-term warranty bonds to a sufficient number of qualified bidders.

Warranty Findings

Warranties were most often used on projects or work items that have performance attributes, or failure thresholds, that can be explicitly defined in the specifications and measured in the field.

Work items that were subject to warranty requirements in the states surveyed included:

- Hot Mix Asphalt—ODOT, MDOT, FDOT, and WisDOT
- Asphalt Chip Seals—ODOT, ADOT, and MDOT
- Bridge Decks, Full Depth—ODOT and FDOT
- Bridge Deck, Overlay—ODOT and FDOT
- Bridge Painting—ODOT, MDOT, FDOT, and WisDOT
- Pavement Markings—ODOT, MDOT, and VDOT
- Signs—ODOT and FDOT
- Concrete Pavement—ODOT, MDOT, and WisDOT
- Capital Preventive Maintenance—MDOT

Two states, Ohio and Michigan, had legislative mandates to do a certain percentage of all projects with warranties.

Construction Warranty Development Summary: The Michigan Department of Transportation is developing a comprehensive construction warranty program as summarized below. The use of a warranty covering workmanship, materials and/or performance has greatly reduced the inspection and testing requirements on construction projects. For projects including a 2-5 year warranty on the finished product, the total Construction Engineering Costs are typically less than five percent of the contract total. (This compares to construction engineering costs of 10-15 percent on traditional contracts.) This is proving to be a very effective tool in coping with construction field staff reductions.

Statement taken from FHWA Web Site

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VDOT and ADOT were not in favor of warranties on roadways in part because of enforcement difficulties stemming from the inability of the state to assure that design loads would not be exceeded.

Those agencies that favored the use of warranties agreed that it was important to limit the risk by only asking for warranties on the elements under the contractor's control, and by using on roads with relatively predictable design criteria and stable base conditions. In general, states using warranties have noticed an increase in quality of work performed on warranted items, and contractors that take additional care in performing the warranted work. Statistics concerning the marginal cost of warranties were not available. Also, many of the warranties have yet to expire, so data concerning enforceability is not yet available.

VALUE ENGINEERING

Definition

Value engineering change proposals (VECP) are a cooperative effort that allows a contractor to suggest changes in a project's design or specifications and share in any cost savings that result from the suggestion after the project has been awarded. The cost difference between the original contract amount and the changed contract amount are normally divided equally between the contractor and the owner.

Objectives of Value Engineering

- A. Provide an incentive to the contractor to suggest innovative cost or time-saving designs and methods.
- B. Generate significant life-cycle cost savings to the owner and the contractor.

Value Engineering Findings

ADOT, WSDOT and FDOT have designated staff specialists to evaluate all VECP's. The goal of these teams is to not only properly analyze proposals, but also to incorporate the new ideas into future plans, thereby only paying for the value engineering once.

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ODOT, ADOT, VDOT, WisDOT, MDOT, and WSDOT all use VECP to generate savings of time or money, as determined by the department, without impairing the essential functions and characteristics of a project.

INCENTIVE/DISINCENTIVE

Definition

An incentive provision pays the contractor a daily amount of money for each calendar day a designated portion of the work is completed (and unrestricted traffic is restored) before a target date set forth in the contract.

A disincentive clause assesses a credit against the contract amount for each calendar day the contractor overruns the target date set forth in the contract for the completion of the designated portion of the work.

Objectives of Incentive/Disincentive

- A. To significantly shorten the actual time that the contractor's work creates a restriction upon traffic flow in the work area.
- B. Minimize inconvenience to the public on projects where severe traffic delays are predictable.
- C. Encourage innovative scheduling and planning by the contractor.
- D. Discourage poor scheduling and planning by the contractor.

Incentive/Disincentive Findings

All states surveyed use some form of I/D based on interim milestones or total contract time. ADOT, in order to promote a positive partnering atmosphere, usually does not include a disincentive.

It was reported that contractors generally react favorably to this format and are more conscientious about shifting crews and wrapping-up work in order to maximize the incentive dollars they earn. FDOT reported

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that 35 contracts have been awarded using the I/D technique. On 16 of these projects that have been completed, days used compared to official contract days reflected an 8% time increase; however, this statistic compares favorably to the average on all FDOT projects, where there is a 28.9% increase in time. Similar results occurred with respect to cost. That is, final actual cost totals for completed projects using I/D was 6% greater than the original bid totals; however, this is less than half of the total cost adjustment on all FDOT projects, which averaged an increase of 14%.

BID AVERAGE METHOD

Definition

Bid Average Method (BAM) bidding is best used where there is ample competition in the project area. When three or four bidders participate, the bid closest to the average is selected. When five or more contractors bid, the low bid and the high bid are excluded, and the bid closest to the average of the remaining bids is selected. If there are any irregularities in the bid, the bid is thrown out, and the next closest to the average is selected.

Objectives of Bid Average Method

- A. Get the contractor to bid a true and reasonable cost for a project.
- B. Minimize claims and costs overruns.

Bid Average Method Findings

FDOT is the only state that has used this technique. They used it primarily on smaller projects (i.e., mowing contracts). FDOT reported that this method actually accelerated two out of the three projects that have been completed so far. Only four FDOT projects (three completed) have used this technique. The intent of having contractors bid a more realistic cost, thereby minimizing cost overruns, has borne results, as these contracts have only overrun by 4%. FDOT felt that BAM bidding is preferable when a “low bid” is anticipated to be a significant problem, such as can be the case when inexperienced or unsophisticated contractors bid on small maintenance projects.

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NO EXCUSE BONUS

Definition

No excuse bonus is paid when a contractor completes a project within a specified time frame regardless of any and all unforeseen conditions. These bonuses are tied to a “drop-dead” date (time frame) that is either met or not met. Unforeseen conditions, weather delays, and other issues that normally extend contract time, do not extend a no excuse target date. If the target bonus date is not met, the contractor will not receive the bonus.

Objectives of No Excuse Bonus

- A. Shorten the construction time that would normally be required to perform the work.
- B. Motivate efficient construction to complete by a date certain.
- C. Eliminate delay claims relating to the target date.

No Excuse Bonus Findings

FDOT and VDOT are the only states where this technique is used. FDOT reported that some contractors were reluctant to devote additional forces or otherwise expend additional money in an attempt to meet a target bonus date if unforeseen conditions might result in its efforts being a waste of money. Sixty-three projects have been awarded by FDOT using the no excuse bonus technique, with 16 completed contracts. This is the most widely used alternative contracting method used by FDOT. A comparison of FDOT’s official days to days used reflects an average 2% decrease in time. Actual final cost totals increased 6% over the original bid totals. Four out of sixteen contractors failed to achieve bonuses. Bonuses awarded totaled just over \$2.8 million.

VDOT has one project using a no excuse bonus. This project involves the reconstruction of I-95/I-495 interchange at Springfield and it has a \$10 million no excuse bonus.

PROGRESSIVE PRACTICES

Innovative Contracting

LIQUIDATED SAVINGS

Definition

Liquidated savings is the opposite of liquidated damages. This alternative contracting technique does not require input from the contractor during the bidding and award process, as the liquidated savings amount is fixed by the DOT. Typically, a cap is fixed by establishing a maximum aggregated liquidated savings.

Objectives of Liquidated Savings

- A. Encourage contractors to finish projects early.
- B. Realize administrative cost savings because of the time savings.

Liquidated Savings Findings

FDOT is the only state using this technique. Contractors have generally reacted favorably to this incentive when scheduling their crews. This is the only incentive technique that ties an incentive to allowable contract days (i.e., time extended due to weather, changed conditions, etc.). In January 1998, FDOT changed its specifications for A+B, I/D, and lane rental to tie the incentive to the original contract time, without time extension allowances, other than for catastrophic events. Based on 10 completed liquidated savings projects, time was reduced by 1% from the original contract time; whereas, a comparison of days used to present days shows a 20% decrease. Final cost adjustments on contracts using liquidated savings were 11%.

LUMP SUM BIDDING

Definition

Lump sum bidding allows the department to put together the design package without providing quantities. The contractor is required to calculate quantities and develop a lump sum bid, as opposed to bidding unit prices on individual pay items with quantities provided.

Objectives of Lump Sum

- A. Reduce quantity overruns due to errors in quantity calculations.
- B. Reduce contract administration costs associated with quantity verification and measurement.

PROGRESSIVE PRACTICES

Innovative Contracting

- C. Make the contractor take a closer look at the project prior to bidding.

Lump Sum Findings

FDOT is the only state among those surveyed that is currently using this technique. The contractors take more risk in developing a bid, since the bid is based on their own calculations. The low bids received on these FDOT projects have averaged 9% higher than the official contract estimate. This technique has grown in popularity in northeast Florida and continues to be used experimentally in other FDOT Districts.

Partnering

General

The idea of partnering is alluring to all. Yet, even at ADOT, where partnering has been established and a part of its culture for many years, some field personnel cling to the notion that partnering favors the contractor more than the DOT. Regardless, experience of those states surveyed suggests that, to be effective, partnering must be supported from the top down, and the changing of skeptical attitudes takes training, time, and plenty of feedback.

ODOT

ODOT intends to formalize its partnering process on construction projects during 2001. Some districts use two-day facilitated work sessions at the start of a project, but such practices are not standard.

When used by ODOT, the partnering process includes a workshop agenda, facilitated by either in-house or outside (90%) facilitators. The workshops last one or two days. Work groups address project specific issues, and agree upon a process for escalating decision-making. A charter is developed and signed. Third parties are involved.

The informal criteria used by ODOT to determine the types of projects to be partnered include large projects, complex projects, and projects that have a high impact upon the traveling public.

ODOT intends to formalize its partnering process on construction projects during 2001.

PROGRESSIVE PRACTICES

Partnering

ODOT does not maintain a separate historical database for partnered projects. A system designed to permit ODOT to maintain comparative statistics is under development. ODOT does maintain records that note the number of claims, projects completed on time, projects completed within budget, and complaints. Also, ODOT's C95 contractor evaluation form is likely to capture data that is relevant to assessing the effects of partnering.

The industry's perspective on partnering is mixed. Some smaller contractors are not supportive of partnering initiatives.

When used by ODOT, partnering has generally been reported to be successful. The opinions of project personnel are mixed regarding the benefits of formalized partnering. Some claimed to practice informal partnering on all projects. Most reported that partnering was particularly beneficial on projects with third party partners (railroad, local utilities, etc.). However, these observations are only anecdotal because ODOT has not quantified the benefits of partnering yet.

OCA representatives indicated that attitude dictates whether or not partnering is successful. OCA supports partnering as long as all parties are committed to it. OCA believes that partnering is best accomplished with good communication between the parties in the field, at the job site level. OCA believes that formalized partnering is not necessary if good communication is maintained on the job.

ADOT

Partnering was implemented by ADOT in 1992, following a pilot program in 1991. Senior managers in ADOT now assert that partnering has resulted in a fundamental cultural change in the way its business is conducted.

ADOT's partnering specification allows the contractor to choose to enter into a partnering relationship. The specifications for all projects include such partnering provisions. Smaller, less complex projects conduct abbreviated workshops. Two-day workshops are offered on larger projects for stakeholder buy-in as required. Partnering training is provided to all new ADOT hires.



ODOT team on ADOT rural district Site visit.

PROGRESSIVE PRACTICES

Partnering

ADOT's partnering process typically consists of the following: 1) selection of one of a variety of workshop models of various lengths, 2) development of, and agreement upon, an issue resolution and issue escalation process, 3) an evaluation process, called the Partnering Evaluation Program (PEP), that ADOT has developed, and 4) a project close-out process that highlights lessons learned and provides feedback to the project staff.

ADOT also regularly offers partnering education classes that include the following topics: 1) introduction to partnering, 2) how to conduct a partnering workshop, 3) how to make partnering work in the field, 4) leaders guide to issue resolution, 5) leading in a partnering environment, and 6) mediation courses.



Arizona DOT Bridge at Roosevelt Lake

ADOT has made it clear that it expects all project teams to participate in partnering. ADOT employees are expected to conduct themselves as a partner. The Contract Administration Staff has been informed that ADOT expects partnering to be applied as the DOT business practice in administering contracts. Partnering is a systemic part of ADOT culture with respect to Contract Administration.

Statistics provided by ADOT for projects completed between July 1991 and June 2000 is as follows:

- 829 completed projects.
- 8.7% average time Savings (11,102 Contract days saved).
- \$24.3 million in construction engineering savings.
- \$8 million in construction value engineering savings.
- 3% project budget overruns.
- Total of only 2 arbitrated construction claims since 1994.
- Partnering Evaluation Program (PEP) yields lessons learned, which are then discussed with the design staff and used to minimize recurrence of such problems.

The Arizona AGC fully supports partnering with ADOT. Larger contractors believe and follow partnering concepts at the mid and senior management levels. Field personnel do not always understand the value-added benefits of partnering, and as a result, field employees will sometimes try to gain an unfair advantage. Nevertheless, partnering is the way ADOT conducts business.

PROGRESSIVE PRACTICES

Partnering

Rank and file ADOT employees interviewed during the survey reported mixed feelings with respect to the benefits of partnering. Some field personnel indicate that their jobs are made easier by partnering. Others feel that partnering is just a “give away” program, and see no great benefit to the state. There is a fairly widespread perception among ADOT’s field level personnel that ADOT partners, but the contractor benefits from the effort more than ADOT. In an effort to provide more feedback to its field personnel and improve their attitude toward partnering, ADOT has instituted a procedure whereby issues decided at upper levels are written up with an explanation of the basis for the decision. This write-up is then returned to the project level.

Partnering by ADOT has resulted in:

- Establishment of a Partnering Office replacing the Claims Office. Prior to 1992, ADOT had a Claims Office.
- Fewer claims. At the onset of partnering, ADOT had 60+ outstanding claims totaling \$40 million. Since 1992, only 2 cases have escalated to arbitration.
- Overall, final construction costs including incentives, change orders, force accounts, negotiated settlements, etc. have remained at or below 110% of the original bid amount.
- Projects continue to be delivered ahead of schedule (approximately 95% are delivered on or ahead of schedule.)

ADOT’s partnering staff includes five, full-time employees in the Central Office in the Partnering Office, and its partnering budget is \$565,000 annually, which is 0.5% of the overall construction budget.

Arizona AGC believes that partnering works on ADOT projects when upper management is committed to it. Because of partnering, claims do not exist, and paperwork has decreased because contractors do not have to document every detail. Contractors know that issues will be resolved through partnering. One contractor noted during our visit that its younger staff, hired since partnering commenced, would not know how to prepare a claim in Arizona, which illustrates how well partnering works. Arizona AGC expressed the opinion that the implementation of partnering is a five-year process because it takes that long for people to become used to it and for all parties to develop trust. Trust is the most important factor in

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PROGRESSIVE PRACTICES

Partnering

partnering. Contractors believe that their best deal is cut at the project level; however, they also understand the need to escalate issues if a problem is not getting resolved. Typically, contractors do not escalate an issue until it threatens to affect the progress of the work.

FDOT

Major and complex FDOT projects contain partnering provisions as part of the contract documents. Partnering is at the contractor's option. For smaller and less complex FDOT projects, informal partnering is optional for both the contractor and FDOT.



FDOT District 3 site visit to bridge replacement project.

Bid items are established to cover the cost of the facilitator and other aspects of the kick-off meeting. The partnering specification contains the bid item listing. Consultants are also using partnering concepts to resolve project issues. Approximately 50 FDOT projects per year are partnered.

When used, FDOT's partnering process typically includes a workshop that is either a one-half day session for contractors familiar with partnering, or a two-day workshop if the parties prefer. Topics to be covered include relationship building and business issues including the development of an escalation ladder. During this workshop a charter is also developed and signed by all parties.

It was reported that formal partnering is not necessary for contractors that have a good long-term relationship with FDOT.

FDOT kept records on the number of projects partnered in the early 1990s to see if the concept was gaining in popularity. Once partnering became routine, record-keeping was discontinued. There are no formal partnering performance measurement methods in place; however, if a partnered project is successful, partnering is typically mentioned as contributing to its success.

FTBA members predominately favor partnering due to the improved human relations, and rarely decline an opportunity to partner. Partnering is considered by FDOT to be a contract management tool.

PROGRESSIVE PRACTICES

Partnering

FDOT experienced an adversarial relationship with contractors in the late 1980s, and partnering has served as a tool to improve business relationships.

Rank and file FDOT employees have mixed feelings with respect to benefits/usefulness of partnering; however, most FDOT personnel are supportive.

Senior managers at FDOT assert that the benefits of partnering include:

- Contractors are more willing to submit complete and accurate paperwork relating to extra compensation.
- More effort is expended in anticipating problems and resolving them before they adversely affect the progress of the work.
- Responses by both FDOT and contractor project personnel are more prompt.
- Decisions are made at the appropriate levels in accordance with the escalation ladder.
- Because of open communications, concerns and issues are discussed in advance of the work, when the opportunity to mitigate the impact of those issues is greatest.
- There are fewer claims, better communication, and improved relationships.



ODOT team on FDOT rural district Site visit.

The following is a description of the issue escalation process that FDOT typically implements. Within the contractor's organization, issues flow up from Foreman to Project Manager to Project Director. Within FDOT, issues flow from Inspector to Project Engineer to Resident Engineer to District Construction Engineer or Operations Engineer (Claims Review Board) to District Secretary. At each level of escalation, the contractor and FDOT personnel who could not resolve the issue must escalate the issue together and each make a presentation regarding the issue to the persons at the next level. Non-agreement on problems that are about to cause project delays are escalated immediately.

DRBs are occasionally used by FDOT. When they are used, they are project specific and established and managed in accordance with contract

PROGRESSIVE PRACTICES

Partnering

provisions. The use of regional DRBs is being considered by FDOT. Florida courts may require mediation prior to litigation.

FTBA believes that the escalation ladder is a good way to resolve disputes and noted that partnering is only successful when both sides are committed to it.

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MDOT

Partnering has been used by MDOT since 1991. Currently, MDOT's typical partnering process includes a one-half day workshop. When partnering was first introduced ten years ago, two-day workshops that focused primarily on team building were the norm. The goal of the workshop now is to focus on project specific activities and issues in an effort to avoid future conflicts. The workshop agenda focuses on issues, concerns, and barriers to open communication. A partnering charter is developed and agreed upon. The charter includes action steps, mission statements, goals and objectives, and an issue resolution/escalation process. All stakeholders sign the charter as a commitment to partnering.



MDOT Gathering data at a TSC

large, complex projects greater than \$2 million are partnered.

Generally large, complex projects greater than \$2 million are partnered; however, smaller projects that have high public impact, or that are complex, may also be partnered upon request of the contractor or MDOT. Partnering also occurs on projects where consultants play a major role or where improved relations between MDOT and the contractor are desired.

MDOT has not instituted any formal partnering performance measurements.

A majority of the contractors feel that partnering is beneficial and that it allows for the mutual establishment of goals, promotes open discussion of major project-related issues, and provides an issue resolution process. Partnering also helps to clarify the roles and responsibilities of project personnel.

As in other states, rank and file MDOT employees reported mixed feelings with respect to partnering. MDOT senior managers favor partnering. Benefits of partnering include fewer project level conflicts, fewer claims, and improved teamwork.

PROGRESSIVE PRACTICES

Partnering

MRBA believes that MDOT's partnering initiatives have been successful, yet notes that MDOT's program is less formal than other states. MRBA also noted that the success or failure of a partnering program is dependent on the receptiveness of all of the involved parties.

VDOT

Partnering is not regularly required by VDOT. VDOT independently selects the projects to be partnered.

The partnering process typically starts with a one or two-day workshop with facilitators (ice breaker). At this workshop, work groups address designated issues which may vary from project to project. An escalation process is defined, and a charter is prepared and signed.

Large, complex, and urban projects are most likely to be partnered.

Performance measure methods have not been established by VDOT.

Generally, the industry and VDOT personnel are supportive of partnering initiatives. Some field level VDOT employees feel that the contractors benefit more from partnering than VDOT.

VRA noted that when objectives are clearly understood, and when participants communicate openly, partnering is successful. It believes that when partnering includes subcontractors and utilities the benefits to the project are even greater. Contractors also noted that in order for partnering to be successful, the emphasis must come from the top, and the decision-makers must be empowered.

WSDOT

Partnering has been used by WSDOT for several years and consultants are available to facilitate initial sessions. Some projects contain provisions requiring partnering, and other projects may be partnered at the discretion of the project staff, WSDOT, and the contractor jointly.

WSDOT's partnering process includes a one or two-day session that focuses on interpersonal relationships, communication skills, and dispute



ODOT team at Pocahantas Freeway Project.

when objectives are clearly understood, and when participants communicate openly, partnering is successful.

PROGRESSIVE PRACTICES

Partnering

resolution training. During this session, the parties also discuss and plan the project work with special emphasis on the most challenging aspects of the work. This session culminates with the preparation of a partnering agreement.



ODOT team on WSDOT urban district Site visit.

WSDOT does not employ special performance measuring methods on partnered projects.

Benefits of partnering that were enumerated by WSDOT include a 90% reduction in the frequency of claims since 1990, timely completion of projects, and more value engineering proposals.

WSDOT has entered into a formal partnering agreements with various trade and industry organizations.

Washington State AGC supports partnering and noted that a task force of small working groups meets three times a year with WSDOT personnel to discuss contracting issues.

WisDOT

WisDOT's districts use partnering voluntarily. Partnering is regarded as an optional contract administration tool to meet the needs of the project.

When WisDOT uses partnering, the process includes the use of a facilitator to conduct a one-day workshop. The goal of the workshop is to adopt a charter. Work is performed in one large group, and an evaluation process is developed to monitor adherence to the charter.

Generally large, complex projects are partnered; however, smaller projects with high public impact or compressed schedules may also be partnered.

Currently, WisDOT has compiled no discrete database for partnered projects. Such records were maintained from 1992 to 1995 when WisDOT first initiated its use of partnering.

PROGRESSIVE PRACTICES

Partnering

Performance measures for all WisDOT projects include completion times, budget, and construction quality. Reviews indicate that partnered projects yield higher performance scores in each of these areas.

Rank and file WisDOT employees have mixed feelings with respect to partnering. Informal partnering is reportedly used as good business practice; however, in dispute situations, there reportedly is very little emphasis placed on partnering. Nevertheless, senior managers in WisDOT identify the benefits of partnering to include:

- More projects completed within time and budget constraints.
- Faster and more economical problem solving.
- Improved working environment.
- Fewer claims.
- Non-adversarial resolution of claims when they do occur.

Contractors are supportive of partnering initiatives. They believe it works when all parties are committed to it. WisDOT and the contractors associations meet yearly to discuss issues, with technical meetings occurring quarterly. On many job sites the contractor and WisDOT meet with local businesses and residents to discuss the progress of the job and to hear concerns from the community, thereby extending the partnering approach even to those who are not parties to any contractual agreement.



ODOT team at G/I-94 Interchange Project.

BEST PRACTICES

Our research team has attempted to bring a high degree of objectivity to the task of identifying the Best Practices to be implemented by ODOT. During the process of analyzing the findings made during our survey and distilling them into this list of Best Practices, we applied a number of screens or filters designed to point us in the direction of those practices that yield the highest return. The screens were a series of questions that delved into whether or not the practice had certain beneficial characteristics, including:

IMPACT ON QUALITY—Does the practice result in a better product for the customer? How is the quality of the product or the quality of the service to the customer improved by this practice?

EFFECTIVENESS—Do we know that the practice is effective? How? Does it achieve what it is designed to achieve? Has the DOT that uses the practice attempted to measure its effectiveness? Has there been enough good data collected to make that measurement reliable?

COST/BENEFIT—What are the direct and indirect costs associated with implementing this practice? What are the direct and indirect benefits that flow from implementation of the policy? How are these costs and benefits measured?

USER SUPPORT—Can we realistically expect to implement this practice in our state? Are there legal impediments to its implementation? Are statutory changes required? Does it seem likely to be opposed by unions, contractors, or other important constituencies in our state?

COMMONALITY—Are most of the other states using this practice? Has their experience with it been positive?

UNIQUENESS—Is the practice unique? Or, is it really just a slight variation of another long-standing practice? Is it just an old practice with a new name?

These screens were applied to the construction contract administration practices of each of the seven state DOTs that were surveyed, including ODOT. The following list of construction contract administration practices have been identified as Best Practices for ODOT as a result of that process.

From ODOT's perspective, some of these practices are already in use. Some may be implemented by merely "tweaking" its current way of doing business. Some will require a fundamental change in ODOT's historical approach to the construction and maintenance of its roads and

bridges. Based upon the survey and analysis, it is believed that each will result in better quality roads, better service to the users and others affected by construction, and lower overall construction costs.

BASIC ORGANIZATION AND PROCEDURES

Organization and Staffing

1. *Create a core project staff with flexible skills and transparent boundaries.* Six of the seven states surveyed had been through significant reorganizations in recent times that had, among other things, resulted in the loss of a disproportionate number of its more experienced engineers and inspectors. In some cases, this was due to early retirement packages that, in effect, targeted the most experienced employees. In other cases, this was due to an increased use of consultants, and the attrition caused by DOT employees leaving the DOT to go to work for the consultants, who offered higher pay. As DOTs have moved toward doing more with less, it has become clear that reduced staffing levels are going to mandate that core engineering and inspection staffs have a wider variety of skills, and be willing to work in wider geographic areas than previously had been the norm. This can be achieved through expanded training programs and cross-training.
2. *Continue to use ODOT's "Thousand-Hour Transfer Program" in lieu of consultants for inspection, and enhance the program to ensure sufficient participants.* ODOT's 1,000 hour transfer program uses ODOT employees who work as maintenance workers during the winter months to work as inspectors during the peak construction season. ODOT believes that the chief benefit of this program is that it permits them to reduce their need to hire outside consultants to perform various construction-related functions by using personnel already on its payroll.

