

---

---

# ***Louisiana Transportation Research Center***

---

---

**Final Report 629**

**Assessment of Consultant Plan Development  
and Performance Rating Processes**

by

Ron Hamilton, P.E.  
Caroline Leary  
Bill Dye

***Dye Management Group, Inc.***

---

---



4101 Gourrier Avenue | Baton Rouge, Louisiana 70808  
(225) 767-9131 | (225) 767-9108 fax | [www.ltrc.lsu.edu](http://www.ltrc.lsu.edu)

## TECHNICAL REPORT STANDARD PAGE

---

1. Title and Subtitle  
**Assessment of Consultant Plan Development and Performance Rating Processes**
2. Author(s)  
Ron Hamilton, P.E.  
Caroline Leary  
Bill Dye
3. Performing Organization Name and Address  
Dye Management Group, Inc.  
601 108<sup>th</sup> Ave. N.E., Suite 1900  
Bellevue, WA 98004
4. Sponsoring Agency Name and Address  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, LA 70804-9245
5. Report No.  
**FHWA/LA.17/629**
6. Report Date  
November 2020
7. Performing Organization Code  
LTRC Project Number: 18-6SS  
SIO Number: DOTLTI000224
8. Type of Report and Period Covered  
Final Report  
September 2018 to January 2020
9. No. of Pages  
189 total pages with appendices
10. Supplementary Notes  
Conducted in Cooperation with the U.S. Department of Transportation, Federal Highway Administration
11. Distribution Statement  
Unrestricted. This document is available through the National Technical Information Service, Springfield, VA 21161.
12. Key Words  
Plan development quality control, consultant rating system
13. Abstract

High-quality engineering plans are essential: errors and omissions in design plans can impact public safety, cause construction delays, and cost overruns. The Louisiana Department of Transportation and Development (DOTD) undertook an assessment of its consultant plan development and consultant rating processes to identify opportunities for improving consultant plan quality.

Dye Management Group, Inc. (DMG) assisted DOTD on the project. DMG performed a comprehensive literature search, conducted individual interviews and focus groups with internal and external stakeholders, completed a peer survey and interviews with other state departments of transportation (DOTs), and evaluated DOTD's existing practices for plan development quality control and consultant rating processes.

The assessment found that DOTD’s plan development quality control policies and procedures are in line with prevailing practices in other state DOTs. The opportunity for DOTD to improve upon plan quality lies in more consistent application and stricter adherence to its established policies and procedures.

While consultant rating practices vary considerably among DOTs, DOTD’s policies are in line with established norms and comply with statutory guidelines and regulations. Achieving consistency among raters is an issue most state DOTs struggle with. Opportunities to improve DOTD’s consultant rating system include simplifying the rating process and forms, reducing the number of ratings required, training raters in how to conduct ratings, and requiring better compliance with established DOTD policies and guidelines.

## **Project Review Committee**

Each research project will have an advisory committee appointed by the LTRC Director. The Project Review Committee is responsible for assisting the LTRC Administrator or Manager in the development of acceptable research problem statements, requests for proposals, review of research proposals, oversight of approved research projects, and implementation of findings. LTRC appreciates the dedication of the following Project Review Committee Members in guiding this research study to fruition.

### ***LTRC Administrator/Manager***

Kirk Zeringue  
Special Studies Research Administrator

### ***Members***

Ed Wedge - Deputy Chief Engineer  
Mark Chenevert - Consultant Services Administrator  
David Smith - Road Design Engineer Administrator  
Brian Kendrick - Project Management Division Administrator  
Jerry Pitts - Federal Highway Administration  
Scott Nelson