TRAINING

3. *Offer an expanded Training Curriculum that focuses on work elements.* WSDOT and FDOT each have extensive training curriculums for engineers and inspectors. MDOT uses a Work

BASIC ORGANIZATION AND PROCEDURES



VDOT Pocahontas Freeway Project.

Element Program for inspector and technician advancement. ODOT intends to borrow from each of these programs as it develops its own training curriculum.

4. *Require certification for certain tasks, and re-certification as necessary.* Concrete, bituminous, aggregate, and density testing and inspection represent such fundamental and critical aspects of road construction that the benefits of certification, and periodic certification renewals, far outweigh the cost of administering a training regimen designed to help assure the highest quality standards in these areas. Other areas, such as those dealing directly with personal safety (e.g., radiation safety) or the safety of the traveling public (e.g., managing a traffic safety plan), also demand a higher level of focus and training.
5. *Tie the Training Program to a career ladder.* The efficient management of the construction administration process requires experience, technical training, and a unique mix of interpersonal skills. Passing grades in key courses is an appropriate way to measure proficiency in critical technical areas, and therefore should be considered one of the prerequisites for career advancement. Because of the importance of experience and interpersonal skills, however, passing grades should not be the sole determining factor.

COMPUTERIZATION

6. *Continue to use ODOT's CMS software. Enhance, as necessary, to implement future documentary and procedural changes.* ODOT's CMS software generates progress reports, payments, and monitors the testing and quality assurance process. Thus, it is as versatile as any encountered during the surveying process. If and when changes in QC/QA practices and other procedures are implemented, these changes will need to be reflected in future updates of the program.
7. *Continue to enhance the Website as a source of valuable and current information.* Continue to develop ODOT's website to stay current with industry's movement towards 100% electronic contract administration.

BASIC ORGANIZATION AND PROCEDURES

DOCUMENTATION

8. *Continue to use ODOT's Contractor Prequalification and Evaluation process.* Objectivity and accountability are essential to fairly evaluate a contractor's ability to bid work. ODOT's procedures for evaluating contractors at the end of a project require that the project engineer list, in writing, specific examples to support any inferior rating. The contractor is then given an opportunity to appeal such a rating.

9. *Eliminate the need for a Change Order prior to payment when plan quantity is exceeded.* Minor variations in quantities are virtually certain to occur on construction projects of any size. The benefit of the checks and balances that are a part of the change order process are outweighed by the documentary burden that accompanies such minor changes. Given that the checks and balances are maintained as a part of the finalization process, this interim burden can be eliminated with little risk.

10. *Establish a Contingency Line Item for use by the project engineer for minor changes encountered while the work is being performed.* States using a contingency reported favorably on the practice, noting that it eased documentation requirements, empowered project engineers to resolve matters efficiently, speeded up payment, and permitted early and final resolution of numerous small, otherwise troublesome matters.

11. *Establish a statewide Documentation Review Process to enhance constructability, uniformity, and quality.* Two of the states surveyed sought to minimize bid contingencies by performing formal constructibility reviews as part of its pre-sale procedures, and two others reportedly enhanced constructibility by making sure that its staff worked on both design and construction. Statewide uniformity of post-sale documentation was addressed in several states by means of a central office review of projects at various phases during a project. Those states reported both improved uniformity and more efficient project closeout often resulted from these efforts. It was felt that the added cost of the additional central office staff would be offset by lower contingencies and less troublesome closeouts.



MDOT Concrete Pavement Resurfacing project.

BASIC ORGANIZATION AND PROCEDURES

12. *Continue to process progress payments with no retainage on a bi-monthly basis.* ODOT's standard practice for some years has been to pay contractors 100% of the amount earned, with no retainage withheld. This practice not only results in improved cash flow for contractors (and reportedly lower bids), but it also eases the administration of contracts and the monitoring of DBE and other subcontractor payments as well. If a particular problem with the quality or the progress of the work occurs, ODOT may invoke contract provisions that permit it to withhold contract dollars sufficient to protect itself from loss.

CONTRACTING PRACTICES

SPECIFICATIONS

13. *Implement a written policy for revising the specifications modeled on FDOT's process (Policy Topic No. 630-010-001-9), and model the process similar to MDOT and VDOT with standing committees covering functional areas, and an Executive Committee for final approvals.* Specifications need to change regularly to keep up with technological advances, product changes, and lessons learned on prior projects. A written policy that defines the process for revising the specifications seems certain to facilitate the specification updating process. The establishment of standing committees with specialized expertise to focus on one of the standard specification sections and be responsible for reviewing revisions to that specification section likewise will facilitate the process. An executive committee with authority to make all decisions regarding implementation of the revised specifications will provide the desired oversight of this critical function.

14. *Develop a policy for tracking plan notes and seek more uniformity in bid packages by implementing a bid package errors and omissions review prior to advertising.*

CONTRACTING PRACTICES

PROJECT SCHEDULING

15. *Expand the use of CPM schedules as tools for managing projects and analyzing claims.* Many of the incentive/disincentive type of innovative contracts are reportedly successful in reducing the overall time used to complete a project, in part because the project team focuses on ways to sequence and execute the work in the most time-efficient manner. In order to prepare a good CPM schedule for any project, a project team must focus on the planned durations, sequences, and relationships between activities on a project. The target here is shorter overall project durations achieved through enhanced planning and management practices.

16. *Develop CPM scheduling expertise in Construction Administration to serve as a resource for project engineers.* It is recognized that scheduling expertise cannot simply be mandated. Resources must be made available to assist in the enhancement of scheduling skills. While certainly valuable and necessary, software program tutorials and abstract training are not likely to be enough. These resources need to be supplemented by someone with real, hands-on experience and expertise as project engineers develop their skills and their confidence in scheduling techniques.

CHANGE ORDERS/CLAIMS AVOIDANCE/ANALYSIS TECHNIQUES

17. *Develop and implement a constructability review modeled on the "Plan Review" process used by MDOT.* Project costs can be dramatically impacted by a design that fails to take constructability issues into account. Claims can result from reasonable contractor expectations for construction that a particular design did not accommodate. A policy that requires a detailed plan review by the project engineer, and construction and maintenance personnel, while the project is still in the design phase, can identify and eliminate many issues before a project is advertised.

18. *Improve the focus and effort put into Geotechnical Design and Subsurface Investigations.* Differing site conditions are among the most common cause of claims. More and better subsurface

CONTRACTING PRACTICES

investigations prior to beginning work on a project can help reduce the frequency and severity of such claims.

19. *Adopt a contractual formula approach to Home Office Overhead claims similar to that implemented by FDOT.* Commerce benefits from predictability. Settlement of a dispute is less likely when a contractor believes that it is entitled to a substantial recovery for home office overhead, but the owner thinks that such a claim is overstated or without merit. Also, each side of the dispute is likely to spend more money hiring experts to articulate and advocate their position. Contractually specified formulas, such as those drafted by FDOT can do away with the uncertainty related to the calculating of costs and improve the likelihood of dispute resolution.
20. *Establish policies and procedures designed to encourage the forward pricing of Changes Orders.* It seems that no one likes to use force account, or time and materials pricing, yet many are afraid of getting “taken” if they agree to forward price changes. To overcome this fear, encouragement of forward pricing must come from the top down. WSDOT reported using forward pricing extensively, especially in time-related situations involving accelerations and/or extensions of time, and were pleased with the fact that the practice seemed to eliminate the basis for subsequent claims relating to those issues.
21. *Implement the Use of Disputes Review Boards on Select Projects.* The use of Disputes Review Boards on projects where the risks cannot be clearly defined, is a proven method to address the issue of risk allocation in an effort to mitigate the impact that claims can have on a project. FDOT is piloting a program that establishes multi-project, district-wide Disputes Review Boards. The goal is to find a more efficient and cost effective process for resolving disputes.
22. *Continue the use of ODOT’s claim specification process, including the publishing of the Claims Digest to inform all stakeholders and promote uniformity.* Early identification and analysis of potential changes or claims is mandated by ODOT’s standard specification. The notice requirements permit the parties to review potential claim

CONTRACTING PRACTICES

situations while mitigation measures may still be available. When ODOT resolves a claim, the resolution is written up and published so that both project engineers and contractors can see how ODOT's contract will be interpreted. Understanding how ODOT interprets its specifications is a benefit to contractors as it lends predictability to the bidding process.

MAINTENANCE OF TRAFFIC

23. Pilot Basis: *Use the "Indiana Lane Merge" system of moving traffic through work zones, as used by MDOT.* Well in advance of a construction zone, the traffic is merged into the right lane(s) eliminating the typical bottleneck that occurs when the public waits until the last minute to get into the merged lane(s). This only works with police enforcement preventing the public from using the empty lane(s) to pass the merged traffic. By always moving traffic to the right and snaking it back to the left if necessary, MDOT has eliminated driver confusion as to which lane they need to get into.
24. Pilot Basis: *Require both the contractor and ODOT to have ATSSA-Certified traffic supervisors at work zone sites at all times.* To demonstrate ODOT's commitment to the safety of the traveling public and the personnel working on its projects, it believes that the parties responsible for maintenance of traffic should be certified by ATSSA. This highlights the significance and increases the level of professionalism needed in these important positions.
25. Pilot Basis: *Designate a public relations person within each district to develop a Public Relations Plan for each significant project.* Model that role on ADOT's Transportation System Management (TSM). ADOT forms committees on every significant project to go out into the communities for public relations. TSMs are working meetings where all of the parties involved with a project discuss policy and schedule and how to report that to the community. TSMs meet once a month; and each TSM can cover more than one project. TSMs communicate on three levels—the local level with people and businesses immediately adjacent to the project; commuter or regional level with people traveling through the project; and the global level with television, radio, and newspaper announcements.

CONTRACTING PRACTICES

26. *Include “business signing,” as used by FDOT, in the Maintenance of Traffic Plans and Specifications.* FDOT installs temporary signs at the entrance to all businesses within a project work zone. This helps to minimize the impact a project can have on the flow of customers to businesses within a work zone by reducing driver confusion in locating the entrance to the business. As a public relations tool, installing these signs demonstrates FDOT’s commitment to minimizing the effects its projects have on the local communities.
27. *Continue to maintain a minimum of two lanes of traffic in each direction at all times on Interstates.* Maintaining two lanes of traffic on interstates helps to reduce the impact of construction on the traveling public. FDOT requires that the same number of lanes remain open through work zones as were open prior to construction.
28. *Continue to use off-peak work hours.* All of the states visited use off-peak work hours on its projects where working these hours reduce the impact the construction has on the traveling public.

QUALITY OF WORK

MATERIALS/QUALITY MANAGEMENT

29. *Continue to use ODOT’s Quality Control/Quality Assurance approach to Asphalt, and adopt similar approaches for concrete, aggregate, and sub-base materials.* ODOT accepts the contractor’s test results for asphalt, if the contractor’s QC/QA plan has been accepted by the central laboratory, and if the test results for the asphalt have been verified by ODOT testing.
30. *Continue to use and expand a program for the acceptance of manufactured materials through a materials certification program based upon the manufacturer’s quality control results.* ODOT central laboratory accepts a manufacturer’s sampling, testing, and certified data if the manufacturer is part of ODOT’s plant sampling and testing program. ODOT maintains a list of approved products. Contractors almost exclusively use program suppliers to avoid sampling and testing delays. Accordingly, manufacturers are

QUALITY OF WORK

generally limited in the amount of work they can perform if they are not part of this program.

INSPECTION

31. *Establish a Process Improvement Team to analyze inspection requirements and identify “critical inspection items” similar to WisDOT and VDOT’s inspection programs.* WisDOT assembled a process improvement team that studied inspection requirements. The team developed a Critical Inspection Report that analyzed 34 different construction operations with respect to the risk assumed by the owner if inspection was not provided. From this analysis, the frequency of inspection and the level of inspection was developed for these “critical items”. The identification of the “critical inspection items” will enable ODOT to effectively manage its inspection efforts thereby reducing its inspection costs.
32. *Reduce documentation requirements associated with inspection and testing.* Eliminate some of ODOT’s verification sampling and testing, and rely instead on contractor and manufacturer QC/QA documentation for acceptance and payment. This will reduce the amount of redundant documentation.

PROGRESSIVE PRACTICES

INNOVATIVE CONTRACTING

33. *Continue Pilot Programs using Warranty and Design-Build contracting formats.* Warranty projects seem to be an appropriate corollary to the trend toward placing more responsibility for QC/QA on contractors. The practicality of enforcement of warranty provisions, however, has yet to be fully tested in practice and in the courts. Similarly, the pace of development and the desire to be more responsive to the needs of the traveling public seem to demand the shortening of the time between identification of a project and its completion. Design-build contracts seem best suited to meet these demands on time sensitive projects where the public is impacted.

PROGRESSIVE PRACTICES

34. *Develop an alternate contracting program, similar to FDOT's, which uses innovative contract management methods designed to encourage the contractor to use creative means and methods to save time, improve quality, and serve the customer better.* Through this program, pilot the use of innovative contracts such as A+B bidding, no excuse bonuses, lump sum contracts, A+B-C bidding, liquidated savings, lane rentals, and incentive/disincentive. These methods entail multiple objectives. They include easing the inconveniences suffered by the traveling public, promoting quality, and simplifying administration of contracts (lump sum). As in the case of FDOT, it is important to establish benchmarks to measure the success of these methods.
35. *Expand the use of Value Engineering and establish a procedure for reporting its use, so that this year's Value Engineering ideas make it into next year's plans and specifications.* All states seem willing to pay for better ideas. The purpose of these procedures is to make sure that the state pays for these ideas only once.

PARTNERING

36. *Model a Partnering program around ADOT's program, recognizing that commitment to Partnering must come from the top down, and that it will likely take several years before a true cultural change in the industry takes place.* Claims and litigation create animosity and hinder the willingness of the parties to communicate freely and openly. Partnering tries to do the opposite. ADOT reports that its Partnering initiatives have essentially eliminated claims, have kept total contract expenditures including incentives, change orders, force accounts, negotiated settlements, etc. at or below 110% of the original bid, and resulted in 95% of its projects being delivered on or ahead of schedule. Yet, it seems that old ways die hard, and half-hearted attempts to implement partnering are ineffective.
37. *Use FDOT's dispute escalation method.* If an escalation ladder is simply a way to get a problem off of one's desk, it is more likely to be misused or overused. If the party that has been unsuccessful in resolving a claim is required to present his case to his supervisor, a different mindset may be present.

POTENTIAL BEST PRACTICES FOR FURTHER STUDY

This additional category lists those practices that seem to have the potential to be “Best Practices,” but either have not been in effect long enough to know whether or not they have been effective, or the Team has not collected enough information during this survey to thoroughly understand the practices.

It is ODOT’s intention to review these practices further with the designated representatives from the host DOTs to determine whether or not these practices meet the criteria to be designated a “Best Practice”.

ADOT safety program—inspect every project and fill out safety checklists. ADOT is proactive in how it addresses safety on its projects. Every ADOT employee is involved with two safety training programs including the statewide Supervisor’s Training for Accident Reduction Training (START), and the district-wide, 40-hour, safety-training course, with an 8-hour annual refresher course. Safety is also a performance measure used when evaluating an individual’s performance. It is also a component in ADOT’s Performance-Based Incentive Pilot Program.

Contractor safety plans are required to be submitted at all preconstruction conferences and are reviewed by ADOT safety personnel. Safety is also required to be a topic for discussion at all project progress meetings. ADOT performs quarterly safety inspections of every project. During these inspections, ADOT uses an Onsite Project Safety Inspection Program Checklist that was developed to evaluate each project’s safety performance.

VDOT’s Safety Office. Similar to ADOT, VDOT is proactive in how it addresses safety issues on its projects. It is involved in both VDOT and contractor safety compliance. VDOT also offers extensive training for both its employees and contractor employees. VDOT will stop work if conditions are unsafe.

Manpower Planning Program. ADOT has developed a program to evaluate each project’s staffing requirements and whether its various projects will be staffed with ADOT personnel, consultants, or a mix of the two. ADOT can also assign personnel to projects outside of that individual’s district if needed.

POTENTIAL BEST PRACTICES FOR FURTHER STUDY

Performance-Based Incentive Pilot Program is a pilot program where every month each member of the ADOT project team can earn up to \$100 in incentive pay based upon that project's overall performance. The personnel performance measure is made up of four components—project manager's report, safety, progress payments, and customer service. This program had only been in effect for eight months at the time of our visit; however, after initial skepticism, it was reported that ADOT's employees were very receptive to it.

ADOT's Partnering Evaluation Policy (PEP). All ADOT projects are evaluated on a monthly basis for quality, communication, issue resolution, schedule, and teamwork. Projects can also be evaluated based upon five project-specific categories. Everyone on a project including the ADOT staff, consultants, contractors, subcontractors, suppliers, etc. are responsible for filling out PEP forms on a monthly basis. The information is then entered into a sequel server from the project, and the results are summarized. Feedback is given to all of the project participants, and projects that receive a score of below 2.5 for three or more months are designated as needing help.

Investigate master agreements or other methods to better manage utility relocations. FDOT has begun to develop master agreements to better manage coordination of utility company relocation work. MDOT's Real Estate Division is responsible for, and has been successful in, obtaining compensation from utility companies through project-specified agreements to offset delay damages incurred by the state.

VDOT's use of Zipper Barriers for MOT. Zipper barriers are typically Jersey-type barriers that can be moved easily. These barriers can be moved during the day when there are a limited number of lanes available to accommodate rush-hour traffic. During the morning commute, the barriers can be positioned to permit traffic to move along a particular lane or lanes in one direction. During the afternoon commute, the barriers can be repositioned to allow traffic to move along the same lane or lanes in the opposite direction.

CONCLUSION

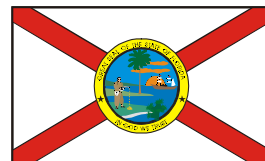
You have probably heard the expression “There’s more than one way to skin a cat.” Well, let us assure you that the team conducting this survey now knows with absolute certainty that “There’s more than one way to build a road!”

The Team witnessed first-hand that American ingenuity is alive and well in the transportation industry across the United States. The variety of practices, the willingness to share experiences, and the eagerness to hear about the experiences of others gave ample testimony to whole-hearted, on-going efforts to achieve excellence by the Departments of Transportation and the industries serving them.

The rate at which construction practices change is rapid, and seems to be accelerating. These changes do not come without the pain of an occasional error. But an occasional error does not seem to be dampening the transportation community’s zest for trying out new and, hopefully, better ways of building and maintaining its roads and bridges. This is true regardless of whether the change in question deals with technological, contractual, or administrative aspects of road and bridge construction.

This report identifies and describes a wide variety of practices. The Team has analyzed these practices as objectively as possible to come up with a list of best practices for its client, the Ohio Department of Transportation. The survey team strongly believes that implementation of these best practices will yield more cost-effective ways of designing and building safer, better quality roads and bridges in shorter timeframes, and with less inconvenience to those using those facilities, as well as those affected by the construction activities.

Given the pace of changes in the industry, the survey team also recognizes that some of the best practices set forth herein are likely to become out-dated in the relatively near future. Therefore, our final recommendations are that the transportation industry continue to support studies such as these and continue to be willing to freely and candidly share information and experiences with one another.



ACKNOWLEDGEMENTS

Knowing that the road-building industry bombards its members with survey after survey, the Team tried to be sensitive to the possibility that the selected host states may have been less than eager to answer yet another survey. Without exception, however, the Team members were met at each state with boundless enthusiasm, endless cooperation, and gracious hospitality. The Team extends a well-deserved thank you to all of those who gave their active support to this study for their time, insight, and selfless participation.

The professionalism and hospitality displayed by each state to the Team during its visits flows from the top down. The Team recognizes Mary Peters, ADOT Director, Thomas F. Barry, Jr., FDOT Secretary, James R. DeSana, MDOT Director, Charles D. Nottingham, VDOT Commissioner, Sidney Morrison, WSDOT Secretary of Transportation, and Terrence Mulcahy, WisDOT Secretary for making their people available, and for opening their doors to receive us.

Recognition also goes to the designated contact person(s) and their staffs from each host state who orchestrated many of the details of our visits, obtained answers to our questionnaires, scheduled and organized personnel to be available for interviews at specific times, and organized the various trips and interviews at the districts and jobsites we visited across six states. Accordingly, the Team would like to thank Ron Williams, ADOT; Greg Xanders, FDOT; Phil Lynwood, MDOT; Frank Gee, VDOT; Rudy Malfabon and Ron Howard, WSDOT; and Gary Whited and Mark Woltmann, WisDOT.

The Team would also like to acknowledge the Arizona Associated General Contractors, the Florida Transportation Builders Association, the Michigan Roadbuilders Association, the Virginia Roadbuilders Association, the Washington State Associated General Contractors, and the Wisconsin Transportation Builders Association who provided objective and constructive insight and opinions on the contract administration practices of the various state DOTs.

There are many in Ohio who provided help in identifying topics and questions to pose to the other states such as Fred Frecker from Flexible Pavements, Inc., Don Mader of the Consulting Engineers Council of Ohio, John Paxton of The Ohio Ready Mixed Concrete Association and Pat Jacomet from The Ohio Aggregates & Industrial Minerals

Association. We acknowledge their valuable contributions. We also appreciate the support received from Division Administrator Leonard Brown of FHWA and his tremendous staff, Bob Wright for assisting us in our planning and Andy Blalock and Mark Vonder-Embse who alternated on the site visits. Without their support and insight the study certainly would not have been so successful. Jim Hauenstein from the Ohio Civil Service Employees Association provided insights from a union perspective that added a great deal to our report. Lastly, we truly appreciated the cooperation and support of Clark Street and Michael Miller from the Ohio Contractors Association. Mike Miller attended all the state visits providing comments, questions and other intangibles from a contractor's perspective. He was also responsible for organizing the trade associations and contractor representatives from the other states. Their interviews often proved to be the liveliest of all. The contractor perspective certainly was not overlooked in this report due largely to Mike's involvement. We thank you all.

On behalf of the Ohio Department of Transportation and the entire Survey Team, we gratefully acknowledge the extensive contributions made to this study by the study's project manager, Julie Brogan of the Ohio Department of Transportation. Julie's abilities were continuously on display throughout this project. With coordinating skills unmatched, insights perceptive and patience inexhaustible, she led us well. She was truly our catalyst, our scheduler and our source of energy, as well as a substantive participant on our team. For all of that and for the other myriad roles she played and the endless duties she performed we thank her.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

No. 066-15-002

Project Specifications and Instructions
for Submitting a Proposal to Furnish

Statewide NDOT Operational Audit

Due: March 17, 2015



Rudy Malfabon, P.E., Director
Department of Transportation

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SECTION I - INSTRUCTIONS TO PROPOSER

The enclosed Request for Proposal (RFP) is being advertised for use in submitting information that will be used to select a firm with whom the Nevada Department of Transportation (DEPARTMENT) hopes to negotiate an agreement for the described services.

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statement of Qualifications (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

The proposer shall submit one (1) CD containing one (1) typewritten, legible proposal as instructed above as well as in Section X (B), contained within one (1) Portable Document Format (PDF) file. The proposer shall also submit one (1) Cost Proposal in a separate envelope included with their proposal package. In addition, the DEPARTMENT is testing new functionality with the DEPARTMENT's electronic portal/website, located at www.nevadadot.com/Doing_Business/Vendors/Vendor_Portal_Login.aspx. Proposers are encouraged also submit the proposal electronically through the portal to assist with our testing, however, this is NOT required.

If the proposer chooses to submit proposals electronically through the above link, Vendor registration is required. If you are not a registered vendor with the DEPARTMENT, please register online using the [vendor registration](#) form and follow the instructions. After submitting the online application, you will receive an email with your registration number. Once you receive the registration number, you will be able to submit your proposal electronically.

Proposals must be received **NO LATER THAN 3:00 P.M. PST, on Tuesday March 17, 2015**, and the proposal package containing the CDs must be addressed **exactly** as follows:

Agreement Services
Nevada Department of Transportation
Attn: RFP 498-14-002
1263 South Stewart Street, Room 101A
Carson City, NV 89712

Proposals received after the specified deadline or submitted to the wrong location **will not** be considered and will be disposed of in an appropriate manner suitable to the DEPARTMENT.

Proposals and Statements of Qualification will first be reviewed to determine if minimum qualification requirements are met. Any proposals submitted that do not meet the minimum qualification requirements, as outlined below, will be disposed of in an appropriate manner, at the sole discretion of the DEPARTMENT, and without further review.

Qualification Requirements:

- The firm must be well versed with at least three (3) years' experience performing similar audits.
- The firm must have knowledge and demonstrated experience in evaluating internal controls, policies and procedures, construction contracts, procurement processes, facility and shop operations.

Any proposal received prior to the date and time specified above for receipt of proposals may be withdrawn or modified; electronically submitted proposals can be modified through the Vendor Portal Login webpage, while proposals submitted on CDs can be modified through a written request from the proposer. To be considered, however, a written request to withdraw the proposal or the modified proposal must be received before the time and date specified above for receipt of proposals. Oral interviews may be conducted for each firm that submits a written proposal. The DEPARTMENT has the sole discretion as to whether it will or will not conduct oral interviews. In the event that the DEPARTMENT elects to conduct oral interviews, each proposer in the competitive range will be advised of the format for such interview, and will be provided with a schedule for such interview. Competitive range refers to a list of the most highly rated proposals based on the initial ranking of the proposals; it is based on the initial rating of each proposal measured against all evaluation criteria set forth in this RFP.

Confidential Information, Trade Secrets, and/or Proprietary Information must be uploaded into the Confidential/Proprietary folder provided on the Vendor Proposal webpage if submitted electronically, or sealed in a separate package with each page clearly marked "Confidential" if submitted on CD. The failure to separate and mark this information as per NRS 333.020 and 333.333 shall constitute a complete waiver of any and all claims for damages caused by release of the information by the DEPARTMENT. If the DEPARTMENT reviews the confidential information and determines that the information is not considered confidential pursuant to NRS Chapter 333, the DEPARTMENT will contact the proposer. The proposer must advise the DEPARTMENT as to whether it either accepts the DEPARTMENT's determination that the information is not confidential, or withdraws the information. The proposer will not be allowed to alter the proposal after the date and time set for receipt of proposals shown above. Notwithstanding the provisions in NRS Chapter 333, the DEPARTMENT retains its immunity pursuant to the provisions of NRS 239.012 for any "good faith" release of information, and the immunities from liability provided to it pursuant to NRS Chapter 41.

Issuance of this RFP shall in no way constitute a commitment by the DEPARTMENT to execute an agreement. The DEPARTMENT reserves the right to reject any or all proposals received in response to this RFP, or to cancel this RFP if it is deemed in the best interest of the DEPARTMENT to do so.

The DEPARTMENT reserves the right to issue supplemental notices to this RFP prior to the closing date. If a firm chooses to download this procurement from the www.nevadadot.com website, it is the firm's responsibility to check for any supplemental notices to this procurement from the www.nevadadot.com website.

The DEPARTMENT assumes no financial responsibility in connection with the proposers' costs incurred in the preparation and submission of the proposal packets, or by attending the oral interviews, if such interviews are conducted by the DEPARTMENT in its sole discretion.

Proposers should provide a minimum of three (3) references from similar projects performed for the state and/or large local government clients within the last three (3) years. Proposers are required to submit a Reference Questionnaire to the business references listed within the proposal. The business

references must submit the Reference Questionnaire directly to the DEPARTMENT's Agreement Services Section. It is the proposer's responsibility to ensure the completed forms are received by the DEPARTMENT on or before the proposal submission deadline for inclusion in the evaluation process. The DEPARTMENT may contact any or all business references for validation of information submitted. With this RFP, the proposer is furnished a copy of an Agreement sample (see Attachment F - Agreement Sample). To maintain consistency between the DEPARTMENT and its SERVICE PROVIDERS, only those portions of the Agreement sample which are open for negotiation shall be blank.

A pre-negotiation audit may be required by the DEPARTMENT's Internal Audit Division. All DEPARTMENT audits will be conducted in accordance with the AASHTO Uniform Audit and Accounting Guide 2012, which can be found at www.transportation.org. The Specific Rates of Compensation method of compensation shall be used for the proposer's services, as set forth in 48 CFR Chapter 1.

The following rules of contact shall apply during this procurement for the project:

A. After release of the RFP and through the Notice of Intent to the Notice of Award of the agreement, the proposers shall **ONLY** correspond with the DEPARTMENT regarding this RFP through the DEPARTMENT's designated representative as per NAC 333.155. The designated representative's contact information is:

Agreement Services
Nevada Department of Transportation
1263 South Stewart Street, Room 101A
Carson City, Nevada 89712
Phone: 775-888-7070, Option 1
Fax: 775-888-7101
agreeservices@dot.state.nv.us

B. The proposers shall not contact the DEPARTMENT's employees, including department heads, members of the review committee and/or any official who will participate in the decision to award the agreement regarding the project, except through the process identified above;

C. Any communications determined to be improper may result in disqualification, at the sole discretion of the DEPARTMENT;

D. Any official information regarding the RFP will be disseminated by the DEPARTMENT. Specific information necessary for the preparation of proposals will be disclosed to all proposers;

E. The DEPARTMENT will not be responsible for any oral exchange or any other information or exchange that occurs outside the official process specified herein.

SECTION II - PROPOSER QUESTIONS

The DEPARTMENT will respond to questions regarding the RFP, including requests for clarification and requests to correct errors, submitted in writing by proposers. Only **written** requests as described above will be considered. No oral requests will be considered. No requests for additional information or clarification to any other DEPARTMENT office, consultant, employee or the FHWA will be considered.

Any questions raised by proposers must be submitted in writing to Agreement Services, 1263 South Stewart Street, Room 101A, Carson City, Nevada, 89712, faxed to (775) 888-7101, submitted electronically on the Open Procurements section of www.nevadadot.com, or emailed to agreeservices@dot.state.nv.us and **received by 3:00 P.M. PST, on February 20, 2015**. Written responses will be distributed by the DEPARTMENT on or before **February 26, 2015**.

SECTION III - RFP SCHEDULE

Task	Date
Advertised	02/04/2015, 02/11/2015, and 02/18/2015
Proposers' Questions Due	02/20/2015
DEPARTMENT's Response to Proposers' Questions Distributed	02/26/2015
Proposal Due	03/17/2015

SECTION IV - DBE REQUIREMENTS

There are no Disadvantaged Business Enterprise (DBE) requirements for the project.

SECTION V - NEVADA BUSINESS LICENSE REQUIREMENT

The selected firm, prior to doing business in the State of Nevada, must be appropriately licensed by the Office of the Secretary of State pursuant to NRS 76.100. Information regarding the Nevada State Business License can be located at www.nvsos.gov.

Firms must provide the following:

A. Nevada State Business License Number, and

B. Business Entity's Legal Name (affirm that it is the same name under which the proposer is doing business)

Additionally, if the firm is a corporation, LLC, LP, LLP, or LLLP, or non-profit corporation based out of state, it must be registered as a foreign business entity equivalent in Nevada, in active status, and in good standing with the Nevada Secretary of State.

Each proposer shall clearly state, at the time of proposal, its willingness to adhere to this requirement by providing a copy of its Nevada State Business License, a copy of its application from the Secretary of State Office, or a print out of the entity status, which can be obtained from the Nevada Business Search found on the homepage of the Nevada Secretary of State's website at www.nvsos.gov.

Award of any RFP is contingent on a proposer having and holding an active and valid Nevada State Business License. The successful proposer must satisfy this requirement within five (5) business days of issuance of the Notice of Intent. If a proposer is unable or unwilling to adhere to this requirement, the DEPARTMENT will deem the proposer to be non-responsive, and the DEPARTMENT shall proceed to negotiate with the next most qualified firm, and so on, until an agreement, that is acceptable to the DEPARTMENT, is negotiated.

To apply for a Nevada State Business License or to file appropriate formation documents with the Nevada Secretary of State's office, please visit www.nvsos.gov. Business licenses can be obtained immediately by applying on-line; however, paper applications may take several weeks to process.

SECTION VI - SELECTION PROCESS

Selection will be based on the factors listed in the Evaluation Criteria Items section (see Section X (A)), which will be used by a Review Committee to evaluate the proposals. If the committee elects, in its sole discretion, to conduct oral interviews, each proposer in the competitive range shall be notified of the interview schedule, and will be required to confirm their willingness to attend the oral interview. Failure of a proposer to appear at the oral interview, if the committee elects to conduct such interviews, will be considered non-responsive, and that proposer will be eliminated from any further consideration. The committee tasked with ranking the proposals will be comprised of DEPARTMENT staff and other

members representing local entities, who shall remain anonymous to protect the integrity of the procurement process.

The committee may use the information submitted in the proposer's proposal package, the information referencing this RFP, and the information presented at the interview, if applicable, to arrive at the final ranking. The proposals will be ranked and an agreement shall be negotiated following the selection of a firm. If an acceptable agreement cannot be reached with the highest ranked firm, the DEPARTMENT shall proceed to negotiate with the next highest ranked firm, and so on, until an acceptable agreement is negotiated, or the DEPARTMENT, in its sole discretion, elects to terminate the solicitation.

SECTION VII - BACKGROUND

The DEPARTMENT's Director's Office has the need for a firm with the ability to perform financial and operational audits, and other related audit work of various operational areas within the DEPARTMENT.

SECTION VIII - SCOPE OF SERVICES

The Scope of Services consists of operational audits of various areas of the DEPARTMENT to identify opportunities for improving internal controls and to evaluate effectiveness and efficiency. The objectives of each audit include an initial assessment and a detailed assessment. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks.

The objectives of said audits are:

1. PROCUREMENT CARDS

- a. Initial assessment
 - i. Review current policies and procedures related to Procurement Cards;
 - ii. Review segregation of duties;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed;
 - ii. Determine if the proper accounting records and other documentation is available to support charges;
 - iii. Determine if the segregation of duties is adequate;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improvements to the policies and procedures and internal controls.

2. PURCHASING SUPPLIES AND EQUIPMENT

- a. Initial assessment
 - i. Review current policies and procedures related to Purchasing Supplies and Equipment;
 - ii. Review established policies and procedures for purchasing non-rental equipment;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed by HQ Divisions, and Districts;
 - ii. Determine if the appropriate controls are being followed consistently in the stockrooms located statewide for supplies and equipment;
 - iii. Determine if the established policies and procedures for purchasing vehicles (light fleet) and heavy equipment estimated to cost over \$50,000.00 are being followed (proper justification, approvals, procurement and reporting);
 - iv. Determine if the proper accounting records and other documentation is available to support charges;
 - v. Report on exceptions;

- vi. Recommend opportunities for improvements to the policies and procedures and internal controls

3. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Review established policies and procedures for coding productive labor and overhead activities appropriately on time sheets;
 - iii. Recommend opportunities for improvements to the policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the equipment mechanics are coding productive labor and overhead activities appropriately on time sheets;
 - ii. Determine if activities that should be coded as overhead are appropriately identified by equipment mechanics on time sheets;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improvements to the policies and procedures and internal controls.

4. OVERTIME

- a. Initial assessment
 - i. Review current policies and procedures related to Overtime;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if overtime is pre-approved per adopted policies and procedures (HQ Divisions, and Districts statewide);
 - ii. Determine if maintenance call-out procedures have been adopted in each District and are being followed for emergency maintenance activities;
 - iii. Determine if furlough restrictions on overtime are being followed;
 - iv. Report on exceptions;
 - v. Recommend opportunities for reducing the amount of overtime accrued at the District and Division level.
 - vi. Recommend opportunities for improvements to the policies and procedures and internal controls.

5. STATE VEHICLE USAGE

- a. Initial assessment
 - i. Review current policies and procedures related to State Vehicle Usage;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if prior approvals are obtained for home storage;
 - ii. Determine if home storage is properly reported to Accounting Division;
 - iii. Determine if reported improper use of state vehicles is investigated, and appropriate corrective measures are taken, if necessary;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

6. PROPER MAINTENANCE OF DEPARTMENT FACILITIES

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance of Department Facilities;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment

- i. Determine if maintenance schedules are kept for various building control systems (for example, HVAC) for each DEPARTMENT facility;
 - ii. Determine if facility maintenance is managed at each DEPARTMENT facility;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.

- 7. COST EFFECTIVENESS OF EQUIPMENT REBUILD PROGRAM – For the last six years, the DEPARTMENT Equipment Division has rebuilt drive trains for selected heavy fleet such as trucks, loaders, and paint strippers. Some rebuild work is contracted out and some is performed in-house. The equipment mechanics working on the rebuild program are less available for day-to-day equipment maintenance functions. The DEPARTMENT has also had major maintenance on agency aircraft, such as new engines. The DEPARTMENT would like to assess the cost effectiveness of the major equipment rebuild program in the equipment division and the major maintenance program of agency aircraft and determine if it is an efficient use of DEPARTMENT resources.
 - a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. Investigate and determine the cost effectiveness of the equipment rebuild program and major maintenance on agency aircraft;
 - ii. Recommend improvements to increase cost effectiveness or;
 - iii. Recommend other alternatives that would be more cost effective than the current program;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.

- 8. PROPER MANAGEMENT AND ADMINISTRATION OF MAINTENANCE CONTRACTS – The DEPARTMENT contracts out various maintenance services. This can be outsourced work normally performed by maintenance forces (street sweeping, contracted surface treatments on pavements, janitorial services, facilities maintenance) and unique work that the DEPARTMENT does not have resources to perform (certain facilities maintenance activities, maintenance of elevators and escalators at pedestrian bridges). The DEPARTMENT would like to assess if the managers of maintenance contracts have the proper skills and training to monitor performance by contracted service providers and training for proper administration. For example, does a DEPARTMENT maintenance contractor manager receive training on proper review of invoices for work performed? How is performance monitored on maintenance contracts?
 - a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. For outsourced maintenance contracts, determine who administers the contracts and assess whether the administration of contracts is delegated to the appropriate level;
 - ii. Assess whether the administrators of maintenance contracts receive appropriate training;
 - iii. In general, make recommendations to improve the effectiveness of administering and monitoring maintenance contracts;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls

- 9. INTERLOCAL AGREEMENTS – An agreement between public agencies to obtain a service from a public agency is known as an Interlocal Agreement. The DEPARTMENT also can enter into a Cooperative Agreement, which is an agreement between two or more public agencies for the

joint exercise of powers, privileges and authority. Authority is granted under NRS 277.045 and 277.180. An example of an Interlocal agreement is the DEPARTMENT distributing federal funds to a metropolitan planning organization (MPO) for their use on programs and projects.

- a. Initial assessment
 - i. Review current policies and procedures related to Interlocal Agreements;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - ii. Review amendments to Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - iii. Review the reported Interlocal Agreements and amendments for compliance with the reporting matrix approved by the Board of Transportation (as appropriate for the execution date of the agreement/amendment; the reporting matrix has been amended periodically);
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

10. PROFESSIONAL SERVICES CONTRACTS – The DEPARTMENT uses professional services contracts when it has insufficient resources to perform the work in-house, when it does not have in-house expertise, or to meet delivery schedule requirements in a timely manner. The DEPARTMENT would like to assess and improve how its technical Divisions determine when to outsource professional services. The following technical Divisions which use professional services contracts shall be considered under this item: Project Management; Roadway Design; Structures; Hydraulics; Landscape & Aesthetics; Right-of-Way; Environmental; Maintenance & Asset Management; Architectural; Traffic Operations; Construction; Materials; Roadway Systems; Multimodal Planning; Program Development; Safety; Locations. This task shall be limited to a review of state fiscal years 2011-2014.

- a. Initial assessment
 - i. Review current policies and procedures related to Professional Services Contracts;
 - ii. Interview the technical divisions listed above to assess how they determine the need to outsource professional services;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review sample scopes of work to determine if all or a portion of work should be considered to be eliminated from outsourcing in the future;
 - ii. Review amendments to professional services contracts to assess if they were anticipated in the original agreement or unanticipated. (For instance, that the original agreement allowed for the addition of future phases of work that was substantially more effort than the original scope of work, as with preliminary engineering proceeding after environmental clearance on design projects);
 - iii. Make recommendations to improve how the assessment to determine the need to outsource professional services is conducted;
 - iv. Make recommendations on reducing the number and cost of amendments to professional services contracts;
 - v. Make recommendations regarding where current staff may be better utilized before hiring outside professional services.

11. CONSTRUCTION CONTRACT CHANGE ORDERS – Construction contracts can be revised by change order. The contracts closed out in state fiscal years 2011 – 2014 shall be reviewed.

- a. Initial assessment

- i. Review current policies and procedures related to Construction Contract Change Orders;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Work with the Construction Division, and confirm the percentage of cost overruns/underruns due to change orders;
 - ii. Review the cause of change orders (design error; unforeseen conditions; added scope; etc.) and report on the distribution of change orders;
 - iii. Identify areas that commonly resulted in change orders that could be avoided through improved design review and other measures;
 - iv. Make recommendations on reducing the number of Construction Contract Change Orders.

12. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review the productivity of the Equipment Division and District equipment shops;
 - ii. Review equipment maintenance and repair that is outsourced and make recommendations on whether the work should continue to be outsourced or performed in-house;
 - iii. Review equipment maintenance and repair that is performed in-house and make recommendations on whether the work should continue to be performed in-house or outsourced;
 - iv. Report on observed discrepancies of productivity statistics between the equipment shops;
 - v. Make recommendations on how to improve the overall productivity of equipment shops.

SECTION IX - PROJECT SCHEDULE

It is anticipated that the project schedule will be twelve (12) to fifteen (15) months from the execution date of the agreement.

SECTION X - PROPOSAL CONTENT

A section of the proposal shall be devoted to each Evaluation Criteria Item. The proposal must be signed by the individual(s) legally authorized to bind the firm as per NRS 333.337.

A. EVALUATION CRITERIA ITEMS

1. Project Approach:

- a. Describe your firm's understanding of project requirements contained in the Scope of Services.
- b. Identify specific methods to be used to complete each project requirement.
- c. Identify potential complications or difficulties that might be encountered in the implementation of required services along with suggested resolutions for each.

2. Project Team:

- a. Provide a summary of the education including CPE Hours & Course Listing, and experience of each member of the Project Team who will be assigned to this project, including resumes for the project manager and the key principals.

- b. Include a current organizational chart of the project team, including sub-consultant(s) with responsibilities of team members identified therein.
- c. Identify the location(s) where actual work will be completed.
- d. Provide a percentage of work to be completed at each location.
- e. Identify the location of the office which will provide primary project control for this project.

3. Past Performance:

- a. Describe your firm's competence in the services to be provided contained in the Scope of Services.
- b. Provide the details of the audits completed, including Attestation Engagements, in accordance with Generally Accepted Government Auditing Standards in the past three (3) years.
- c. Provide information that your firm is free from personal, external, and organizational impairments to independence and avoid the appearance of such impairments to independence for the project contained in the Scope of Services.
- d. Provide a copy of the most recent Peer Review Report of the firm and Letter of Comments, if any.

4. Availability and Capacity:

- a. Provide a listing of your firm's technical equipment which will support this effort.
- b. Provide a matrix or chart which lists all current projects of the Project Team, the number of hours remaining for completion of each project and the estimated completion date for each project.
- c. In view of this data, describe your firm's ability to meet time lines established for this project.
- d. Identify the availability of Project Team to attend meetings and interact with DEPARTMENT staff on short notice.

5. Proximity of Project Team:

- a. Describe your firm's location in the geographical area.
- b. Describe your knowledge of the locality of the project.

6. Cost: Submitted in a separate sealed envelope.

Proposals shall be submitted in two (2) distinct parts - the **Technical Proposal** and the **Cost Proposal**. The Technical Proposal **must not** include any cost information. Electronic Cost Proposal submissions must be uploaded in the Cost Proposal file. While Technical Proposals submitted on CD and the hardcopy Cost Proposal may be shipped together in the same shipping container, the Technical Proposals and the Cost Proposal must be placed in separate envelopes within the shipping container and clearly marked with the proposer's name and the RFP number; each respective envelope must be marked "Technical Proposal" or "Cost Proposal," as appropriate.

B. PROPOSAL LIMITATIONS

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statements of Qualification (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

C. DISCLOSURE OF CURRENT AND FORMER STATE EMPLOYEES

Proposals from firms employing current employees or former employees of the State of Nevada will be considered pursuant to the requirements and limitations set forth in the NRS Chapter 333.705, and the State Administrative Manual, Sections 322 and 323.

If the apparent top-ranked firm proposes any current state employees or former state employees who left state service within the preceding two (2) years, the DEPARTMENT must request approval from the State Board of Examiners (BOE) prior to entering into an agreement with such firm. The proposer shall submit, as part of their proposal, the "Authorization Current Employee, Authorization Former Employee Form" to assist the DEPARTMENT in requesting approval from the BOE.

The forms are located at http://purchasing.state.nv.us/contracting/current_and_former.htm. In the event of a denial by the BOE, the proposer will be allowed one (1) opportunity to replace the disapproved employee with another employee who possesses substantially equivalent capabilities. The DEPARTMENT has the authority to approve or deny the equivalent employee.

SECTION XI - AWARD PROCESS

The DEPARTMENT shall issue its Notice of Intent in accordance with NAC §333.170. Any award is contingent upon the successful negotiation of final contract terms and upon approval of the Transportation Board, when required. Negotiations shall be confidential and not subject to disclosure to competing firms. The terms agreed to by the parties shall be confidential until an agreement is executed. If contract negotiations cannot be concluded successfully, the DEPARTMENT, at its sole discretion and upon written notice to all firms, may negotiate a contract with the next highest ranking firm or withdraw the RFP and cancel this procurement.

The DEPARTMENT shall issue a Notice of Award in accordance with NAC §333.170, at which time proposals are no longer confidential and can be requested by the public from the DEPARTMENT via a Public Records Request, which can be located at: www.nevadadot.com/Contact_Us/Public_Records_Requests.aspx.

SECTION XII - TERMS, CONDITIONS AND EXCEPTIONS

This procurement is being conducted in accordance with NRS Chapters 333 and 408 and NAC Chapter 333.

The DEPARTMENT reserves the right to alter, amend, or modify any provisions of this RFP, or to withdraw this RFP, at any time prior to the award of a contract pursuant hereto, if, in the sole discretion of the DEPARTMENT, it is in the best interest of the state to do so.

The DEPARTMENT reserves the right to waive informalities and minor irregularities in proposals received.

The DEPARTMENT reserves the right to reject any or all proposals received prior to contract award (NRS §333.350).

The DEPARTMENT shall not be obligated to accept the lowest priced proposal, but will make an award in the best interests of the State of Nevada after all factors have been evaluated (NRS §333.335).

Any irregularities or lack of clarity in the RFP must be brought to Agreement Service's attention as soon as possible, so that corrective addenda may be furnished to all proposers.

Alterations, modifications or variations to a proposal may not be considered unless authorized by the RFP, or by an addendum or an amendment to the RFP.

Proposals which appear unrealistic in the terms of technical commitments, lack of technical competence, or are indicative of failure to comprehend the complexity and risk of this contract, may be rejected.

All materials submitted in accordance with the prescribed deadline become the property of the DEPARTMENT and will not be returned. The DEPARTMENT's selection or rejection of a proposal does not affect this right. The master copy of each proposal shall be retained for official files and will become public record after execution of a contract. Only specific parts of the proposal may be labeled a "trade secret," provided that the proposer agrees to defend and indemnify the DEPARTMENT for honoring such a designation (NRS §333.333); unsuccessful proposals containing "trade secrets" will be returned pursuant to NRS 293.010. The failure to so label any information shall constitute a complete waiver of any and all claims for damages caused by any release of such information by the DEPARTMENT. The DEPARTMENT shall not be liable for disclosure or release of information when authorized or required by law to do so pursuant to NRS 239.012.

A proposal submitted in response to this RFP must identify any sub-consultants, and outline the contractual relationship between the awarded proposer and each such sub-consultant. An official of each proposed sub-consultant must sign, and include as part of the proposal submitted in response to this RFP, a statement to the effect that the sub-consultant has read this RFP, and agrees to abide by the awarded proposer's obligations. A sub-consultant's compliance with these requirements does not create a contractual relationship between the sub-consultant and the DEPARTMENT.

The awarded proposer will be the sole point of contract responsibility. The DEPARTMENT will look solely to the awarded proposer for the performance of all contractual obligations, which may result from an award based on this RFP, and the awarded proposer shall not be relieved for the non-performance of any or all of its sub-consultants.

The awarded proposer must maintain, for the duration of its contract, insurance coverage as set forth in the agreement executed in response to this RFP. Work on the contract shall not begin until after the awarded proposer has submitted to the DEPARTMENT acceptable evidence of the required insurance coverage. Failure to maintain any required insurance coverage or alternative method of insurance acceptable to the DEPARTMENT in its sole discretion will be deemed a breach of contract.

Each proposer must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict must be disclosed. By submitting a proposal in response to this RFP, proposers affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a proposer's proposal. An award will not be made where a conflict of interest exists. The DEPARTMENT, in its sole discretion, will determine whether a conflict of interest exists and whether it may reflect negatively on the DEPARTMENT's selection of a proposer. The DEPARTMENT reserves the right in its sole discretion to impose additional requirements upon the proposer to mitigate

such conflict of interest or to disqualify any proposer on the grounds of an actual or an apparent conflict of interest.

The DEPARTMENT will not be liable for Federal, State, or Local excise taxes.

The DEPARTMENT reserves the right to negotiate final contract terms with any proposer selected in accordance with NAC §333.170. The contract between the parties will consist of the final executed contract, the RFP with any modifications thereto, and the awarded proposer's proposal with any modifications and clarifications thereto that are incorporated at the request of the DEPARTMENT during the evaluation and negotiation process. In the event of any conflict or contradiction between or among these documents, the documents shall control in the following order of precedence: the final executed contract, addenda to the RFP, the RFP, any modifications and clarifications to the awarded proposer's proposal, and the awarded proposer's proposal. Specific exceptions to this general rule may be noted in the final executed contract.

The proposer understands and acknowledges that the representations above are material and important, and will be relied on by the DEPARTMENT in its evaluation of a proposal. Any misrepresentation by a proposer shall be treated as fraudulent concealment from the DEPARTMENT of the true facts relating to the proposal.

No announcement concerning the award of a contract as a result of this RFP can be made without the prior written approval of the DEPARTMENT.

The Nevada Attorney General will not render any type of legal opinion regarding this transaction.

SECTION XIII - PROTEST PROCEDURE

Protests may be filed only with respect to:

1. Allegations that the terms of the RFP are wholly ambiguous, are contrary to legal requirements applicable to the procurement, or exceed the DEPARTMENT's authority, and/or
2. A determination as to whether a proposal is responsive to the requirements of the RFP, or failed any Pass/Fail criteria, as applicable, and/or
3. The award of an Agreement.

A. DEADLINES FOR PROTESTS

Protests concerning the issues described in Section XIII (1) and contained in the RFP must be filed no later than ten (10) calendar days prior to the proposal due date, and those contained in any amendment to the RFP must be filed no later than three (3) business days after the DEPARTMENT distributes the related addenda.

Protests concerning the issues described in Section XIII (2) must be filed within ten (10) calendar days after the DEPARTMENT issues to the proposer a notice regarding the failure of any pass/fail criteria, or a notice regarding the non-responsiveness of the proposal.

Protests concerning the issue described in Section XIII (3) must be filed within ten (10) calendar days after the DEPARTMENT issues the Notice of Award.

The DEPARTMENT will not accept any protests received after the above-stated deadlines for receipt of such protests.

B. PROTEST CONTENTS

Protests shall include information about the protesting firm, including the firm's name, mailing address, and phone number, as well as the name of the individual responsible for the submission of the protest. Protests shall completely and succinctly state the grounds for the protest, its legal authority, and its factual basis; protests shall include all factual and legal documentation in sufficient detail to establish the merits of the protest. Statements shall be sworn and submitted under penalty of perjury.

C. FILING OF PROTEST

Protests shall be in writing, and filed by hand delivery on or before the applicable deadline to:

Nevada Department of Transportation
ATTN: Administrative Services/Dispute Resolution Office
1263 South Stewart Street, Room 101A
Carson City, NV 89712

The proposer filing the protest shall concurrently submit a copy of the protest to the other proposers; the other proposers' addresses may be obtained from the DEPARTMENT.

D. COMMENTS FROM OTHER PROPOSERS

Other proposers may file statements in support of or in opposition to the protest within seven (7) calendar days of the filing of the protest. The DEPARTMENT shall promptly forward copies of all such statements to the protester. Any statements shall be sworn and submitted under penalty of perjury.

E. BURDEN OF PROOF

The protester shall have the burden of proving the basis of its protest. The DEPARTMENT may, in its sole discretion, discuss the protest with the protester and other proposers. No hearing will be held on the protest. The protest shall be decided on the basis of written submissions.

F. DECISION ON PROTEST

The DEPARTMENT's Director or designee shall issue a written decision regarding the protest within thirty (30) calendar days after the filing of the detailed statement of protest. If it is necessary to address the issues raised in a protest, the DEPARTMENT may, in its sole discretion, make appropriate revisions to the RFP by issuing addenda.

G. PROTESTER'S PAYMENT OF COSTS

If a protest is denied, the proposer filing the protest shall be liable for the DEPARTMENT's costs reasonably incurred to defend against or resolve the protest, including attorney's fees, consultant fees and costs, and any reasonably unavoidable damages sustained by the DEPARTMENT as a consequence of the protest.

H. RIGHTS AND OBLIGATIONS OF PROPOSERS

Each proposer, by submitting its proposal, expressly recognizes the limitation on its rights to protest provided in this Section XIII and expressly waives all other rights and remedies, and agrees that the decision on the protest is final and conclusive. If a proposer disregards, disputes, or does not follow the exclusive protest remedies provided in this section, it shall indemnify and hold harmless the DEPARTMENT and its officers, employees, agents, and consultants from and against all liabilities, fees and costs, including legal and consultant fees and costs, and damages incurred or suffered as a result

of such proposer's actions. **Each proposer, by submitting a proposal, shall be deemed to have irrevocably and unconditionally agreed to this indemnity obligation.**

No Stay Pending Final Determination: Agreement negotiations with the selected proposer shall not be stayed during the pendency of any protest. Any agreement with the selected proposer shall be made contingent upon the outcome of any pending protest.

ATTACHMENTS

- Attachment A - Statement of Qualification
- Attachment B - Reference Questionnaire
- Attachment C - Cost Proposal
- Attachment D - Checklist
- Attachment E - Title VI Compliance Questionnaire
- Attachment F - Agreement Sample

Attachment A
Statement of Qualification

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Statement_of_Qualification_Form.pdf

The Statement of Qualification Form must be completed in full, and submitted as part of the proposal package per Request for Proposal instructions.

1. Date prepared: _____
2. Firm's name: _____
3. Firm's address: _____
Phone: _____ FAX: _____
4. Is your local office the main office? _____ or branch office? _____ or sole office? _____
5. Year your firm was established: _____
6. Year your local office was established: _____
7. Location of:
 - a. Main office: _____
 - b. Local office: _____
 - c. Invoice remit-to office: _____
8. Year former firm(s) were established:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
9. Name, title, telephone number, address and e-mail address of one principal in firm who may be contacted:

10. List locations of other offices (no more than five):

	<u>Address</u>	<u>Telephone</u>	<u>No. of Personnel</u>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____

11. Total employees presently employed:
- a. At your local Northern Nevada office: _____
 At your local Southern Nevada office: _____
- b. Total in your firm: _____
12. By category, give the number of projects your firm is working on / has worked:
- | | <u>Current/Active</u> | <u>Last Five (5) Years</u> |
|------------------------|-----------------------|----------------------------|
| a. Public/Governmental | _____ | _____ |
| b. Commercial | _____ | _____ |
| c. Residential | _____ | _____ |
| d. Other | _____ | _____ |
13. Nevada Department of Transportation encourages the participation and utilization of minority and women-owned businesses.
- a. Is your firm certified as a minority-owned, women-owned or disabled veteran-owned business?
 Yes ___ No ___ Specify _____
- b. If yes, by what governmental agency? _____
14. Specialty: _____ (i.e.: Project Management, etc.)

The DEPARTMENT periodically engages consultants to perform work of a specialized nature including (but not limited to) such areas as DBE Supportive Services, Claims Review, etc.

I. Briefly describe your specialty as it applies to this Project's discipline, and the scope of the services that your firm provides.

II. Select three recent projects that have applicability to this Project, and list a reference that the DEPARTMENT may contact for each.

PROJECT NAME	REFERENCE	TELEPHONE
		()
		()
		()



**Attachment B
Reference Questionnaire
State of Nevada
Department of Transportation**

RFP No. 066-15-002 REFERENCE QUESTIONNAIRE
FOR:

_____ (Name of company requesting reference)

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Reference_Questionnaire_070-028_Jan2014.pdf

This form is being submitted to your company for completion as a business reference for the company listed above. Please return this form to the Nevada Department of Transportation (NDOT) via email to agreeservices@dot.state.nv.us, or fax to (775) 888-7101 no later than **March 17, 2015, at 3:00pm**. Do not remit this document to the company requesting the reference.

The information contained in this questionnaire will be confidential and will not be accessible to the referenced company. For questions or concerns regarding this form, please contact the Agreement Services Division by phone (775) 888-7070 or email agreeservices@dot.state.nv.us and refer to the RFP number.

CONFIDENTIAL INFORMATION

Company providing reference: _____
 Contact name and title/position: _____
 Contact telephone number: _____
 Contact email address: _____

Questions:

1. In what capacity have you worked with this company in the past? Please explain the company's responsibilities.
 COMMENTS:

2. How would you rate this company's knowledge and expertise?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

3. How would you rate the company's flexibility relative to changes in the project scope and timelines?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

4. What was your level of satisfaction with hard-copy materials/products developed by the company?
_____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

5. Was the work done by this company completed on time and within budget?
COMMENTS on Time:

COMMENTS on Budget:

6. Who were the company's principal representatives involved in your project and how would you rate them individually? Please comment on the skills, knowledge, behaviors or other factors on which you base your rating.
(3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)

Name: _____	Rating: _____
Name: _____	Rating: _____
Name: _____	Rating: _____
Name: _____	Rating: _____

COMMENTS:

7. With which aspect(s) of this company were you:
Most satisfied with
COMMENTS:

Least satisfied with
COMMENTS:

8. Would you recommend this company's service to your organization again?
COMMENTS:

**Attachment C
Cost Proposal**

RFP No.: 066-15-002 Statewide NDOT Operational Audit

INSTRUCTIONS: The Cost Proposal shall be itemized by task, and then added up for the Total Proposed Cost. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks. Each task is described in Section VIII - Scope of Services.

The DEPARTMENT has established an initial budget for the Statewide NDOT Operational Audit of \$650,000.00.

Task	Cost Per Task
1a. Procurement Cards-Initial assessment	
1b. Procurement Cards-Detailed assessment	
2a. Purchasing Supplies And Equipment-Initial assessment	
2b. Purchasing Supplies And Equipment-Detailed assessment	
3a. Maintenance And Equipment Shops-Initial assessment	
3b. Maintenance And Equipment Shops-Detailed assessment	
4a. Overtime-Initial assessment	
4b. Overtime-Detailed assessment	
5a. State Vehicle Usage-Initial assessment	
5b. State Vehicle Usage-Detailed assessment	
6a. Proper Maintenance of Department Facilities-Initial assessment	
6b. Proper Maintenance of Department Facilities-Detailed assessment	
7a. Cost Effectiveness of Equipment Rebuild Program-Initial assessment	
7b. Cost Effectiveness of Equipment Rebuild Program-Detailed assessment	
8a. Proper Management and Administration of Maintenance Contracts-Initial assessment	
8b. Proper Management and Administration of Maintenance Contracts-Detailed assessment	
9a. Interlocal Agreements-Initial assessment	
9b. Interlocal Agreements-Detailed assessment	
10a. Professional Services Contracts-Initial assessment	
10b. Professional Services Contracts-Detailed assessment	

11a. Construction Contract Change Orders-Initial assessment	
11b. Construction Contract Change Orders- Detailed assessment	
12a. Maintenance and Equipment Shops-Initial assessment	
12b. Maintenance and Equipment Shops-Detailed assessment	
Total Proposed Cost:	

Name

Signature

Firm Name

Attachment D Checklist

This checklist is provided for the proposer's convenience only, and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite items in the number and form set forth in the proposal instructions, may in the sole discretion of the DEPARTMENT, be deemed non-responsive and not considered for contract award.

1. Number of Pages within Page Range (see Section X (B))
2. Sections match Evaluation Criteria Items (see Section X (A))
3. Technical Proposal
4. Cost Proposal in a separate sealed envelope
5. Statement of Qualification (see Section X (B))
6. Nevada State Business License (see Section V)

Attachment E
Title VI Compliance Questionnaire

Title VI is a statute provision of the Civil Rights Act of 1964:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 U.S.C. Sec 2000d)

The following information will be used by the Nevada Department of Transportation (DEPARTMENT) and the Federal Highway Administration (FHWA) for statistical purposes only. This information will be stored confidentially, and will not affect any decisions made by the DEPARTMENT.

Your participation is voluntary, but would be greatly appreciated.

Choose one ethnic group with which the principal owner(s) most identify:

- Black** (Not of Hispanic origin: All persons having origins in any of the Black racial groups.)
- Asian/Pacific Islander** (All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.)
- Hispanic** (All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)
- Native American** (All persons having origins in any of the original peoples of North America and who maintain cultural identification through a tribal affiliation or community recognition.)
- White** (Not of Hispanic origin: All persons having origins in any of the original peoples of Europe, North Africa, or Middle East.)
- Other** (All persons not matching one of the other choices.)

Sex: Male Female

- I understand my participation is voluntary and decline to provide the requested information

Firm Name: _____

Owner Name (Print): _____

Owner Name (Sign): _____

Date: _____

Attachment F
Agreement Sample
SERVICE AGREEMENT

This Agreement, made and entered into the _____ day of _____, _____ by and between the STATE OF NEVADA, acting by and through its DEPARTMENT OF TRANSPORTATION (hereinafter "DEPARTMENT") and **NAME AND ADDRESS** (hereinafter "SERVICE PROVIDER"). Individually they are each a "Party" and collectively they are the "Parties."

WITNESSETH:

WHEREAS, the Director of the DEPARTMENT may, pursuant to Nevada Revised Statutes (hereinafter "NRS") Chapter 333 & Chapter 408, contract for technical services that may be required; and

WHEREAS, NRS Chapter 333 authorizes heads of state departments to contract for the services of independent contractors; and

WHEREAS, **PROJECT IDENTIFICATION**, is necessary for **PROJECT EXPLANATION** (hereinafter "PROJECT"); and

WHEREAS, SERVICE PROVIDER's services will be of great benefit to the DEPARTMENT and to the people of the State of Nevada.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is agreed by and between the Parties as follows:

ARTICLE I - SCOPE OF SERVICES

1. The SERVICE PROVIDER agrees to **SUMMARIZE PROJECT DESCRIPTION OR INSERT:** perform services listed in Attachment A - Scope of Services attached hereto and incorporated herein.
2. The SERVICE PROVIDER agrees to furnish all labor, materials, services, equipment, tools and other expenses necessary to perform the professional services required under the terms of this Agreement, except as specifically provided otherwise herein.
3. The SERVICE PROVIDER agrees to comply with all requirements contained in the underlying Request for Proposal which is incorporated into this Agreement by reference. **ONLY USE PARAGRAPH IF APPLICABLE**

ARTICLE II - PERFORMANCE

1. The term of this Agreement shall be from the date first written above through and including **DATE**, unless a change extending the term is further agreed to by written amendment signed by all parties to this Agreement and approved by appropriate official action of the governing body of the DEPARTMENT prior to such term expiration date.

OR

1. The term of this Agreement shall be from the date first written above through and including **DATE**, thereby terminating **NUMBER (#)** years from the above date or upon completion of the case, including any appeal, whichever comes first. **ONLY USE PARAGRAPH FOR EXPERT WITNESS OR LEGAL**

2. In the event that the SERVICE PROVIDER performs or causes to be performed any work after: (a) the Agreement's expiration date as set forth within this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date; or (b) termination of this Agreement prior to the expiration date set forth within this Agreement; then the DEPARTMENT shall make no payment for work performed following the expiration or termination dates, and the SERVICE PROVIDER shall forfeit any and all right to payment for such work.

3. The SERVICE PROVIDER, on behalf of itself, its spouses, heirs, executors, administrators, successors, subrogees, servants, insurers, attorneys, independent representatives, personal representatives, agents, and assigns, does hereby waive, release, and forever discharge the State of Nevada, the DEPARTMENT, and each and every of their departments, divisions, agencies, officers, directors, agents, contractors, and

employees, from any and all claims, demands, liens, liability, actions, causes of action, and suits for damages, at law and in equity, in any way connected with or arising from the SERVICE PROVIDER's provision of services and work performed following termination of this Agreement, and/or following the expiration date of this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date.

4. Neither the State of Nevada, the DEPARTMENT, nor any of their departments, divisions, agencies, officers, directors, agents, contractors, and employees, shall have authority to extend this Agreement beyond the expiration date set forth within this Agreement, unless such extension is set forth within a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date. The SERVICE PROVIDER shall not rely upon any oral or written representations expressed extrinsic to a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date, purporting to alter or amend this Agreement, including but not limited representations relating to the extension of the Agreement's expiration date.

5. Paragraphs 1 through 4 of this Article II - Performance, shall survive the termination and expiration of this Agreement.

6. The SERVICE PROVIDER shall not proceed with said work until a copy of this Agreement is fully executed, signed by all individuals on the signatory lines below (hereinafter the "Final Execution Date"), and the Agreement is received by the SERVICE PROVIDER, which shall then constitute the written "Notice to Proceed" from the DEPARTMENT. The SERVICE PROVIDER shall notify the DEPARTMENT in writing of the exact date of commencement. If the SERVICE PROVIDER does commence said work prior to receiving said "Notice to Proceed" or prior to the Final Execution Date, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Final Execution Date and/or Notice to Proceed. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

OR

6. The SERVICE PROVIDER shall not proceed with work until the SERVICE PROVIDER receives a written "Notice to Proceed" from the DEPARTMENT. If the SERVICE PROVIDER does commence said work prior to receiving said Notice to Proceed, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Notice to Proceed and/or Final Execution Date. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR PARTIALLY OR FULLY FEDERALLY FUNDED PROJECTS**

7. The SERVICE PROVIDER agrees to complete the PROJECT within **NUMBER (#)** calendar **OR** working days of the commencement day of the PROJECT and agrees to pay to the DEPARTMENT, the sum of **NUMBER** and **#/100 Dollars (\$#)** for each and every calendar day past said date when the delay is caused by negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's direct control. These damages are not intended as a penalty. Damages are difficult to ascertain and the Parties agree that this amount is a reasonable estimate of presumed actual damages. **ONLY USE PARAGRAPH IF APPLICABLE**

8. In the event the DEPARTMENT discovers a SERVICE PROVIDER's error or omission before its discovery by the SERVICE PROVIDER, the DEPARTMENT shall not unreasonably delay in notifying SERVICE PROVIDER of such error or omission. DEPARTMENT's notice to SERVICE PROVIDER shall specify the maximum time period SERVICE PROVIDER will be allowed for correction. The SERVICE PROVIDER shall make all necessary corrections resulting from its errors and omissions, and shall without delay make any corrections necessitated by the negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's control, and shall make such corrections without additional compensation. SERVICE PROVIDER shall track all related costs for the correction. Acceptance of the professional services by the DEPARTMENT will not relieve the

SERVICE PROVIDER of the responsibility for any subsequent correction of any such errors and omissions, and the clarification of any ambiguities. The SERVICE PROVIDER will be responsible for additional costs in subsequent related construction resulting from its errors or omissions. Should the DEPARTMENT use its own personnel, supplies or equipment to remedy the deficiency, all such costs incurred by the DEPARTMENT shall be deducted from the sum due or which may become due to the SERVICE PROVIDER. In the event all such costs and charges incurred by the DEPARTMENT exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall reimburse the DEPARTMENT the amount of said excess.

9. The SERVICE PROVIDER shall assign one individual throughout the life of this Agreement who shall have overall PROJECT responsibility unless illness or termination requires replacement. **IF APPLICABLE ADD:** This individual shall be registered in accordance with NRS Chapter 625, Professional Engineers and Land Surveyors. This individual shall ensure that each sheet of the final submittal, including the title sheet, is stamped (electronic or wet stamp acceptable), signed and dated (original signature and date required) in accordance with NRS Chapter 625 and Nevada Administrative Code, Chapter 625.

10. A key person is defined as any individual identified by the SERVICE PROVIDER in its proposal as being part of the team to be assigned to the PROJECT. The SERVICE PROVIDER acknowledges and agrees, that the award of this Agreement was based, in part, on its ability to manage the PROJECT, and the qualifications, experience, and capacity of the SERVICE PROVIDER's aforementioned key persons and team. The SERVICE PROVIDER represents, warrants and covenants that such key persons are and will continue to be available to undertake and perform all services identified herein and fulfill the roles identified in its proposal. The SERVICE PROVIDER shall notify the DEPARTMENT in writing within ten (10) calendar days when a key person leaves the PROJECT team. **ONLY USE PARAGRAPH IF APPLICABLE**

a. If a key person leaves the PROJECT team, the SERVICE PROVIDER shall promptly propose a replacement within thirty (30) calendar days to and for the DEPARTMENT's review and written consent.

b. The DEPARTMENT shall have the unilateral right to terminate this Agreement:

(1) If a key person leaves the PROJECT team for a reason other than death, retirement, incapacitation or leaving SERVICE PROVIDER's employment (including the employment with SERVICE PROVIDER's affiliates, subsidiaries and parent companies/organizations);

(2) If a key person listed by the SERVICE PROVIDER in its proposal to perform or supervise various aspects of design is changed or leaves the PROJECT team; or

(3) If the DEPARTMENT does not accept the SERVICE PROVIDER's proposed key person replacement.

c. If this Agreement is terminated pursuant to the above, the SERVICE PROVIDER shall be paid for actual costs incurred for all services rendered and accepted by the DEPARTMENT and an amount of fee proportional to the work completed as of the date of termination. Additionally, the SERVICE PROVIDER shall not be entitled to any settlement costs, if any. Such termination will not occur if the SERVICE PROVIDER provides a replacement that is acceptable to the DEPARTMENT within thirty (30) calendar days of the date when the key person is changed or has left the PROJECT team.

11. The SERVICE PROVIDER shall at all times maintain control over and have complete responsibility for all services performed pursuant to this Agreement by the SERVICE PROVIDER and any of its subcontractors.

12. The SERVICE PROVIDER warrants that all deliverables and professional services produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry. The standard of care applicable to SERVICE PROVIDER's services will be of the degree of skill and diligence normally employed by professional engineers **OR** SERVICE PROVIDERS performing the same or similar services at the time said services are performed.

13. This Agreement, and any amendments, may be suspended temporarily, either wholly or in part, by the DEPARTMENT upon oral notice confirmed in writing within ten (10) calendar days, when the DEPARTMENT determines that conditions beyond the control of the SERVICE PROVIDER are unfavorable to its satisfactory continuation of work. Should such conditions be encountered, the time for completion may be extended in an amount determined by the DEPARTMENT to be equivalent to the delay. Requests for suspension of time by the SERVICE PROVIDER must have the written approval of the DEPARTMENT. No allowance shall be made for delay or suspension of the services solely due to the fault of the SERVICE PROVIDER.

14. An alteration ordered by the DEPARTMENT which substantially changes the services provided for by the expressed intent of this Agreement will be considered extra professional services and shall be specified in a written amendment signed by all Parties, which will set forth the nature and scope thereof. The method of payment for extra professional services shall be specified at the time the amendment is written.

15. The SERVICE PROVIDER shall not assign or subcontract, any of the professional services performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER will, subsequent to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the contract or agreement for professional services. The SERVICE PROVIDER shall require any subcontractor to comply with all provisions of 48 CFR Chapter 1, Part 31, in its agreement with the subcontractor, if the SERVICE PROVIDER subcontracts any professional services contemplated by this Agreement. The SERVICE PROVIDER will be responsible for any costs or deficiencies resulting from noncompliance if the subcontractors fail to comply with 48 CFR Chapter 1, Part 31.

16. The SERVICE PROVIDER agrees to complete and sign Attachment B - "AFFIDAVIT REQUIRED UNDER SECTION 112(c) of Title 23 United States Code, Act of August 27, 1958 and Part 29 of Title 49, Code of Federal Regulations, November 17, 1987," Attachment C - "CERTIFICATION REQUIRED BY SECTION 1352 of TITLE 31, UNITED STATES CODE, RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS," and "INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES," attached hereto and incorporated herein. **ONLY USE PARAGRAPH IF PROJECT IS FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

17. The SERVICE PROVIDER acknowledges that the DEPARTMENT has established a Disadvantaged Business Enterprise (DBE) participation requirement of **NUMBER** percent (#%) of the total dollar value of the Agreement costs. A DBE must be a small business concern as defined by the U.S. Small Business Act, 15 U.S.C. § 632 or by 49 CFR Subtitle A, Part 26. **ONLY USE PARAGRAPH IF APPLICABLE**

18. Failure by the Service Provider to fulfill the DBE Agreement requirements and to demonstrate good faith efforts, either in the Service Provider's proposal or during the performance period, constitutes a breach of this Agreement. In event of such a breach, the DEPARTMENT may:

(a) Withhold progress payments or a portion thereof;

(b) Deduct, as damages, an amount equal to the unmet portion of the DBE commitment not achieved. This amount will be determined by multiplying the percentage of DBE participation proposed by the total cost set forth in the agreement and then multiplying the actual percentage of DBE participation used during the agreement by the total cost set forth in the agreement. In the event the actual percentage of DBE participation is less than the proposed percentage of DBE participation, the difference in these two figures shall be the amount of damages due to the DEPARTMENT;

(c) Remove the SERVICE PROVIDER from the prequalified list for repeated violations, falsifications, or misrepresentations; and/or

(d) Terminate the Agreement.

19. This Agreement shall not become effective until and unless approved by the State Board of Examiners. **ONLY USE PARAGRAPH IF APPLICABLE**

20. This Agreement is contingent upon the verification that the SERVICE PROVIDER has a valid and active Nevada Business License and is in good standing in all areas of the Secretary of State's business requirements. If the SERVICE PROVIDER is an out of state provider, the SERVICE PROVIDER must be registered as a foreign business entity equivalent in Nevada, in active status and in good standing.

ARTICLE III - TERMINATION

1. The DEPARTMENT may terminate this Agreement without cause **NUMBER (#)** calendar **OR** working days after service of a termination letter to the SERVICE PROVIDER. In the event this Agreement is terminated in this manner, the SERVICE PROVIDER shall be paid for the cost of the professional services which have been completed and accepted by the DEPARTMENT up to the date of termination.

2. The continuation of this Agreement beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Nevada State Legislature and/or federal sources. The DEPARTMENT may terminate this Agreement, and the SERVICE PROVIDER waives any and all claims for damages, effective immediately upon receipt of written notice, or any date specified therein, if for any reason the DEPARTMENT's funding from state and/or federal sources is not appropriated or is withdrawn, limited or impaired.

3. A default or breach may be declared with or without termination. This Agreement may be terminated by either Party upon written notice of default or breach to the other Party as follows:

a. If the SERVICE PROVIDER fails to provide or satisfactorily perform any of the professional services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or

b. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law or regulation to be held by the SERVICE PROVIDER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed or not renewed; or

c. If the SERVICE PROVIDER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of a bankruptcy court; or

d. If DEPARTMENT materially breaches any material duty under this Agreement and any such breach impairs the SERVICE PROVIDER's ability to perform; or

e. If it is found by the DEPARTMENT that any quid pro quo or gratuities in the form of money, services, entertainment, gifts or otherwise were offered or given by the SERVICE PROVIDER, or any agent or representative of the SERVICE PROVIDER, to any officer or employee of the State of Nevada with a view toward securing an agreement or securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performing of such agreement.

4. Termination upon a declared default or breach may be exercised after service of written notice and the subsequent failure of the defaulting Party, within fifteen (15) calendar days of service of that notice, to provide evidence, satisfactory to the aggrieved Party, showing the declared default or breach has been corrected. Such correspondence shall be deemed to have been served on the date of postmark.

5. In the event of the SERVICE PROVIDER's breach of this Agreement, all costs and charges incurred by the DEPARTMENT, together with the cost of completing the work under this Agreement, shall be deducted from any money due or which may become due to said SERVICE PROVIDER. If expenses exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall be liable and shall pay to the DEPARTMENT the amount of said excess.

6. This Agreement shall be terminated when the professional services contemplated and covered by this Agreement have been completely performed by the SERVICE PROVIDER, and all items of professional services have been approved and accepted by the DEPARTMENT.

ARTICLE IV - COST

1. The "specific rates of compensation" method of compensation shall be used for the SERVICE PROVIDER's services.

2. The total cost of the services by the SERVICE PROVIDER shall not exceed the sum of **NUMBER** and **#/100 Dollars (\$#)**, which includes the fixed fee.

3. The rate will be reimbursed at **NUMBER** and **#/100 Dollars (\$#)** per **DESCRIPTION** and shall include direct salary costs, indirect costs, other direct costs and fixed fee. **IF APPLICABLE, INCLUDE SCHEDULE AS AN ATTACHMENT**

4. The DEPARTMENT will pay the SERVICE PROVIDER in monthly installments based upon progress and final payment reports submitted by the SERVICE PROVIDER and as approved by the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

5. The SERVICE PROVIDER is required to submit a monthly progress report in the DEPARTMENT's format showing the status of the professional services and the degree of completion thereof.

6. The SERVICE PROVIDER agrees to complete and sign Attachment D - Service Provider Cost Certification of Final Indirect Costs, attached hereto and incorporated herein. **ONLY USE FOR PROJECTS PARTIALLY OR FULLY FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

IF APPLICABLE, INSERT THE FOLLOWING THREE PARAGRAPHS AT THE END OF THE METHOD OF COMPENSATION CHOSEN AND RENUMBER THEM ACCORDINGLY, EXCEPT WHEN THE LUMP SUM METHOD OF PAYMENT IS USED, IN WHICH CASE THEY ARE NOT TO BE INSERTED.

X. Travel costs will be reimbursed at the current rates allotted to state employees. Travel costs will be reimbursed based on actual costs limited by Federal Travel Regulations (FTR) and the CONUS rate for Nevada. The FTR breaks down meals and incidental expenses at its website: www.gsa.gov/mie. The first and last travel days are calculated at seventy-five percent (75%). The lodging rate excludes taxes and fees. Taxes and fees are reimbursable. See this website for lodging in Nevada: <http://www.gsa.gov/portal/category/100120>. The SERVICE PROVIDER shall provide lodging receipts.

X. The SERVICE PROVIDER shall be reimbursed for the use of company vehicles as agreed upon with the Project Manager. Cost shall include a direct expense that includes anticipated mileage, insurance, maintenance and a lease fee, if applicable.

X. When requested by the DEPARTMENT, the SERVICE PROVIDER shall schedule its own airline and rental car reservations by the most economical means for reimbursement. Original receipts for airfare and rental cars must be submitted with the "Claim for Travel Expense." The DEPARTMENT is not responsible for payment of any premium, deductible or assessments on insurance policies purchased by the SERVICE PROVIDER for a rental vehicle.

ARTICLE V - SCHEDULE OF PAYMENTS

1. The SERVICE PROVIDER shall submit a signed invoice monthly **OR** bi-weekly **OR** quarterly **OR** semi-annually **OR** yearly **OR** upon completion for all services rendered along with one copy of substantiating documentation. The invoice must be submitted on the SERVICE PROVIDER's stationery using the DEPARTMENT's format or submitted on the DEPARTMENT's standard invoice form. The DEPARTMENT will utilize its normal accounting procedure in the payment of the invoices submitted. **IF APPLICABLE ADD:** The Fixed Fee shall be paid monthly and shall be calculated as a percentage of the direct salary plus overhead costs of that month's invoice until the full agreed fee is paid.

2. Payment will be made for one hundred percent (100%) of the amount of each invoice, until a maximum of ninety percent (90%) of the total Agreement costs have been billed by the SERVICE PROVIDER. Thereafter, payment for the remaining ten percent (10%) of the total Agreement costs shall be withheld by the DEPARTMENT, until such time as the professional services delivered by the SERVICE PROVIDER have been completely accepted by the DEPARTMENT. The final audit shall be performed after the release of the retained amount, and may cause an adjustment of payments to the DEPARTMENT or to the SERVICE PROVIDER. No interest shall be paid to the SERVICE PROVIDER on this retained amount or any adjustment of payments. **ONLY USE PARAGRAPH IF APPLICABLE**

3. The DEPARTMENT reserves the right to inspect and approve the professional services performed before payment is made to the SERVICE PROVIDER. Payment will be withheld for deliverables and professional services the DEPARTMENT determines to be unsatisfactory in that they have not been provided in a workmanlike manner consistent with standards in the trade, profession or industry. Payment shall remain unpaid until the professional services are completed in accordance with the standards and work requirements defined in this Agreement. In such an event, the DEPARTMENT will provide the SERVICE PROVIDER with a written explanation as to why payment has been withheld.

4. The total cost of services for this Agreement, is the negotiated amount identified in Article IV, Paragraph 2. This amount was based upon the SERVICE PROVIDER's costs and fixed fee as well as the costs and fixed fees, if any, of all of its subcontractors. If a subcontractor does not expend all funds allocated to it for services identified in its agreement with the SERVICE PROVIDER, a copy of which shall be provided to the DEPARTMENT prior to issuance of the Notice to Proceed, the SERVICE PROVIDER shall not redistribute or expend such funds without the prior written approval of the DEPARTMENT. Failure to notify the DEPARTMENT prior to the use of such funds will constitute grounds for denial of reimbursement for such expenditures.

5. Payment of invoices, interest penalties, and discounts shall be paid as follows:

a. The SERVICE PROVIDER shall be paid within sixty (60) calendar days of a postmarked invoice which is complete, correct, and undisputed by the DEPARTMENT.

b. The DEPARTMENT shall have twenty (20) calendar days after postmark of an invoice to dispute any or all of the charges on that invoice. The undisputed amount shall be paid to the SERVICE PROVIDER within sixty (60) calendar days of the date of postmark. The disputed amount shall be negotiated and resolved in good faith by both Parties and paid within forty (40) calendar days after the date the corrected invoice is received by the DEPARTMENT or is approved by both Parties for payment.

c. If the DEPARTMENT fails to pay the SERVICE PROVIDER the undisputed amount within sixty (60) calendar days after the postmark date of the invoice, the interest penalty assessed to the DEPARTMENT shall be one percent (1%) of the undisputed amount per month, not to exceed a total of One Thousand and No/100 Dollars (\$1,000.00).

d. Payment of penalties shall not apply to the final payment or bill pertaining to this Agreement as determined by the post audit.

6. The prevailing party in an action to enforce this Agreement is entitled to reasonable attorney's fees and costs.

ARTICLE VI - MISCELLANEOUS PROVISIONS

1. The SERVICE PROVIDER shall be responsible for and shall comply with all applicable federal, state, and local government obligations and DEPARTMENT policies and procedures. The SERVICE PROVIDER will be responsible for and shall pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are SERVICE PROVIDER's responsibility in accordance with NRS Chapter 361. The SERVICE PROVIDER warrants that it has a valid business license. The SERVICE PROVIDER agrees to be responsible for and shall pay any such government obligations not paid by its subcontractors during performance of this Agreement. The DEPARTMENT may set-off any consideration due against any delinquent government obligation.

2. It is expressly understood that the SERVICE PROVIDER is an independent contractor, and is subject to all statutes and laws, including NRS 333.700 relating to independent contractors. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the DEPARTMENT whatsoever with respect to the indebtedness, liabilities, and obligations of the SERVICE PROVIDER or any other party. Neither the SERVICE PROVIDER nor its employees, agents or representatives shall be considered employees, agents or representatives of the DEPARTMENT.

3. The SERVICE PROVIDER shall be solely responsible for its own employees, and the DEPARTMENT shall have no obligation with respect to:

- a. Withholding of income taxes, FICA or any other taxes or fees;
- b. Industrial insurance coverage;
- c. Participation in any group insurance plans available to employees of the DEPARTMENT;
- d. Participation or contributions by either the SERVICE PROVIDER or the DEPARTMENT to the Public Employees Retirement System;
- e. Accumulation of vacation leave or sick leave; or
- f. Unemployment compensation coverage provided by the DEPARTMENT.

4. The SERVICE PROVIDER shall indemnify and hold the DEPARTMENT harmless from, and defend the DEPARTMENT against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes, fees, insurance, contributions, leave or coverage.

5. Unless expressly provided in this Agreement, the SERVICE PROVIDER shall not engage or use the devices and/or services of the DEPARTMENT's personnel without the prior written consent of the DEPARTMENT.

6. The SERVICE PROVIDER shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT proof of worker's compensation insurance as required by the NRS.

OR

6. The SERVICE PROVIDER, as a sole proprietor who does not use the services of his employees, if any, shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT Attachment E - "Worker's Compensation Insurance Affidavit." **ONLY USE PARAGRAPH IF APPLICABLE; RE-LETTER ATTACHMENTS IF NECESSARY**

7. The SERVICE PROVIDER shall furnish a Certificate of Errors and Omissions Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00). **INCREASE FROM \$1,000,000.00 UP TO \$3,000,000.00 DEPENDING UPON THE SIZE OF THE PROJECT**

8. The SERVICE PROVIDER shall furnish a Certificate, Declarations Page and an Endorsement designating the DEPARTMENT as an additional insured evidencing Commercial General Liability Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00) per occurrence. These policies shall be maintained for the entire period of this Agreement. The policies shall include a 30-day advance written notice of any cancellation of said policies. The SERVICE PROVIDER shall furnish the DEPARTMENT with certificates of such insurance prior to commencement of professional services.

9. All insurance required by this Agreement shall be placed with insurers with a rating from the current issue of Best's Key Rating Guide of no less than A-: VII.

10. The DEPARTMENT has the option of requesting, at any time, a meeting with the SERVICE PROVIDER or its authorized representative to discuss and review PROJECT status and the SERVICE PROVIDER shall furnish thereafter a copy of the minutes of such meetings to the DEPARTMENT.

11. The SERVICE PROVIDER has total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement, and shall check all such material accordingly for completeness, missing items, correct multipliers and consistency. The deliverables shall be reviewed by the DEPARTMENT for conformity with the DEPARTMENT's procedures and contract terms. The SERVICE PROVIDER acknowledges that review by the DEPARTMENT does not include detailed review or checking of major components and related details or the accuracy of such deliverables, and the DEPARTMENT's review shall not relieve the SERVICE PROVIDER of its total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement.

12. The SERVICE PROVIDER shall appear as an expert witness on behalf of the DEPARTMENT in any subsequent court action which involves any of the services required by this Agreement. Compensation for services rendered in this regard will be paid at a rate to be negotiated at the time such services are necessary.

13. Upon completion, termination or cancellation of the services embraced under this Agreement, all professional services inclusive of research, investigation and analysis data, reports (including files stored on mobile media), computations, tabulations, original drawings and design files (including CAD information stored on mobile media), correspondence input from external sources (including subcontractors), etc., shall be delivered to and become the property of the DEPARTMENT, without limitation. Reuse of said materials, information or data, during performance or following termination of this Agreement, on any other project or for any other purpose except as provided for herein, shall be at the DEPARTMENT's discretion and the DEPARTMENT's sole decision. The SERVICE PROVIDER shall not utilize any materials, information or data obtained as a result of performing the services called for in this Agreement in any commercial or academic publication or presentation without the express written permission of the DEPARTMENT. The SERVICE PROVIDER shall not reference an opinion of an employee or agent of the DEPARTMENT obtained as a result of performing the services called for in this Agreement, in any publication or presentation, without the written permission of the employee or agent to whom the opinion is attributed, in addition to the permission of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

14. All design drawings must be created and delivered to the DEPARTMENT in Microstation "dgn" format. Drawing files converted to Microstation format from other formats will not be accepted by the DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

15. All roadway design engineering files must be created and delivered to the DEPARTMENT in InRoads format. Design files converted to InRoads format from other formats will not be accepted by the

DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

16. All reports and notes for special provisions shall be delivered to the DEPARTMENT via FTP or email using the most current version of Microsoft Word. **ONLY USE PARAGRAPH IF APPLICABLE**

17. The SERVICE PROVIDER agrees that any reports, materials, studies, photographs, negatives, drawings or other documents prepared by the SERVICE PROVIDER in the performance of its obligations under this Agreement shall be the exclusive property of the DEPARTMENT. The SERVICE PROVIDER shall remit all such documents to the DEPARTMENT upon completion, termination or cancellation of this Agreement or upon written request of the DEPARTMENT. The SERVICE PROVIDER shall not use, willingly allow or cause to have such documents used for any purpose other than performance of the SERVICE PROVIDER's obligation under this Agreement, without the prior written consent of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

18. The SERVICE PROVIDER and successors, executors, administrators, and assigns of the SERVICE PROVIDER's interest in the professional services or the compensation herein provided shall be bound to the DEPARTMENT to the full legal extent to which the SERVICE PROVIDER is bound with respect to each of the terms of this Agreement.

19. The SERVICE PROVIDER warrants that it has not employed or retained any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) to solicit or secure this Agreement and that the SERVICE PROVIDER has not paid or agreed to pay any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) any fee, commission, percentage, brokerage fee, or any other gifts contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the DEPARTMENT shall have the right to annul this Agreement without liability, or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

20. It is the intent of the Parties to avoid and resolve disputes at the lowest level possible. Accordingly, the DEPARTMENT and the SERVICE PROVIDER will enter into a partnering relationship, pursuant to the provisions set forth in Attachment **LETTER**. Any unresolved disputes will be referred to a nonbinding dispute resolution process pursuant to the terms outlined in Attachment **LETTER**. Nothing herein contained shall impair the Parties' right to file suit in the state district courts of the State of Nevada in the event the dispute resolution process is unsuccessful. **ONLY USE PARAGRAPH IF APPLICABLE**

OR

20. Any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement shall be decided by the DEPARTMENT. It is the intent of the DEPARTMENT to resolve disputes at the lowest level possible. Nothing herein contained shall impair either of the Parties' right to file suit in the state district courts of the State of Nevada.

21. During the performance of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. **Compliance with Regulations:** The SERVICE PROVIDER shall comply with all of the regulations relative to nondiscrimination in federally-assisted programs of 49 CFR Part 21 as they may be amended from time to time (hereinafter "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

b. **Nondiscrimination:** The SERVICE PROVIDER, with regard to the professional services performed by it during the Agreement, shall not discriminate on the grounds of race, color, age, religion, sex, creed, handicap, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The SERVICE PROVIDER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5. of the Regulations, including employment practices, when the Agreement covers a program set forth in Appendix B of the Regulations.

c. **Solicitations for Subcontracts, Including Procurement of Materials, and Equipment:** In all solicitations either by competitive bidding or negotiation made by the SERVICE PROVIDER for professional services to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the SERVICE PROVIDER of the SERVICE PROVIDER's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, age, religion, sex, creed, handicap or national origin.

d. Information and Reports: The SERVICE PROVIDER shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a SERVICE PROVIDER is in the exclusive possession of another who fails or refuses to furnish this information, the SERVICE PROVIDER shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the SERVICE PROVIDER's noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding of payments to the SERVICE PROVIDER under the Agreement until the SERVICE PROVIDER complies, and/or

2. Cancellation, termination or suspension of the Agreement, in whole or in part.

f. Agreements with subcontractors will include provisions making all subcontractor records available for audit by the DEPARTMENT or the FHWA.

g. Incorporation of Provisions: The SERVICE PROVIDER will include the provisions of Paragraphs (a) through (f) above in every subcontract including procurement of materials and leases of equipment, unless exempt by Regulations, order, or instructions issued pursuant thereto. The SERVICE PROVIDER will take such action with respect to any subcontract or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. In the event SERVICE PROVIDER becomes involved in, or is threatened with litigation by a subcontractor or supplier as a result of such direction, the SERVICE PROVIDER may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and the SERVICE PROVIDER may request the United States to enter into such litigation to protect the interests of the United States.

22. In the event federal funds are used for payment of all or part of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Debarment and/or Suspension: The SERVICE PROVIDER certifies that neither it nor its subcontractors, nor their principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

b. ADA: The SERVICE PROVIDER and subcontractor shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1980, as amended, and regulations adopted thereunder contained in 49 CFR, Part 27, and any relevant program-specific regulations.

c. Civil Rights: The SERVICE PROVIDER and subcontractor shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or person offered employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition, including AIDS and AIDS-related conditions.

23. Each party agrees to keep and maintain under generally accepted accounting principles full, true and complete records and documents pertaining to this Agreement and present, at any reasonable time, such information for inspection, examination, review, audit and copying at any office where such records and documentation are maintained. It is expressly understood that the duly authorized representatives of the DEPARTMENT and the FHWA shall have the right to inspect/audit the professional services and charges of the SERVICE PROVIDER whenever such representatives may deem such inspection to be desirable or necessary. Such records and documentation shall be maintained for three (3) years after final payment is made.

24. To the fullest extent permitted by law, the SERVICE PROVIDER shall defend, indemnify and hold harmless the State of Nevada, and the employees, officers and agents of the State of Nevada from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorney's fees, that are caused by the negligence, errors, omissions, reckless or intentional misconduct of the SERVICE PROVIDER or the employees or agents of the SERVICE PROVIDER in the performance of this Agreement.

25. The SERVICE PROVIDER shall use its own vehicles and the DEPARTMENT is not responsible for the payment of any premiums, deductible or assessments on any insurance policies purchased by the SERVICE PROVIDER.

26. The SERVICE PROVIDER warrants that all deliverables and work produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry.

27. The SERVICE PROVIDER is required to register as a vendor with the Nevada State Controller's office. The Registration Substitute IRS Form W-9 can be accessed at http://controller.nv.gov/VendorServices/Vendor_Services.html. The SERVICE PROVIDER will follow the Registration Instructions, complete the Registration Substitute IRS Form W-9 and submit it to the State Controller's Office.

28. The SERVICE PROVIDER agrees that, prior to any sale, transfer, business name change, change in principals or any other occurrence that alters or this Agreement in any way, the SERVICE PROVIDER shall notify the DEPARTMENT of such intent at least seven (7) calendar days prior to making said change.

29. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other Party at the address set forth below:

FOR DEPARTMENT: Rudy Malfabon, P.E., Director
Attn: **DIVISION CHIEF**
Nevada Department of Transportation
Division:
1263 South Stewart Street
Carson City, NV 89712
Phone:
Fax:
E-mail:

FOR SERVICE PROVIDER: **NAME**
FIRM
MAILING ADDRESS, CITY, STATE, ZIP CODE
PHYSICAL ADDRESS, CITY, STATE, ZIP CODE
Phone:
Fax:
E-mail:

30. This Agreement and the rights and obligations of the Parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The Parties consent to the exclusive jurisdiction of the Nevada state district courts for enforcement of this Agreement.

31. As used herein the term "SERVICE PROVIDER" shall include the plural as well as the singular, and the feminine as well as the masculine.

32. Neither Party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, or accidents, fires, explosions, earthquakes, floods, winds, failure of public transportation, or any other similar serious cause beyond the reasonable control of either Party. In such an event the intervening cause must not be through the fault of the Party asserting such an excuse, and the excused Party is obligated promptly to perform in accordance with the terms of the Agreement after the intervening cause ceases.

33. In connection with the performance of work under this Agreement, the SERVICE PROVIDER agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability, pregnancy, sexual orientation, genetic information (GINA) or gender identity or expression, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation apprenticeship. The SERVICE PROVIDER further agrees to insert this provision in all

subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

34. The SERVICE PROVIDER shall keep confidential all information, in whatever form, produced, prepared, observed or received by the SERVICE PROVIDER to the extent that such information is confidential by law or otherwise required by this Agreement.

35. Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The Parties **OR** DEPARTMENT will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

36. The SERVICE PROVIDER shall provide a minimum of fifty-one percent (51%) of the combined value of all items of work covered by this Agreement. The SERVICE PROVIDER shall not assign or subcontract any of the work performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER shall, prior to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the subcontract or subagreement for said work. Any assignment of rights or delegation of duties under this Agreement, without the prior written consent of the DEPARTMENT, shall be void.

37. The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of the Agreement and this Agreement shall be construed as if such provision did not exist. The unenforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

38. Except as otherwise provided for by law or this Agreement, the rights and remedies of the Parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, the recovery of actual damages and the prevailing party's reasonable attorney's fees and costs.

39. It is specifically agreed between the Parties executing this Agreement that it is not intended by any of the provisions of any part of this Agreement to create in the public or any member thereof a third party beneficiary status hereunder, or to authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damage, or pursuant to the terms or provisions of this Agreement.

40. The Parties hereto represent and warrant that the person executing this Agreement on behalf of each Party has full power and authority to enter into this Agreement and that the Parties are authorized by law to perform the services set forth herein.

41. This Agreement constitutes the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto and the Attorney General.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

No. 066-15-002

Project Specifications and Instructions
for Submitting a Proposal to Furnish

Statewide NDOT Operational Audit

Due: March 17, 2015



Rudy Malfabon, P.E., Director
Department of Transportation

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SECTION I - INSTRUCTIONS TO PROPOSER

The enclosed Request for Proposal (RFP) is being advertised for use in submitting information that will be used to select a firm with whom the Nevada Department of Transportation (DEPARTMENT) hopes to negotiate an agreement for the described services.

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statement of Qualifications (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

The proposer shall submit one (1) CD containing one (1) typewritten, legible proposal as instructed above as well as in Section X (B), contained within one (1) Portable Document Format (PDF) file. The proposer shall also submit one (1) Cost Proposal in a separate envelope included with their proposal package. In addition, the DEPARTMENT is testing new functionality with the DEPARTMENT's electronic portal/website, located at www.nevadadot.com/Doing_Business/Vendors/Vendor_Portal_Login.aspx. Proposers are encouraged also submit the proposal electronically through the portal to assist with our testing, however, this is NOT required.

If the proposer chooses to submit proposals electronically through the above link, Vendor registration is required. If you are not a registered vendor with the DEPARTMENT, please register online using the [vendor registration](#) form and follow the instructions. After submitting the online application, you will receive an email with your registration number. Once you receive the registration number, you will be able to submit your proposal electronically.

Proposals must be received **NO LATER THAN 3:00 P.M. PST, on Tuesday March 17, 2015**, and the proposal package containing the CDs must be addressed **exactly** as follows:

Agreement Services
Nevada Department of Transportation
Attn: RFP 498-14-002
1263 South Stewart Street, Room 101A
Carson City, NV 89712

Proposals received after the specified deadline or submitted to the wrong location **will not** be considered and will be disposed of in an appropriate manner suitable to the DEPARTMENT.

Proposals and Statements of Qualification will first be reviewed to determine if minimum qualification requirements are met. Any proposals submitted that do not meet the minimum qualification requirements, as outlined below, will be disposed of in an appropriate manner, at the sole discretion of the DEPARTMENT, and without further review.

Qualification Requirements:

- The firm must be well versed with at least three (3) years' experience performing similar audits.
- The firm must have knowledge and demonstrated experience in evaluating internal controls, policies and procedures, construction contracts, procurement processes, facility and shop operations.

Any proposal received prior to the date and time specified above for receipt of proposals may be withdrawn or modified; electronically submitted proposals can be modified through the Vendor Portal Login webpage, while proposals submitted on CDs can be modified through a written request from the proposer. To be considered, however, a written request to withdraw the proposal or the modified proposal must be received before the time and date specified above for receipt of proposals. Oral interviews may be conducted for each firm that submits a written proposal. The DEPARTMENT has the sole discretion as to whether it will or will not conduct oral interviews. In the event that the DEPARTMENT elects to conduct oral interviews, each proposer in the competitive range will be advised of the format for such interview, and will be provided with a schedule for such interview. Competitive range refers to a list of the most highly rated proposals based on the initial ranking of the proposals; it is based on the initial rating of each proposal measured against all evaluation criteria set forth in this RFP.

Confidential Information, Trade Secrets, and/or Proprietary Information must be uploaded into the Confidential/Proprietary folder provided on the Vendor Proposal webpage if submitted electronically, or sealed in a separate package with each page clearly marked "Confidential" if submitted on CD. The failure to separate and mark this information as per NRS 333.020 and 333.333 shall constitute a complete waiver of any and all claims for damages caused by release of the information by the DEPARTMENT. If the DEPARTMENT reviews the confidential information and determines that the information is not considered confidential pursuant to NRS Chapter 333, the DEPARTMENT will contact the proposer. The proposer must advise the DEPARTMENT as to whether it either accepts the DEPARTMENT's determination that the information is not confidential, or withdraws the information. The proposer will not be allowed to alter the proposal after the date and time set for receipt of proposals shown above. Notwithstanding the provisions in NRS Chapter 333, the DEPARTMENT retains its immunity pursuant to the provisions of NRS 239.012 for any "good faith" release of information, and the immunities from liability provided to it pursuant to NRS Chapter 41.

Issuance of this RFP shall in no way constitute a commitment by the DEPARTMENT to execute an agreement. The DEPARTMENT reserves the right to reject any or all proposals received in response to this RFP, or to cancel this RFP if it is deemed in the best interest of the DEPARTMENT to do so.

The DEPARTMENT reserves the right to issue supplemental notices to this RFP prior to the closing date. If a firm chooses to download this procurement from the www.nevadadot.com website, it is the firm's responsibility to check for any supplemental notices to this procurement from the www.nevadadot.com website.

The DEPARTMENT assumes no financial responsibility in connection with the proposers' costs incurred in the preparation and submission of the proposal packets, or by attending the oral interviews, if such interviews are conducted by the DEPARTMENT in its sole discretion.

Proposers should provide a minimum of three (3) references from similar projects performed for the state and/or large local government clients within the last three (3) years. Proposers are required to submit a Reference Questionnaire to the business references listed within the proposal. The business

references must submit the Reference Questionnaire directly to the DEPARTMENT's Agreement Services Section. It is the proposer's responsibility to ensure the completed forms are received by the DEPARTMENT on or before the proposal submission deadline for inclusion in the evaluation process. The DEPARTMENT may contact any or all business references for validation of information submitted. With this RFP, the proposer is furnished a copy of an Agreement sample (see Attachment F - Agreement Sample). To maintain consistency between the DEPARTMENT and its SERVICE PROVIDERS, only those portions of the Agreement sample which are open for negotiation shall be blank.

A pre-negotiation audit may be required by the DEPARTMENT's Internal Audit Division. All DEPARTMENT audits will be conducted in accordance with the AASHTO Uniform Audit and Accounting Guide 2012, which can be found at www.transportation.org. The Specific Rates of Compensation method of compensation shall be used for the proposer's services, as set forth in 48 CFR Chapter 1.

The following rules of contact shall apply during this procurement for the project:

A. After release of the RFP and through the Notice of Intent to the Notice of Award of the agreement, the proposers shall **ONLY** correspond with the DEPARTMENT regarding this RFP through the DEPARTMENT's designated representative as per NAC 333.155. The designated representative's contact information is:

Agreement Services
Nevada Department of Transportation
1263 South Stewart Street, Room 101A
Carson City, Nevada 89712
Phone: 775-888-7070, Option 1
Fax: 775-888-7101
agreeservices@dot.state.nv.us

B. The proposers shall not contact the DEPARTMENT's employees, including department heads, members of the review committee and/or any official who will participate in the decision to award the agreement regarding the project, except through the process identified above;

C. Any communications determined to be improper may result in disqualification, at the sole discretion of the DEPARTMENT;

D. Any official information regarding the RFP will be disseminated by the DEPARTMENT. Specific information necessary for the preparation of proposals will be disclosed to all proposers;

E. The DEPARTMENT will not be responsible for any oral exchange or any other information or exchange that occurs outside the official process specified herein.

SECTION II - PROPOSER QUESTIONS

The DEPARTMENT will respond to questions regarding the RFP, including requests for clarification and requests to correct errors, submitted in writing by proposers. Only **written** requests as described above will be considered. No oral requests will be considered. No requests for additional information or clarification to any other DEPARTMENT office, consultant, employee or the FHWA will be considered.

Any questions raised by proposers must be submitted in writing to Agreement Services, 1263 South Stewart Street, Room 101A, Carson City, Nevada, 89712, faxed to (775) 888-7101, submitted electronically on the Open Procurements section of www.nevadadot.com, or emailed to agreeservices@dot.state.nv.us and **received by 3:00 P.M. PST, on February 20, 2015**. Written responses will be distributed by the DEPARTMENT on or before **February 26, 2015**.

SECTION III - RFP SCHEDULE

Task	Date
Advertised	02/04/2015, 02/11/2015, and 02/18/2015
Proposers' Questions Due	02/20/2015
DEPARTMENT's Response to Proposers' Questions Distributed	02/26/2015
Proposal Due	03/17/2015

SECTION IV - DBE REQUIREMENTS

There are no Disadvantaged Business Enterprise (DBE) requirements for the project.

SECTION V - NEVADA BUSINESS LICENSE REQUIREMENT

The selected firm, prior to doing business in the State of Nevada, must be appropriately licensed by the Office of the Secretary of State pursuant to NRS 76.100. Information regarding the Nevada State Business License can be located at www.nvsos.gov.

Firms must provide the following:

A. Nevada State Business License Number, and

B. Business Entity's Legal Name (affirm that it is the same name under which the proposer is doing business)

Additionally, if the firm is a corporation, LLC, LP, LLP, or LLLP, or non-profit corporation based out of state, it must be registered as a foreign business entity equivalent in Nevada, in active status, and in good standing with the Nevada Secretary of State.

Each proposer shall clearly state, at the time of proposal, its willingness to adhere to this requirement by providing a copy of its Nevada State Business License, a copy of its application from the Secretary of State Office, or a print out of the entity status, which can be obtained from the Nevada Business Search found on the homepage of the Nevada Secretary of State's website at www.nvsos.gov.

Award of any RFP is contingent on a proposer having and holding an active and valid Nevada State Business License. The successful proposer must satisfy this requirement within five (5) business days of issuance of the Notice of Intent. If a proposer is unable or unwilling to adhere to this requirement, the DEPARTMENT will deem the proposer to be non-responsive, and the DEPARTMENT shall proceed to negotiate with the next most qualified firm, and so on, until an agreement, that is acceptable to the DEPARTMENT, is negotiated.

To apply for a Nevada State Business License or to file appropriate formation documents with the Nevada Secretary of State's office, please visit www.nvsos.gov. Business licenses can be obtained immediately by applying on-line; however, paper applications may take several weeks to process.

SECTION VI - SELECTION PROCESS

Selection will be based on the factors listed in the Evaluation Criteria Items section (see Section X (A)), which will be used by a Review Committee to evaluate the proposals. If the committee elects, in its sole discretion, to conduct oral interviews, each proposer in the competitive range shall be notified of the interview schedule, and will be required to confirm their willingness to attend the oral interview. Failure of a proposer to appear at the oral interview, if the committee elects to conduct such interviews, will be considered non-responsive, and that proposer will be eliminated from any further consideration. The committee tasked with ranking the proposals will be comprised of DEPARTMENT staff and other

members representing local entities, who shall remain anonymous to protect the integrity of the procurement process.

The committee may use the information submitted in the proposer's proposal package, the information referencing this RFP, and the information presented at the interview, if applicable, to arrive at the final ranking. The proposals will be ranked and an agreement shall be negotiated following the selection of a firm. If an acceptable agreement cannot be reached with the highest ranked firm, the DEPARTMENT shall proceed to negotiate with the next highest ranked firm, and so on, until an acceptable agreement is negotiated, or the DEPARTMENT, in its sole discretion, elects to terminate the solicitation.

SECTION VII - BACKGROUND

The DEPARTMENT's Director's Office has the need for a firm with the ability to perform financial and operational audits, and other related audit work of various operational areas within the DEPARTMENT.

SECTION VIII - SCOPE OF SERVICES

The Scope of Services consists of operational audits of various areas of the DEPARTMENT to identify opportunities for improving internal controls and to evaluate effectiveness and efficiency. The objectives of each audit include an initial assessment and a detailed assessment. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks.

The objectives of said audits are:

1. PROCUREMENT CARDS

- a. Initial assessment
 - i. Review current policies and procedures related to Procurement Cards;
 - ii. Review segregation of duties;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed;
 - ii. Determine if the proper accounting records and other documentation is available to support charges;
 - iii. Determine if the segregation of duties is adequate;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improvements to the policies and procedures and internal controls.

2. PURCHASING SUPPLIES AND EQUIPMENT

- a. Initial assessment
 - i. Review current policies and procedures related to Purchasing Supplies and Equipment;
 - ii. Review established policies and procedures for purchasing non-rental equipment;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the current policies and procedures are being followed by HQ Divisions, and Districts;
 - ii. Determine if the appropriate controls are being followed consistently in the stockrooms located statewide for supplies and equipment;
 - iii. Determine if the established policies and procedures for purchasing vehicles (light fleet) and heavy equipment estimated to cost over \$50,000.00 are being followed (proper justification, approvals, procurement and reporting);
 - iv. Determine if the proper accounting records and other documentation is available to support charges;
 - v. Report on exceptions;

- vi. Recommend opportunities for improvements to the policies and procedures and internal controls

3. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Review established policies and procedures for coding productive labor and overhead activities appropriately on time sheets;
 - iii. Recommend opportunities for improvements to the policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if the equipment mechanics are coding productive labor and overhead activities appropriately on time sheets;
 - ii. Determine if activities that should be coded as overhead are appropriately identified by equipment mechanics on time sheets;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improvements to the policies and procedures and internal controls.

4. OVERTIME

- a. Initial assessment
 - i. Review current policies and procedures related to Overtime;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if overtime is pre-approved per adopted policies and procedures (HQ Divisions, and Districts statewide);
 - ii. Determine if maintenance call-out procedures have been adopted in each District and are being followed for emergency maintenance activities;
 - iii. Determine if furlough restrictions on overtime are being followed;
 - iv. Report on exceptions;
 - v. Recommend opportunities for reducing the amount of overtime accrued at the District and Division level.
 - vi. Recommend opportunities for improvements to the policies and procedures and internal controls.

5. STATE VEHICLE USAGE

- a. Initial assessment
 - i. Review current policies and procedures related to State Vehicle Usage;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Determine if prior approvals are obtained for home storage;
 - ii. Determine if home storage is properly reported to Accounting Division;
 - iii. Determine if reported improper use of state vehicles is investigated, and appropriate corrective measures are taken, if necessary;
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

6. PROPER MAINTENANCE OF DEPARTMENT FACILITIES

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance of Department Facilities;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment

- i. Determine if maintenance schedules are kept for various building control systems (for example, HVAC) for each DEPARTMENT facility;
 - ii. Determine if facility maintenance is managed at each DEPARTMENT facility;
 - iii. Report on exceptions;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.

- 7. COST EFFECTIVENESS OF EQUIPMENT REBUILD PROGRAM – For the last six years, the DEPARTMENT Equipment Division has rebuilt drive trains for selected heavy fleet such as trucks, loaders, and paint strippers. Some rebuild work is contracted out and some is performed in-house. The equipment mechanics working on the rebuild program are less available for day-to-day equipment maintenance functions. The DEPARTMENT has also had major maintenance on agency aircraft, such as new engines. The DEPARTMENT would like to assess the cost effectiveness of the major equipment rebuild program in the equipment division and the major maintenance program of agency aircraft and determine if it is an efficient use of DEPARTMENT resources.
 - a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. Investigate and determine the cost effectiveness of the equipment rebuild program and major maintenance on agency aircraft;
 - ii. Recommend improvements to increase cost effectiveness or;
 - iii. Recommend other alternatives that would be more cost effective than the current program;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls.

- 8. PROPER MANAGEMENT AND ADMINISTRATION OF MAINTENANCE CONTRACTS – The DEPARTMENT contracts out various maintenance services. This can be outsourced work normally performed by maintenance forces (street sweeping, contracted surface treatments on pavements, janitorial services, facilities maintenance) and unique work that the DEPARTMENT does not have resources to perform (certain facilities maintenance activities, maintenance of elevators and escalators at pedestrian bridges). The DEPARTMENT would like to assess if the managers of maintenance contracts have the proper skills and training to monitor performance by contracted service providers and training for proper administration. For example, does a DEPARTMENT maintenance contractor manager receive training on proper review of invoices for work performed? How is performance monitored on maintenance contracts?
 - a. Initial assessment
 - i. Review current policies and procedures related to Equipment Rebuild Program;
 - ii. Recommend improvements to policies and procedures and internal controls.
 - b. Detailed assessment
 - i. For outsourced maintenance contracts, determine who administers the contracts and assess whether the administration of contracts is delegated to the appropriate level;
 - ii. Assess whether the administrators of maintenance contracts receive appropriate training;
 - iii. In general, make recommendations to improve the effectiveness of administering and monitoring maintenance contracts;
 - iv. Recommend opportunities for improving the policies and procedures and internal controls

- 9. INTERLOCAL AGREEMENTS – An agreement between public agencies to obtain a service from a public agency is known as an Interlocal Agreement. The DEPARTMENT also can enter into a Cooperative Agreement, which is an agreement between two or more public agencies for the

joint exercise of powers, privileges and authority. Authority is granted under NRS 277.045 and 277.180. An example of an Interlocal agreement is the DEPARTMENT distributing federal funds to a metropolitan planning organization (MPO) for their use on programs and projects.

- a. Initial assessment
 - i. Review current policies and procedures related to Interlocal Agreements;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - ii. Review amendments to Interlocal Agreements executed in the last four state fiscal years (2011 – 2014) and determine if they were appropriate as authorized under NRS;
 - iii. Review the reported Interlocal Agreements and amendments for compliance with the reporting matrix approved by the Board of Transportation (as appropriate for the execution date of the agreement/amendment; the reporting matrix has been amended periodically);
 - iv. Report on exceptions;
 - v. Recommend opportunities for improving the policies and procedures and internal controls.

10. PROFESSIONAL SERVICES CONTRACTS – The DEPARTMENT uses professional services contracts when it has insufficient resources to perform the work in-house, when it does not have in-house expertise, or to meet delivery schedule requirements in a timely manner. The DEPARTMENT would like to assess and improve how its technical Divisions determine when to outsource professional services. The following technical Divisions which use professional services contracts shall be considered under this item: Project Management; Roadway Design; Structures; Hydraulics; Landscape & Aesthetics; Right-of-Way; Environmental; Maintenance & Asset Management; Architectural; Traffic Operations; Construction; Materials; Roadway Systems; Multimodal Planning; Program Development; Safety; Locations. This task shall be limited to a review of state fiscal years 2011-2014.

- a. Initial assessment
 - i. Review current policies and procedures related to Professional Services Contracts;
 - ii. Interview the technical divisions listed above to assess how they determine the need to outsource professional services;
 - iii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review sample scopes of work to determine if all or a portion of work should be considered to be eliminated from outsourcing in the future;
 - ii. Review amendments to professional services contracts to assess if they were anticipated in the original agreement or unanticipated. (For instance, that the original agreement allowed for the addition of future phases of work that was substantially more effort than the original scope of work, as with preliminary engineering proceeding after environmental clearance on design projects);
 - iii. Make recommendations to improve how the assessment to determine the need to outsource professional services is conducted;
 - iv. Make recommendations on reducing the number and cost of amendments to professional services contracts;
 - v. Make recommendations regarding where current staff may be better utilized before hiring outside professional services.

11. CONSTRUCTION CONTRACT CHANGE ORDERS – Construction contracts can be revised by change order. The contracts closed out in state fiscal years 2011 – 2014 shall be reviewed.

- a. Initial assessment

- i. Review current policies and procedures related to Construction Contract Change Orders;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Work with the Construction Division, and confirm the percentage of cost overruns/underruns due to change orders;
 - ii. Review the cause of change orders (design error; unforeseen conditions; added scope; etc.) and report on the distribution of change orders;
 - iii. Identify areas that commonly resulted in change orders that could be avoided through improved design review and other measures;
 - iv. Make recommendations on reducing the number of Construction Contract Change Orders.

12. MAINTENANCE AND EQUIPMENT SHOPS

- a. Initial assessment
 - i. Review current policies and procedures related to Maintenance and Equipment Shops;
 - ii. Recommend improvements to policies and procedures and internal controls.
- b. Detailed assessment
 - i. Review the productivity of the Equipment Division and District equipment shops;
 - ii. Review equipment maintenance and repair that is outsourced and make recommendations on whether the work should continue to be outsourced or performed in-house;
 - iii. Review equipment maintenance and repair that is performed in-house and make recommendations on whether the work should continue to be performed in-house or outsourced;
 - iv. Report on observed discrepancies of productivity statistics between the equipment shops;
 - v. Make recommendations on how to improve the overall productivity of equipment shops.

SECTION IX - PROJECT SCHEDULE

It is anticipated that the project schedule will be twelve (12) to fifteen (15) months from the execution date of the agreement.

SECTION X - PROPOSAL CONTENT

A section of the proposal shall be devoted to each Evaluation Criteria Item. The proposal must be signed by the individual(s) legally authorized to bind the firm as per NRS 333.337.

A. EVALUATION CRITERIA ITEMS

1. Project Approach:

- a. Describe your firm's understanding of project requirements contained in the Scope of Services.
- b. Identify specific methods to be used to complete each project requirement.
- c. Identify potential complications or difficulties that might be encountered in the implementation of required services along with suggested resolutions for each.

2. Project Team:

- a. Provide a summary of the education including CPE Hours & Course Listing, and experience of each member of the Project Team who will be assigned to this project, including resumes for the project manager and the key principals.

- b. Include a current organizational chart of the project team, including sub-consultant(s) with responsibilities of team members identified therein.
- c. Identify the location(s) where actual work will be completed.
- d. Provide a percentage of work to be completed at each location.
- e. Identify the location of the office which will provide primary project control for this project.

3. Past Performance:

- a. Describe your firm's competence in the services to be provided contained in the Scope of Services.
- b. Provide the details of the audits completed, including Attestation Engagements, in accordance with Generally Accepted Government Auditing Standards in the past three (3) years.
- c. Provide information that your firm is free from personal, external, and organizational impairments to independence and avoid the appearance of such impairments to independence for the project contained in the Scope of Services.
- d. Provide a copy of the most recent Peer Review Report of the firm and Letter of Comments, if any.

4. Availability and Capacity:

- a. Provide a listing of your firm's technical equipment which will support this effort.
- b. Provide a matrix or chart which lists all current projects of the Project Team, the number of hours remaining for completion of each project and the estimated completion date for each project.
- c. In view of this data, describe your firm's ability to meet time lines established for this project.
- d. Identify the availability of Project Team to attend meetings and interact with DEPARTMENT staff on short notice.

5. Proximity of Project Team:

- a. Describe your firm's location in the geographical area.
- b. Describe your knowledge of the locality of the project.

6. Cost: Submitted in a separate sealed envelope.

Proposals shall be submitted in two (2) distinct parts - the **Technical Proposal** and the **Cost Proposal**. The Technical Proposal **must not** include any cost information. Electronic Cost Proposal submissions must be uploaded in the Cost Proposal file. While Technical Proposals submitted on CD and the hardcopy Cost Proposal may be shipped together in the same shipping container, the Technical Proposals and the Cost Proposal must be placed in separate envelopes within the shipping container and clearly marked with the proposer's name and the RFP number; each respective envelope must be marked "Technical Proposal" or "Cost Proposal," as appropriate.

B. PROPOSAL LIMITATIONS

The proposals shall be limited by the following:

1. The proposal must respond to the Evaluation Criteria Items, which must be identified and presented in the same order as they appear in Section X - Proposal Content. The responses to the items may be separated by distinctly labeled section dividers.

2. The responses to the Evaluation Criteria Items must be double-spaced, and must not exceed thirty-five (35) 8½" x 11" pages. 11" x 17" pages will be counted as two (2) pages.

3. The Cover Letter must be single-spaced, and must not exceed one (1) 8½" x 11" page. It must include the proposer's contact information including name, mailing address, telephone number, and email address.

4. Section Dividers that do not contain text or graphics, Cover Letters, Resumes, Nevada State Business Licenses, and Statements of Qualifications do not count towards the page count limitation identified in Paragraph 2 above.

5. Resumes, Nevada State Business Licenses, and Statements of Qualification (see Attachment A - Statement of Qualification) must be included in an appendix to the proposal.

Exceptions to these stated limitations will be considered during the evaluation process and may, in the DEPARTMENT's sole discretion, result in a proposal being considered non-responsive.

C. DISCLOSURE OF CURRENT AND FORMER STATE EMPLOYEES

Proposals from firms employing current employees or former employees of the State of Nevada will be considered pursuant to the requirements and limitations set forth in the NRS Chapter 333.705, and the State Administrative Manual, Sections 322 and 323.

If the apparent top-ranked firm proposes any current state employees or former state employees who left state service within the preceding two (2) years, the DEPARTMENT must request approval from the State Board of Examiners (BOE) prior to entering into an agreement with such firm. The proposer shall submit, as part of their proposal, the "Authorization Current Employee, Authorization Former Employee Form" to assist the DEPARTMENT in requesting approval from the BOE.

The forms are located at http://purchasing.state.nv.us/contracting/current_and_former.htm. In the event of a denial by the BOE, the proposer will be allowed one (1) opportunity to replace the disapproved employee with another employee who possesses substantially equivalent capabilities. The DEPARTMENT has the authority to approve or deny the equivalent employee.

SECTION XI - AWARD PROCESS

The DEPARTMENT shall issue its Notice of Intent in accordance with NAC §333.170. Any award is contingent upon the successful negotiation of final contract terms and upon approval of the Transportation Board, when required. Negotiations shall be confidential and not subject to disclosure to competing firms. The terms agreed to by the parties shall be confidential until an agreement is executed. If contract negotiations cannot be concluded successfully, the DEPARTMENT, at its sole discretion and upon written notice to all firms, may negotiate a contract with the next highest ranking firm or withdraw the RFP and cancel this procurement.

The DEPARTMENT shall issue a Notice of Award in accordance with NAC §333.170, at which time proposals are no longer confidential and can be requested by the public from the DEPARTMENT via a Public Records Request, which can be located at: www.nevadadot.com/Contact_Us/Public_Records_Requests.aspx.

SECTION XII - TERMS, CONDITIONS AND EXCEPTIONS

This procurement is being conducted in accordance with NRS Chapters 333 and 408 and NAC Chapter 333.

The DEPARTMENT reserves the right to alter, amend, or modify any provisions of this RFP, or to withdraw this RFP, at any time prior to the award of a contract pursuant hereto, if, in the sole discretion of the DEPARTMENT, it is in the best interest of the state to do so.

The DEPARTMENT reserves the right to waive informalities and minor irregularities in proposals received.

The DEPARTMENT reserves the right to reject any or all proposals received prior to contract award (NRS §333.350).

The DEPARTMENT shall not be obligated to accept the lowest priced proposal, but will make an award in the best interests of the State of Nevada after all factors have been evaluated (NRS §333.335).

Any irregularities or lack of clarity in the RFP must be brought to Agreement Service's attention as soon as possible, so that corrective addenda may be furnished to all proposers.

Alterations, modifications or variations to a proposal may not be considered unless authorized by the RFP, or by an addendum or an amendment to the RFP.

Proposals which appear unrealistic in the terms of technical commitments, lack of technical competence, or are indicative of failure to comprehend the complexity and risk of this contract, may be rejected.

All materials submitted in accordance with the prescribed deadline become the property of the DEPARTMENT and will not be returned. The DEPARTMENT's selection or rejection of a proposal does not affect this right. The master copy of each proposal shall be retained for official files and will become public record after execution of a contract. Only specific parts of the proposal may be labeled a "trade secret," provided that the proposer agrees to defend and indemnify the DEPARTMENT for honoring such a designation (NRS §333.333); unsuccessful proposals containing "trade secrets" will be returned pursuant to NRS 293.010. The failure to so label any information shall constitute a complete waiver of any and all claims for damages caused by any release of such information by the DEPARTMENT. The DEPARTMENT shall not be liable for disclosure or release of information when authorized or required by law to do so pursuant to NRS 239.012.

A proposal submitted in response to this RFP must identify any sub-consultants, and outline the contractual relationship between the awarded proposer and each such sub-consultant. An official of each proposed sub-consultant must sign, and include as part of the proposal submitted in response to this RFP, a statement to the effect that the sub-consultant has read this RFP, and agrees to abide by the awarded proposer's obligations. A sub-consultant's compliance with these requirements does not create a contractual relationship between the sub-consultant and the DEPARTMENT.

The awarded proposer will be the sole point of contract responsibility. The DEPARTMENT will look solely to the awarded proposer for the performance of all contractual obligations, which may result from an award based on this RFP, and the awarded proposer shall not be relieved for the non-performance of any or all of its sub-consultants.

The awarded proposer must maintain, for the duration of its contract, insurance coverage as set forth in the agreement executed in response to this RFP. Work on the contract shall not begin until after the awarded proposer has submitted to the DEPARTMENT acceptable evidence of the required insurance coverage. Failure to maintain any required insurance coverage or alternative method of insurance acceptable to the DEPARTMENT in its sole discretion will be deemed a breach of contract.

Each proposer must disclose any existing or potential conflict of interest relative to the performance of the contractual services resulting from this RFP. Any such relationship that might be perceived or represented as a conflict must be disclosed. By submitting a proposal in response to this RFP, proposers affirm that they have not given, nor intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant or any employee or representative of same, in connection with this procurement. Any attempt to intentionally or unintentionally conceal or obfuscate a conflict of interest will automatically result in the disqualification of a proposer's proposal. An award will not be made where a conflict of interest exists. The DEPARTMENT, in its sole discretion, will determine whether a conflict of interest exists and whether it may reflect negatively on the DEPARTMENT's selection of a proposer. The DEPARTMENT reserves the right in its sole discretion to impose additional requirements upon the proposer to mitigate

such conflict of interest or to disqualify any proposer on the grounds of an actual or an apparent conflict of interest.

The DEPARTMENT will not be liable for Federal, State, or Local excise taxes.

The DEPARTMENT reserves the right to negotiate final contract terms with any proposer selected in accordance with NAC §333.170. The contract between the parties will consist of the final executed contract, the RFP with any modifications thereto, and the awarded proposer's proposal with any modifications and clarifications thereto that are incorporated at the request of the DEPARTMENT during the evaluation and negotiation process. In the event of any conflict or contradiction between or among these documents, the documents shall control in the following order of precedence: the final executed contract, addenda to the RFP, the RFP, any modifications and clarifications to the awarded proposer's proposal, and the awarded proposer's proposal. Specific exceptions to this general rule may be noted in the final executed contract.

The proposer understands and acknowledges that the representations above are material and important, and will be relied on by the DEPARTMENT in its evaluation of a proposal. Any misrepresentation by a proposer shall be treated as fraudulent concealment from the DEPARTMENT of the true facts relating to the proposal.

No announcement concerning the award of a contract as a result of this RFP can be made without the prior written approval of the DEPARTMENT.

The Nevada Attorney General will not render any type of legal opinion regarding this transaction.

SECTION XIII - PROTEST PROCEDURE

Protests may be filed only with respect to:

1. Allegations that the terms of the RFP are wholly ambiguous, are contrary to legal requirements applicable to the procurement, or exceed the DEPARTMENT's authority, and/or
2. A determination as to whether a proposal is responsive to the requirements of the RFP, or failed any Pass/Fail criteria, as applicable, and/or
3. The award of an Agreement.

A. DEADLINES FOR PROTESTS

Protests concerning the issues described in Section XIII (1) and contained in the RFP must be filed no later than ten (10) calendar days prior to the proposal due date, and those contained in any amendment to the RFP must be filed no later than three (3) business days after the DEPARTMENT distributes the related addenda.

Protests concerning the issues described in Section XIII (2) must be filed within ten (10) calendar days after the DEPARTMENT issues to the proposer a notice regarding the failure of any pass/fail criteria, or a notice regarding the non-responsiveness of the proposal.

Protests concerning the issue described in Section XIII (3) must be filed within ten (10) calendar days after the DEPARTMENT issues the Notice of Award.

The DEPARTMENT will not accept any protests received after the above-stated deadlines for receipt of such protests.

B. PROTEST CONTENTS

Protests shall include information about the protesting firm, including the firm's name, mailing address, and phone number, as well as the name of the individual responsible for the submission of the protest. Protests shall completely and succinctly state the grounds for the protest, its legal authority, and its factual basis; protests shall include all factual and legal documentation in sufficient detail to establish the merits of the protest. Statements shall be sworn and submitted under penalty of perjury.

C. FILING OF PROTEST

Protests shall be in writing, and filed by hand delivery on or before the applicable deadline to:

Nevada Department of Transportation
ATTN: Administrative Services/Dispute Resolution Office
1263 South Stewart Street, Room 101A
Carson City, NV 89712

The proposer filing the protest shall concurrently submit a copy of the protest to the other proposers; the other proposers' addresses may be obtained from the DEPARTMENT.

D. COMMENTS FROM OTHER PROPOSERS

Other proposers may file statements in support of or in opposition to the protest within seven (7) calendar days of the filing of the protest. The DEPARTMENT shall promptly forward copies of all such statements to the protester. Any statements shall be sworn and submitted under penalty of perjury.

E. BURDEN OF PROOF

The protester shall have the burden of proving the basis of its protest. The DEPARTMENT may, in its sole discretion, discuss the protest with the protester and other proposers. No hearing will be held on the protest. The protest shall be decided on the basis of written submissions.

F. DECISION ON PROTEST

The DEPARTMENT's Director or designee shall issue a written decision regarding the protest within thirty (30) calendar days after the filing of the detailed statement of protest. If it is necessary to address the issues raised in a protest, the DEPARTMENT may, in its sole discretion, make appropriate revisions to the RFP by issuing addenda.

G. PROTESTER'S PAYMENT OF COSTS

If a protest is denied, the proposer filing the protest shall be liable for the DEPARTMENT's costs reasonably incurred to defend against or resolve the protest, including attorney's fees, consultant fees and costs, and any reasonably unavoidable damages sustained by the DEPARTMENT as a consequence of the protest.

H. RIGHTS AND OBLIGATIONS OF PROPOSERS

Each proposer, by submitting its proposal, expressly recognizes the limitation on its rights to protest provided in this Section XIII and expressly waives all other rights and remedies, and agrees that the decision on the protest is final and conclusive. If a proposer disregards, disputes, or does not follow the exclusive protest remedies provided in this section, it shall indemnify and hold harmless the DEPARTMENT and its officers, employees, agents, and consultants from and against all liabilities, fees and costs, including legal and consultant fees and costs, and damages incurred or suffered as a result

of such proposer's actions. **Each proposer, by submitting a proposal, shall be deemed to have irrevocably and unconditionally agreed to this indemnity obligation.**

No Stay Pending Final Determination: Agreement negotiations with the selected proposer shall not be stayed during the pendency of any protest. Any agreement with the selected proposer shall be made contingent upon the outcome of any pending protest.

ATTACHMENTS

- Attachment A - Statement of Qualification
- Attachment B - Reference Questionnaire
- Attachment C - Cost Proposal
- Attachment D - Checklist
- Attachment E - Title VI Compliance Questionnaire
- Attachment F - Agreement Sample

Attachment A
Statement of Qualification

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Statement_of_Qualification_Form.pdf

The Statement of Qualification Form must be completed in full, and submitted as part of the proposal package per Request for Proposal instructions.

1. Date prepared: _____
2. Firm's name: _____
3. Firm's address: _____
Phone: _____ FAX: _____
4. Is your local office the main office? _____ or branch office? _____ or sole office? _____
5. Year your firm was established: _____
6. Year your local office was established: _____
7. Location of:
 - a. Main office: _____
 - b. Local office: _____
 - c. Invoice remit-to office: _____
8. Year former firm(s) were established:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
9. Name, title, telephone number, address and e-mail address of one principal in firm who may be contacted:

10. List locations of other offices (no more than five):

	<u>Address</u>	<u>Telephone</u>	<u>No. of Personnel</u>
a.	_____	_____	_____
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____
e.	_____	_____	_____

11. Total employees presently employed:
- a. At your local Northern Nevada office: _____
 At your local Southern Nevada office: _____
- b. Total in your firm: _____
12. By category, give the number of projects your firm is working on / has worked:
- | | <u>Current/Active</u> | <u>Last Five (5) Years</u> |
|------------------------|-----------------------|----------------------------|
| a. Public/Governmental | _____ | _____ |
| b. Commercial | _____ | _____ |
| c. Residential | _____ | _____ |
| d. Other | _____ | _____ |
13. Nevada Department of Transportation encourages the participation and utilization of minority and women-owned businesses.
- a. Is your firm certified as a minority-owned, women-owned or disabled veteran-owned business?
 Yes ___ No ___ Specify _____
- b. If yes, by what governmental agency? _____
14. Specialty: _____ (i.e.: Project Management, etc.)

The DEPARTMENT periodically engages consultants to perform work of a specialized nature including (but not limited to) such areas as DBE Supportive Services, Claims Review, etc.

I. Briefly describe your specialty as it applies to this Project's discipline, and the scope of the services that your firm provides.

II. Select three recent projects that have applicability to this Project, and list a reference that the DEPARTMENT may contact for each.

PROJECT NAME	REFERENCE	TELEPHONE
		()
		()
		()



**Attachment B
Reference Questionnaire
State of Nevada
Department of Transportation**

RFP No. 066-15-002 REFERENCE QUESTIONNAIRE
FOR:

_____ (Name of company requesting reference)

An electronic copy can be found here:

http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Vendors/Reference_Questionnaire_070-028_Jan2014.pdf

This form is being submitted to your company for completion as a business reference for the company listed above. Please return this form to the Nevada Department of Transportation (NDOT) via email to agreeservices@dot.state.nv.us, or fax to (775) 888-7101 no later than **March 17, 2015, at 3:00pm**. Do not remit this document to the company requesting the reference.

The information contained in this questionnaire will be confidential and will not be accessible to the referenced company. For questions or concerns regarding this form, please contact the Agreement Services Division by phone (775) 888-7070 or email agreeservices@dot.state.nv.us and refer to the RFP number.

CONFIDENTIAL INFORMATION

Company providing reference: _____
 Contact name and title/position: _____
 Contact telephone number: _____
 Contact email address: _____

Questions:

1. In what capacity have you worked with this company in the past? Please explain the company's responsibilities.
 COMMENTS:

2. How would you rate this company's knowledge and expertise?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

3. How would you rate the company's flexibility relative to changes in the project scope and timelines?
 ____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
 COMMENTS:

4. What was your level of satisfaction with hard-copy materials/products developed by the company?
_____ (3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)
COMMENTS:

5. Was the work done by this company completed on time and within budget?
COMMENTS on Time:

COMMENTS on Budget:

6. Who were the company's principal representatives involved in your project and how would you rate them individually? Please comment on the skills, knowledge, behaviors or other factors on which you base your rating.
(3 = Excellent; 2 = Satisfactory; 1 = Unsatisfactory; 0 = Unacceptable)

Name: _____	Rating: _____
Name: _____	Rating: _____
Name: _____	Rating: _____
Name: _____	Rating: _____

COMMENTS:

7. With which aspect(s) of this company were you:
Most satisfied with
COMMENTS:

Least satisfied with
COMMENTS:

8. Would you recommend this company's service to your organization again?
COMMENTS:

**Attachment C
Cost Proposal**

RFP No.: 066-15-002 Statewide NDOT Operational Audit

INSTRUCTIONS: The Cost Proposal shall be itemized by task, and then added up for the Total Proposed Cost. The DEPARTMENT reserves the right to engage the selected firm in none or all of the identified tasks. Each task is described in Section VIII - Scope of Services.

The DEPARTMENT has established an initial budget for the Statewide NDOT Operational Audit of \$650,000.00.

Task	Cost Per Task
1a. Procurement Cards-Initial assessment	
1b. Procurement Cards-Detailed assessment	
2a. Purchasing Supplies And Equipment-Initial assessment	
2b. Purchasing Supplies And Equipment-Detailed assessment	
3a. Maintenance And Equipment Shops-Initial assessment	
3b. Maintenance And Equipment Shops-Detailed assessment	
4a. Overtime-Initial assessment	
4b. Overtime-Detailed assessment	
5a. State Vehicle Usage-Initial assessment	
5b. State Vehicle Usage-Detailed assessment	
6a. Proper Maintenance of Department Facilities-Initial assessment	
6b. Proper Maintenance of Department Facilities-Detailed assessment	
7a. Cost Effectiveness of Equipment Rebuild Program-Initial assessment	
7b. Cost Effectiveness of Equipment Rebuild Program-Detailed assessment	
8a. Proper Management and Administration of Maintenance Contracts-Initial assessment	
8b. Proper Management and Administration of Maintenance Contracts-Detailed assessment	
9a. Interlocal Agreements-Initial assessment	
9b. Interlocal Agreements-Detailed assessment	
10a. Professional Services Contracts-Initial assessment	
10b. Professional Services Contracts-Detailed assessment	

11a. Construction Contract Change Orders-Initial assessment	
11b. Construction Contract Change Orders- Detailed assessment	
12a. Maintenance and Equipment Shops-Initial assessment	
12b. Maintenance and Equipment Shops-Detailed assessment	
Total Proposed Cost:	

Name

Signature

Firm Name

Attachment D Checklist

This checklist is provided for the proposer's convenience only, and identifies documents that must be submitted with each package in order to be considered responsive. Any proposals received without these requisite items in the number and form set forth in the proposal instructions, may in the sole discretion of the DEPARTMENT, be deemed non-responsive and not considered for contract award.

1. Number of Pages within Page Range (see Section X (B))
2. Sections match Evaluation Criteria Items (see Section X (A))
3. Technical Proposal
4. Cost Proposal in a separate sealed envelope
5. Statement of Qualification (see Section X (B))
6. Nevada State Business License (see Section V)

Attachment E
Title VI Compliance Questionnaire

Title VI is a statute provision of the Civil Rights Act of 1964:

“No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 U.S.C. Sec 2000d)

The following information will be used by the Nevada Department of Transportation (DEPARTMENT) and the Federal Highway Administration (FHWA) for statistical purposes only. This information will be stored confidentially, and will not affect any decisions made by the DEPARTMENT.

Your participation is voluntary, but would be greatly appreciated.

Choose one ethnic group with which the principal owner(s) most identify:

- Black** (Not of Hispanic origin: All persons having origins in any of the Black racial groups.)
- Asian/Pacific Islander** (All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.)
- Hispanic** (All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)
- Native American** (All persons having origins in any of the original peoples of North America and who maintain cultural identification through a tribal affiliation or community recognition.)
- White** (Not of Hispanic origin: All persons having origins in any of the original peoples of Europe, North Africa, or Middle East.)
- Other** (All persons not matching one of the other choices.)

Sex: Male Female

- I understand my participation is voluntary and decline to provide the requested information

Firm Name: _____

Owner Name (Print): _____

Owner Name (Sign): _____

Date: _____

Attachment F
Agreement Sample
SERVICE AGREEMENT

This Agreement, made and entered into the _____ day of _____, _____ by and between the STATE OF NEVADA, acting by and through its DEPARTMENT OF TRANSPORTATION (hereinafter "DEPARTMENT") and **NAME AND ADDRESS** (hereinafter "SERVICE PROVIDER"). Individually they are each a "Party" and collectively they are the "Parties."

WITNESSETH:

WHEREAS, the Director of the DEPARTMENT may, pursuant to Nevada Revised Statutes (hereinafter "NRS") Chapter 333 & Chapter 408, contract for technical services that may be required; and

WHEREAS, NRS Chapter 333 authorizes heads of state departments to contract for the services of independent contractors; and

WHEREAS, **PROJECT IDENTIFICATION**, is necessary for **PROJECT EXPLANATION** (hereinafter "PROJECT"); and

WHEREAS, SERVICE PROVIDER's services will be of great benefit to the DEPARTMENT and to the people of the State of Nevada.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is agreed by and between the Parties as follows:

ARTICLE I - SCOPE OF SERVICES

1. The SERVICE PROVIDER agrees to **SUMMARIZE PROJECT DESCRIPTION OR INSERT:** perform services listed in Attachment A - Scope of Services attached hereto and incorporated herein.
2. The SERVICE PROVIDER agrees to furnish all labor, materials, services, equipment, tools and other expenses necessary to perform the professional services required under the terms of this Agreement, except as specifically provided otherwise herein.
3. The SERVICE PROVIDER agrees to comply with all requirements contained in the underlying Request for Proposal which is incorporated into this Agreement by reference. **ONLY USE PARAGRAPH IF APPLICABLE**

ARTICLE II - PERFORMANCE

1. The term of this Agreement shall be from the date first written above through and including **DATE**, unless a change extending the term is further agreed to by written amendment signed by all parties to this Agreement and approved by appropriate official action of the governing body of the DEPARTMENT prior to such term expiration date.

OR

1. The term of this Agreement shall be from the date first written above through and including **DATE**, thereby terminating **NUMBER (#)** years from the above date or upon completion of the case, including any appeal, whichever comes first. **ONLY USE PARAGRAPH FOR EXPERT WITNESS OR LEGAL**

2. In the event that the SERVICE PROVIDER performs or causes to be performed any work after: (a) the Agreement's expiration date as set forth within this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date; or (b) termination of this Agreement prior to the expiration date set forth within this Agreement; then the DEPARTMENT shall make no payment for work performed following the expiration or termination dates, and the SERVICE PROVIDER shall forfeit any and all right to payment for such work.

3. The SERVICE PROVIDER, on behalf of itself, its spouses, heirs, executors, administrators, successors, subrogees, servants, insurers, attorneys, independent representatives, personal representatives, agents, and assigns, does hereby waive, release, and forever discharge the State of Nevada, the DEPARTMENT, and each and every of their departments, divisions, agencies, officers, directors, agents, contractors, and

employees, from any and all claims, demands, liens, liability, actions, causes of action, and suits for damages, at law and in equity, in any way connected with or arising from the SERVICE PROVIDER's provision of services and work performed following termination of this Agreement, and/or following the expiration date of this Agreement, as it may be amended from time to time through written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body, prior to such expiration date.

4. Neither the State of Nevada, the DEPARTMENT, nor any of their departments, divisions, agencies, officers, directors, agents, contractors, and employees, shall have authority to extend this Agreement beyond the expiration date set forth within this Agreement, unless such extension is set forth within a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date. The SERVICE PROVIDER shall not rely upon any oral or written representations expressed extrinsic to a written amendment signed by the parties hereto and approved by appropriate official action of the DEPARTMENT's governing body prior to such expiration date, purporting to alter or amend this Agreement, including but not limited representations relating to the extension of the Agreement's expiration date.

5. Paragraphs 1 through 4 of this Article II - Performance, shall survive the termination and expiration of this Agreement.

6. The SERVICE PROVIDER shall not proceed with said work until a copy of this Agreement is fully executed, signed by all individuals on the signatory lines below (hereinafter the "Final Execution Date"), and the Agreement is received by the SERVICE PROVIDER, which shall then constitute the written "Notice to Proceed" from the DEPARTMENT. The SERVICE PROVIDER shall notify the DEPARTMENT in writing of the exact date of commencement. If the SERVICE PROVIDER does commence said work prior to receiving said "Notice to Proceed" or prior to the Final Execution Date, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Final Execution Date and/or Notice to Proceed. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

OR

6. The SERVICE PROVIDER shall not proceed with work until the SERVICE PROVIDER receives a written "Notice to Proceed" from the DEPARTMENT. If the SERVICE PROVIDER does commence said work prior to receiving said Notice to Proceed, the SERVICE PROVIDER shall forfeit any and all right to reimbursement for that portion of the work performed prior to said dates. Furthermore, the SERVICE PROVIDER shall not rely on the terms of this Agreement in any way, including but not limited to any written or oral representations and warranties made by the DEPARTMENT or any of its agents, employees, or affiliates, or on any dates of performance, deadlines, indemnities, or any other term contained in this Agreement or otherwise prior to the Notice to Proceed and/or Final Execution Date. In the event the SERVICE PROVIDER violates the provisions of this Section, the SERVICE PROVIDER waives any and all claims and damages against the DEPARTMENT, its employees, agents, and/or affiliates, including but not limited to monetary damages and/or any other available remedy at law or in equity arising under the terms of this Agreement. **ONLY USE PARAGRAPH FOR PARTIALLY OR FULLY FEDERALLY FUNDED PROJECTS**

7. The SERVICE PROVIDER agrees to complete the PROJECT within **NUMBER (#)** calendar **OR** working days of the commencement day of the PROJECT and agrees to pay to the DEPARTMENT, the sum of **NUMBER** and **#/100 Dollars (\$#)** for each and every calendar day past said date when the delay is caused by negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's direct control. These damages are not intended as a penalty. Damages are difficult to ascertain and the Parties agree that this amount is a reasonable estimate of presumed actual damages. **ONLY USE PARAGRAPH IF APPLICABLE**

8. In the event the DEPARTMENT discovers a SERVICE PROVIDER's error or omission before its discovery by the SERVICE PROVIDER, the DEPARTMENT shall not unreasonably delay in notifying SERVICE PROVIDER of such error or omission. DEPARTMENT's notice to SERVICE PROVIDER shall specify the maximum time period SERVICE PROVIDER will be allowed for correction. The SERVICE PROVIDER shall make all necessary corrections resulting from its errors and omissions, and shall without delay make any corrections necessitated by the negligence, lack of adequate resources or any other cause within the SERVICE PROVIDER's control, and shall make such corrections without additional compensation. SERVICE PROVIDER shall track all related costs for the correction. Acceptance of the professional services by the DEPARTMENT will not relieve the

SERVICE PROVIDER of the responsibility for any subsequent correction of any such errors and omissions, and the clarification of any ambiguities. The SERVICE PROVIDER will be responsible for additional costs in subsequent related construction resulting from its errors or omissions. Should the DEPARTMENT use its own personnel, supplies or equipment to remedy the deficiency, all such costs incurred by the DEPARTMENT shall be deducted from the sum due or which may become due to the SERVICE PROVIDER. In the event all such costs and charges incurred by the DEPARTMENT exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall reimburse the DEPARTMENT the amount of said excess.

9. The SERVICE PROVIDER shall assign one individual throughout the life of this Agreement who shall have overall PROJECT responsibility unless illness or termination requires replacement. **IF APPLICABLE ADD:** This individual shall be registered in accordance with NRS Chapter 625, Professional Engineers and Land Surveyors. This individual shall ensure that each sheet of the final submittal, including the title sheet, is stamped (electronic or wet stamp acceptable), signed and dated (original signature and date required) in accordance with NRS Chapter 625 and Nevada Administrative Code, Chapter 625.

10. A key person is defined as any individual identified by the SERVICE PROVIDER in its proposal as being part of the team to be assigned to the PROJECT. The SERVICE PROVIDER acknowledges and agrees, that the award of this Agreement was based, in part, on its ability to manage the PROJECT, and the qualifications, experience, and capacity of the SERVICE PROVIDER's aforementioned key persons and team. The SERVICE PROVIDER represents, warrants and covenants that such key persons are and will continue to be available to undertake and perform all services identified herein and fulfill the roles identified in its proposal. The SERVICE PROVIDER shall notify the DEPARTMENT in writing within ten (10) calendar days when a key person leaves the PROJECT team. **ONLY USE PARAGRAPH IF APPLICABLE**

a. If a key person leaves the PROJECT team, the SERVICE PROVIDER shall promptly propose a replacement within thirty (30) calendar days to and for the DEPARTMENT's review and written consent.

b. The DEPARTMENT shall have the unilateral right to terminate this Agreement:

(1) If a key person leaves the PROJECT team for a reason other than death, retirement, incapacitation or leaving SERVICE PROVIDER's employment (including the employment with SERVICE PROVIDER's affiliates, subsidiaries and parent companies/organizations);

(2) If a key person listed by the SERVICE PROVIDER in its proposal to perform or supervise various aspects of design is changed or leaves the PROJECT team; or

(3) If the DEPARTMENT does not accept the SERVICE PROVIDER's proposed key person replacement.

c. If this Agreement is terminated pursuant to the above, the SERVICE PROVIDER shall be paid for actual costs incurred for all services rendered and accepted by the DEPARTMENT and an amount of fee proportional to the work completed as of the date of termination. Additionally, the SERVICE PROVIDER shall not be entitled to any settlement costs, if any. Such termination will not occur if the SERVICE PROVIDER provides a replacement that is acceptable to the DEPARTMENT within thirty (30) calendar days of the date when the key person is changed or has left the PROJECT team.

11. The SERVICE PROVIDER shall at all times maintain control over and have complete responsibility for all services performed pursuant to this Agreement by the SERVICE PROVIDER and any of its subcontractors.

12. The SERVICE PROVIDER warrants that all deliverables and professional services produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry. The standard of care applicable to SERVICE PROVIDER's services will be of the degree of skill and diligence normally employed by professional engineers **OR** SERVICE PROVIDERS performing the same or similar services at the time said services are performed.

13. This Agreement, and any amendments, may be suspended temporarily, either wholly or in part, by the DEPARTMENT upon oral notice confirmed in writing within ten (10) calendar days, when the DEPARTMENT determines that conditions beyond the control of the SERVICE PROVIDER are unfavorable to its satisfactory continuation of work. Should such conditions be encountered, the time for completion may be extended in an amount determined by the DEPARTMENT to be equivalent to the delay. Requests for suspension of time by the SERVICE PROVIDER must have the written approval of the DEPARTMENT. No allowance shall be made for delay or suspension of the services solely due to the fault of the SERVICE PROVIDER.

14. An alteration ordered by the DEPARTMENT which substantially changes the services provided for by the expressed intent of this Agreement will be considered extra professional services and shall be specified in a written amendment signed by all Parties, which will set forth the nature and scope thereof. The method of payment for extra professional services shall be specified at the time the amendment is written.

15. The SERVICE PROVIDER shall not assign or subcontract, any of the professional services performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER will, subsequent to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the contract or agreement for professional services. The SERVICE PROVIDER shall require any subcontractor to comply with all provisions of 48 CFR Chapter 1, Part 31, in its agreement with the subcontractor, if the SERVICE PROVIDER subcontracts any professional services contemplated by this Agreement. The SERVICE PROVIDER will be responsible for any costs or deficiencies resulting from noncompliance if the subcontractors fail to comply with 48 CFR Chapter 1, Part 31.

16. The SERVICE PROVIDER agrees to complete and sign Attachment B - "AFFIDAVIT REQUIRED UNDER SECTION 112(c) of Title 23 United States Code, Act of August 27, 1958 and Part 29 of Title 49, Code of Federal Regulations, November 17, 1987," Attachment C - "CERTIFICATION REQUIRED BY SECTION 1352 of TITLE 31, UNITED STATES CODE, RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS," and "INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES," attached hereto and incorporated herein. **ONLY USE PARAGRAPH IF PROJECT IS FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

17. The SERVICE PROVIDER acknowledges that the DEPARTMENT has established a Disadvantaged Business Enterprise (DBE) participation requirement of **NUMBER** percent (#%) of the total dollar value of the Agreement costs. A DBE must be a small business concern as defined by the U.S. Small Business Act, 15 U.S.C. § 632 or by 49 CFR Subtitle A, Part 26. **ONLY USE PARAGRAPH IF APPLICABLE**

18. Failure by the Service Provider to fulfill the DBE Agreement requirements and to demonstrate good faith efforts, either in the Service Provider's proposal or during the performance period, constitutes a breach of this Agreement. In event of such a breach, the DEPARTMENT may:

(a) Withhold progress payments or a portion thereof;

(b) Deduct, as damages, an amount equal to the unmet portion of the DBE commitment not achieved. This amount will be determined by multiplying the percentage of DBE participation proposed by the total cost set forth in the agreement and then multiplying the actual percentage of DBE participation used during the agreement by the total cost set forth in the agreement. In the event the actual percentage of DBE participation is less than the proposed percentage of DBE participation, the difference in these two figures shall be the amount of damages due to the DEPARTMENT;

(c) Remove the SERVICE PROVIDER from the prequalified list for repeated violations, falsifications, or misrepresentations; and/or

(d) Terminate the Agreement.

19. This Agreement shall not become effective until and unless approved by the State Board of Examiners. **ONLY USE PARAGRAPH IF APPLICABLE**

20. This Agreement is contingent upon the verification that the SERVICE PROVIDER has a valid and active Nevada Business License and is in good standing in all areas of the Secretary of State's business requirements. If the SERVICE PROVIDER is an out of state provider, the SERVICE PROVIDER must be registered as a foreign business entity equivalent in Nevada, in active status and in good standing.

ARTICLE III - TERMINATION

1. The DEPARTMENT may terminate this Agreement without cause **NUMBER (#)** calendar **OR** working days after service of a termination letter to the SERVICE PROVIDER. In the event this Agreement is terminated in this manner, the SERVICE PROVIDER shall be paid for the cost of the professional services which have been completed and accepted by the DEPARTMENT up to the date of termination.

2. The continuation of this Agreement beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Nevada State Legislature and/or federal sources. The DEPARTMENT may terminate this Agreement, and the SERVICE PROVIDER waives any and all claims for damages, effective immediately upon receipt of written notice, or any date specified therein, if for any reason the DEPARTMENT's funding from state and/or federal sources is not appropriated or is withdrawn, limited or impaired.

3. A default or breach may be declared with or without termination. This Agreement may be terminated by either Party upon written notice of default or breach to the other Party as follows:

a. If the SERVICE PROVIDER fails to provide or satisfactorily perform any of the professional services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or

b. If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law or regulation to be held by the SERVICE PROVIDER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed or not renewed; or

c. If the SERVICE PROVIDER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of a bankruptcy court; or

d. If DEPARTMENT materially breaches any material duty under this Agreement and any such breach impairs the SERVICE PROVIDER's ability to perform; or

e. If it is found by the DEPARTMENT that any quid pro quo or gratuities in the form of money, services, entertainment, gifts or otherwise were offered or given by the SERVICE PROVIDER, or any agent or representative of the SERVICE PROVIDER, to any officer or employee of the State of Nevada with a view toward securing an agreement or securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performing of such agreement.

4. Termination upon a declared default or breach may be exercised after service of written notice and the subsequent failure of the defaulting Party, within fifteen (15) calendar days of service of that notice, to provide evidence, satisfactory to the aggrieved Party, showing the declared default or breach has been corrected. Such correspondence shall be deemed to have been served on the date of postmark.

5. In the event of the SERVICE PROVIDER's breach of this Agreement, all costs and charges incurred by the DEPARTMENT, together with the cost of completing the work under this Agreement, shall be deducted from any money due or which may become due to said SERVICE PROVIDER. If expenses exceed the sum which would have been payable under this Agreement, then the SERVICE PROVIDER shall be liable and shall pay to the DEPARTMENT the amount of said excess.

6. This Agreement shall be terminated when the professional services contemplated and covered by this Agreement have been completely performed by the SERVICE PROVIDER, and all items of professional services have been approved and accepted by the DEPARTMENT.

ARTICLE IV - COST

1. The "specific rates of compensation" method of compensation shall be used for the SERVICE PROVIDER's services.

2. The total cost of the services by the SERVICE PROVIDER shall not exceed the sum of **NUMBER** and **#/100 Dollars (\$#)**, which includes the fixed fee.

3. The rate will be reimbursed at **NUMBER** and **#/100 Dollars (\$#)** per **DESCRIPTION** and shall include direct salary costs, indirect costs, other direct costs and fixed fee. **IF APPLICABLE, INCLUDE SCHEDULE AS AN ATTACHMENT**

4. The DEPARTMENT will pay the SERVICE PROVIDER in monthly installments based upon progress and final payment reports submitted by the SERVICE PROVIDER and as approved by the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

5. The SERVICE PROVIDER is required to submit a monthly progress report in the DEPARTMENT's format showing the status of the professional services and the degree of completion thereof.

6. The SERVICE PROVIDER agrees to complete and sign Attachment D - Service Provider Cost Certification of Final Indirect Costs, attached hereto and incorporated herein. **ONLY USE FOR PROJECTS PARTIALLY OR FULLY FEDERALLY FUNDED; RE-LETTER ATTACHMENTS IF NECESSARY**

IF APPLICABLE, INSERT THE FOLLOWING THREE PARAGRAPHS AT THE END OF THE METHOD OF COMPENSATION CHOSEN AND RENUMBER THEM ACCORDINGLY, EXCEPT WHEN THE LUMP SUM METHOD OF PAYMENT IS USED, IN WHICH CASE THEY ARE NOT TO BE INSERTED.

X. Travel costs will be reimbursed at the current rates allotted to state employees. Travel costs will be reimbursed based on actual costs limited by Federal Travel Regulations (FTR) and the CONUS rate for Nevada. The FTR breaks down meals and incidental expenses at its website: www.gsa.gov/mie. The first and last travel days are calculated at seventy-five percent (75%). The lodging rate excludes taxes and fees. Taxes and fees are reimbursable. See this website for lodging in Nevada: <http://www.gsa.gov/portal/category/100120>. The SERVICE PROVIDER shall provide lodging receipts.

X. The SERVICE PROVIDER shall be reimbursed for the use of company vehicles as agreed upon with the Project Manager. Cost shall include a direct expense that includes anticipated mileage, insurance, maintenance and a lease fee, if applicable.

X. When requested by the DEPARTMENT, the SERVICE PROVIDER shall schedule its own airline and rental car reservations by the most economical means for reimbursement. Original receipts for airfare and rental cars must be submitted with the "Claim for Travel Expense." The DEPARTMENT is not responsible for payment of any premium, deductible or assessments on insurance policies purchased by the SERVICE PROVIDER for a rental vehicle.

ARTICLE V - SCHEDULE OF PAYMENTS

1. The SERVICE PROVIDER shall submit a signed invoice monthly **OR** bi-weekly **OR** quarterly **OR** semi-annually **OR** yearly **OR** upon completion for all services rendered along with one copy of substantiating documentation. The invoice must be submitted on the SERVICE PROVIDER's stationery using the DEPARTMENT's format or submitted on the DEPARTMENT's standard invoice form. The DEPARTMENT will utilize its normal accounting procedure in the payment of the invoices submitted. **IF APPLICABLE ADD:** The Fixed Fee shall be paid monthly and shall be calculated as a percentage of the direct salary plus overhead costs of that month's invoice until the full agreed fee is paid.

2. Payment will be made for one hundred percent (100%) of the amount of each invoice, until a maximum of ninety percent (90%) of the total Agreement costs have been billed by the SERVICE PROVIDER. Thereafter, payment for the remaining ten percent (10%) of the total Agreement costs shall be withheld by the DEPARTMENT, until such time as the professional services delivered by the SERVICE PROVIDER have been completely accepted by the DEPARTMENT. The final audit shall be performed after the release of the retained amount, and may cause an adjustment of payments to the DEPARTMENT or to the SERVICE PROVIDER. No interest shall be paid to the SERVICE PROVIDER on this retained amount or any adjustment of payments. **ONLY USE PARAGRAPH IF APPLICABLE**

3. The DEPARTMENT reserves the right to inspect and approve the professional services performed before payment is made to the SERVICE PROVIDER. Payment will be withheld for deliverables and professional services the DEPARTMENT determines to be unsatisfactory in that they have not been provided in a workmanlike manner consistent with standards in the trade, profession or industry. Payment shall remain unpaid until the professional services are completed in accordance with the standards and work requirements defined in this Agreement. In such an event, the DEPARTMENT will provide the SERVICE PROVIDER with a written explanation as to why payment has been withheld.

4. The total cost of services for this Agreement, is the negotiated amount identified in Article IV, Paragraph 2. This amount was based upon the SERVICE PROVIDER's costs and fixed fee as well as the costs and fixed fees, if any, of all of its subcontractors. If a subcontractor does not expend all funds allocated to it for services identified in its agreement with the SERVICE PROVIDER, a copy of which shall be provided to the DEPARTMENT prior to issuance of the Notice to Proceed, the SERVICE PROVIDER shall not redistribute or expend such funds without the prior written approval of the DEPARTMENT. Failure to notify the DEPARTMENT prior to the use of such funds will constitute grounds for denial of reimbursement for such expenditures.

5. Payment of invoices, interest penalties, and discounts shall be paid as follows:

a. The SERVICE PROVIDER shall be paid within sixty (60) calendar days of a postmarked invoice which is complete, correct, and undisputed by the DEPARTMENT.

b. The DEPARTMENT shall have twenty (20) calendar days after postmark of an invoice to dispute any or all of the charges on that invoice. The undisputed amount shall be paid to the SERVICE PROVIDER within sixty (60) calendar days of the date of postmark. The disputed amount shall be negotiated and resolved in good faith by both Parties and paid within forty (40) calendar days after the date the corrected invoice is received by the DEPARTMENT or is approved by both Parties for payment.

c. If the DEPARTMENT fails to pay the SERVICE PROVIDER the undisputed amount within sixty (60) calendar days after the postmark date of the invoice, the interest penalty assessed to the DEPARTMENT shall be one percent (1%) of the undisputed amount per month, not to exceed a total of One Thousand and No/100 Dollars (\$1,000.00).

d. Payment of penalties shall not apply to the final payment or bill pertaining to this Agreement as determined by the post audit.

6. The prevailing party in an action to enforce this Agreement is entitled to reasonable attorney's fees and costs.

ARTICLE VI - MISCELLANEOUS PROVISIONS

1. The SERVICE PROVIDER shall be responsible for and shall comply with all applicable federal, state, and local government obligations and DEPARTMENT policies and procedures. The SERVICE PROVIDER will be responsible for and shall pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are SERVICE PROVIDER's responsibility in accordance with NRS Chapter 361. The SERVICE PROVIDER warrants that it has a valid business license. The SERVICE PROVIDER agrees to be responsible for and shall pay any such government obligations not paid by its subcontractors during performance of this Agreement. The DEPARTMENT may set-off any consideration due against any delinquent government obligation.

2. It is expressly understood that the SERVICE PROVIDER is an independent contractor, and is subject to all statutes and laws, including NRS 333.700 relating to independent contractors. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for the DEPARTMENT whatsoever with respect to the indebtedness, liabilities, and obligations of the SERVICE PROVIDER or any other party. Neither the SERVICE PROVIDER nor its employees, agents or representatives shall be considered employees, agents or representatives of the DEPARTMENT.

3. The SERVICE PROVIDER shall be solely responsible for its own employees, and the DEPARTMENT shall have no obligation with respect to:

- a. Withholding of income taxes, FICA or any other taxes or fees;
- b. Industrial insurance coverage;
- c. Participation in any group insurance plans available to employees of the DEPARTMENT;
- d. Participation or contributions by either the SERVICE PROVIDER or the DEPARTMENT to the Public Employees Retirement System;
- e. Accumulation of vacation leave or sick leave; or
- f. Unemployment compensation coverage provided by the DEPARTMENT.

4. The SERVICE PROVIDER shall indemnify and hold the DEPARTMENT harmless from, and defend the DEPARTMENT against, any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising or incurred because of, incident to, or otherwise with respect to any such taxes, fees, insurance, contributions, leave or coverage.

5. Unless expressly provided in this Agreement, the SERVICE PROVIDER shall not engage or use the devices and/or services of the DEPARTMENT's personnel without the prior written consent of the DEPARTMENT.

6. The SERVICE PROVIDER shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT proof of worker's compensation insurance as required by the NRS.

OR

6. The SERVICE PROVIDER, as a sole proprietor who does not use the services of his employees, if any, shall, before commencing professional services under the provisions of this Agreement, furnish to the DEPARTMENT Attachment E - "Worker's Compensation Insurance Affidavit." **ONLY USE PARAGRAPH IF APPLICABLE; RE-LETTER ATTACHMENTS IF NECESSARY**

7. The SERVICE PROVIDER shall furnish a Certificate of Errors and Omissions Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00). **INCREASE FROM \$1,000,000.00 UP TO \$3,000,000.00 DEPENDING UPON THE SIZE OF THE PROJECT**

8. The SERVICE PROVIDER shall furnish a Certificate, Declarations Page and an Endorsement designating the DEPARTMENT as an additional insured evidencing Commercial General Liability Insurance with a minimum limit of One Million and No/100 Dollars (\$1,000,000.00) per occurrence. These policies shall be maintained for the entire period of this Agreement. The policies shall include a 30-day advance written notice of any cancellation of said policies. The SERVICE PROVIDER shall furnish the DEPARTMENT with certificates of such insurance prior to commencement of professional services.

9. All insurance required by this Agreement shall be placed with insurers with a rating from the current issue of Best's Key Rating Guide of no less than A-: VII.

10. The DEPARTMENT has the option of requesting, at any time, a meeting with the SERVICE PROVIDER or its authorized representative to discuss and review PROJECT status and the SERVICE PROVIDER shall furnish thereafter a copy of the minutes of such meetings to the DEPARTMENT.

11. The SERVICE PROVIDER has total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement, and shall check all such material accordingly for completeness, missing items, correct multipliers and consistency. The deliverables shall be reviewed by the DEPARTMENT for conformity with the DEPARTMENT's procedures and contract terms. The SERVICE PROVIDER acknowledges that review by the DEPARTMENT does not include detailed review or checking of major components and related details or the accuracy of such deliverables, and the DEPARTMENT's review shall not relieve the SERVICE PROVIDER of its total responsibility for the accuracy and correctness of data prepared under the terms of this Agreement.

12. The SERVICE PROVIDER shall appear as an expert witness on behalf of the DEPARTMENT in any subsequent court action which involves any of the services required by this Agreement. Compensation for services rendered in this regard will be paid at a rate to be negotiated at the time such services are necessary.

13. Upon completion, termination or cancellation of the services embraced under this Agreement, all professional services inclusive of research, investigation and analysis data, reports (including files stored on mobile media), computations, tabulations, original drawings and design files (including CAD information stored on mobile media), correspondence input from external sources (including subcontractors), etc., shall be delivered to and become the property of the DEPARTMENT, without limitation. Reuse of said materials, information or data, during performance or following termination of this Agreement, on any other project or for any other purpose except as provided for herein, shall be at the DEPARTMENT's discretion and the DEPARTMENT's sole decision. The SERVICE PROVIDER shall not utilize any materials, information or data obtained as a result of performing the services called for in this Agreement in any commercial or academic publication or presentation without the express written permission of the DEPARTMENT. The SERVICE PROVIDER shall not reference an opinion of an employee or agent of the DEPARTMENT obtained as a result of performing the services called for in this Agreement, in any publication or presentation, without the written permission of the employee or agent to whom the opinion is attributed, in addition to the permission of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

14. All design drawings must be created and delivered to the DEPARTMENT in Microstation "dgn" format. Drawing files converted to Microstation format from other formats will not be accepted by the DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

15. All roadway design engineering files must be created and delivered to the DEPARTMENT in InRoads format. Design files converted to InRoads format from other formats will not be accepted by the

DEPARTMENT. Files must be delivered to the DEPARTMENT via FTP or email. All files must adhere to the DEPARTMENT's standards. **ONLY USE PARAGRAPH IF APPLICABLE**

16. All reports and notes for special provisions shall be delivered to the DEPARTMENT via FTP or email using the most current version of Microsoft Word. **ONLY USE PARAGRAPH IF APPLICABLE**

17. The SERVICE PROVIDER agrees that any reports, materials, studies, photographs, negatives, drawings or other documents prepared by the SERVICE PROVIDER in the performance of its obligations under this Agreement shall be the exclusive property of the DEPARTMENT. The SERVICE PROVIDER shall remit all such documents to the DEPARTMENT upon completion, termination or cancellation of this Agreement or upon written request of the DEPARTMENT. The SERVICE PROVIDER shall not use, willingly allow or cause to have such documents used for any purpose other than performance of the SERVICE PROVIDER's obligation under this Agreement, without the prior written consent of the DEPARTMENT. **ONLY USE PARAGRAPH IF APPLICABLE**

18. The SERVICE PROVIDER and successors, executors, administrators, and assigns of the SERVICE PROVIDER's interest in the professional services or the compensation herein provided shall be bound to the DEPARTMENT to the full legal extent to which the SERVICE PROVIDER is bound with respect to each of the terms of this Agreement.

19. The SERVICE PROVIDER warrants that it has not employed or retained any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) to solicit or secure this Agreement and that the SERVICE PROVIDER has not paid or agreed to pay any company or persons (other than a bona fide employee working solely for the SERVICE PROVIDER) any fee, commission, percentage, brokerage fee, or any other gifts contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the DEPARTMENT shall have the right to annul this Agreement without liability, or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

20. It is the intent of the Parties to avoid and resolve disputes at the lowest level possible. Accordingly, the DEPARTMENT and the SERVICE PROVIDER will enter into a partnering relationship, pursuant to the provisions set forth in Attachment **LETTER**. Any unresolved disputes will be referred to a nonbinding dispute resolution process pursuant to the terms outlined in Attachment **LETTER**. Nothing herein contained shall impair the Parties' right to file suit in the state district courts of the State of Nevada in the event the dispute resolution process is unsuccessful. **ONLY USE PARAGRAPH IF APPLICABLE**

OR

20. Any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement shall be decided by the DEPARTMENT. It is the intent of the DEPARTMENT to resolve disputes at the lowest level possible. Nothing herein contained shall impair either of the Parties' right to file suit in the state district courts of the State of Nevada.

21. During the performance of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. **Compliance with Regulations:** The SERVICE PROVIDER shall comply with all of the regulations relative to nondiscrimination in federally-assisted programs of 49 CFR Part 21 as they may be amended from time to time (hereinafter "Regulations"), which are herein incorporated by reference and made a part of this Agreement.

b. **Nondiscrimination:** The SERVICE PROVIDER, with regard to the professional services performed by it during the Agreement, shall not discriminate on the grounds of race, color, age, religion, sex, creed, handicap, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The SERVICE PROVIDER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5. of the Regulations, including employment practices, when the Agreement covers a program set forth in Appendix B of the Regulations.

c. **Solicitations for Subcontracts, Including Procurement of Materials, and Equipment:** In all solicitations either by competitive bidding or negotiation made by the SERVICE PROVIDER for professional services to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the SERVICE PROVIDER of the SERVICE PROVIDER's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, age, religion, sex, creed, handicap or national origin.

d. Information and Reports: The SERVICE PROVIDER shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a SERVICE PROVIDER is in the exclusive possession of another who fails or refuses to furnish this information, the SERVICE PROVIDER shall so certify to the DEPARTMENT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the SERVICE PROVIDER's noncompliance with the nondiscrimination provisions of this Agreement, the DEPARTMENT shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

1. Withholding of payments to the SERVICE PROVIDER under the Agreement until the SERVICE PROVIDER complies, and/or

2. Cancellation, termination or suspension of the Agreement, in whole or in part.

f. Agreements with subcontractors will include provisions making all subcontractor records available for audit by the DEPARTMENT or the FHWA.

g. Incorporation of Provisions: The SERVICE PROVIDER will include the provisions of Paragraphs (a) through (f) above in every subcontract including procurement of materials and leases of equipment, unless exempt by Regulations, order, or instructions issued pursuant thereto. The SERVICE PROVIDER will take such action with respect to any subcontract or procurement as the DEPARTMENT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. In the event SERVICE PROVIDER becomes involved in, or is threatened with litigation by a subcontractor or supplier as a result of such direction, the SERVICE PROVIDER may request the DEPARTMENT to enter into such litigation to protect the interests of the DEPARTMENT and the SERVICE PROVIDER may request the United States to enter into such litigation to protect the interests of the United States.

22. In the event federal funds are used for payment of all or part of this Agreement, the SERVICE PROVIDER, for itself, its assignees and successors in interest agrees as follows:

a. Debarment and/or Suspension: The SERVICE PROVIDER certifies that neither it nor its subcontractors, nor their principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

b. ADA: The SERVICE PROVIDER and subcontractor shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1980, as amended, and regulations adopted thereunder contained in 49 CFR, Part 27, and any relevant program-specific regulations.

c. Civil Rights: The SERVICE PROVIDER and subcontractor shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or person offered employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition, including AIDS and AIDS-related conditions.

23. Each party agrees to keep and maintain under generally accepted accounting principles full, true and complete records and documents pertaining to this Agreement and present, at any reasonable time, such information for inspection, examination, review, audit and copying at any office where such records and documentation are maintained. It is expressly understood that the duly authorized representatives of the DEPARTMENT and the FHWA shall have the right to inspect/audit the professional services and charges of the SERVICE PROVIDER whenever such representatives may deem such inspection to be desirable or necessary. Such records and documentation shall be maintained for three (3) years after final payment is made.

24. To the fullest extent permitted by law, the SERVICE PROVIDER shall defend, indemnify and hold harmless the State of Nevada, and the employees, officers and agents of the State of Nevada from any liabilities, damages, losses, claims, actions or proceedings, including, without limitation, reasonable attorney's fees, that are caused by the negligence, errors, omissions, reckless or intentional misconduct of the SERVICE PROVIDER or the employees or agents of the SERVICE PROVIDER in the performance of this Agreement.

25. The SERVICE PROVIDER shall use its own vehicles and the DEPARTMENT is not responsible for the payment of any premiums, deductible or assessments on any insurance policies purchased by the SERVICE PROVIDER.

26. The SERVICE PROVIDER warrants that all deliverables and work produced under this Agreement shall be completed in a workmanlike manner consistent with standards in the trade, profession or industry.

27. The SERVICE PROVIDER is required to register as a vendor with the Nevada State Controller's office. The Registration Substitute IRS Form W-9 can be accessed at http://controller.nv.gov/VendorServices/Vendor_Services.html. The SERVICE PROVIDER will follow the Registration Instructions, complete the Registration Substitute IRS Form W-9 and submit it to the State Controller's Office.

28. The SERVICE PROVIDER agrees that, prior to any sale, transfer, business name change, change in principals or any other occurrence that alters or this Agreement in any way, the SERVICE PROVIDER shall notify the DEPARTMENT of such intent at least seven (7) calendar days prior to making said change.

29. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other Party at the address set forth below:

FOR DEPARTMENT:

Rudy Malfabon, P.E., Director
Attn: **DIVISION CHIEF**
Nevada Department of Transportation
Division:
1263 South Stewart Street
Carson City, NV 89712
Phone:
Fax:
E-mail:

FOR SERVICE PROVIDER:

NAME
FIRM
MAILING ADDRESS, CITY, STATE, ZIP CODE
PHYSICAL ADDRESS, CITY, STATE, ZIP CODE
Phone:
Fax:
E-mail:

30. This Agreement and the rights and obligations of the Parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The Parties consent to the exclusive jurisdiction of the Nevada state district courts for enforcement of this Agreement.

31. As used herein the term "SERVICE PROVIDER" shall include the plural as well as the singular, and the feminine as well as the masculine.

32. Neither Party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, or accidents, fires, explosions, earthquakes, floods, winds, failure of public transportation, or any other similar serious cause beyond the reasonable control of either Party. In such an event the intervening cause must not be through the fault of the Party asserting such an excuse, and the excused Party is obligated promptly to perform in accordance with the terms of the Agreement after the intervening cause ceases.

33. In connection with the performance of work under this Agreement, the SERVICE PROVIDER agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability, pregnancy, sexual orientation, genetic information (GINA) or gender identity or expression, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation apprenticeship. The SERVICE PROVIDER further agrees to insert this provision in all

subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. **ONLY USE PARAGRAPH FOR STATE FUNDED PROJECTS**

34. The SERVICE PROVIDER shall keep confidential all information, in whatever form, produced, prepared, observed or received by the SERVICE PROVIDER to the extent that such information is confidential by law or otherwise required by this Agreement.

35. Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The Parties **OR** DEPARTMENT will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

36. The SERVICE PROVIDER shall provide a minimum of fifty-one percent (51%) of the combined value of all items of work covered by this Agreement. The SERVICE PROVIDER shall not assign or subcontract any of the work performed under this Agreement without the prior written approval of the DEPARTMENT. The SERVICE PROVIDER shall, prior to obtaining written approval from the DEPARTMENT, provide the DEPARTMENT with a copy of the subcontract or subagreement for said work. Any assignment of rights or delegation of duties under this Agreement, without the prior written consent of the DEPARTMENT, shall be void.

37. The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of the Agreement and this Agreement shall be construed as if such provision did not exist. The unenforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

38. Except as otherwise provided for by law or this Agreement, the rights and remedies of the Parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, the recovery of actual damages and the prevailing party's reasonable attorney's fees and costs.

39. It is specifically agreed between the Parties executing this Agreement that it is not intended by any of the provisions of any part of this Agreement to create in the public or any member thereof a third party beneficiary status hereunder, or to authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damage, or pursuant to the terms or provisions of this Agreement.

40. The Parties hereto represent and warrant that the person executing this Agreement on behalf of each Party has full power and authority to enter into this Agreement and that the Parties are authorized by law to perform the services set forth herein.

41. This Agreement constitutes the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement, no modification or amendment to this Agreement shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto and the Attorney General.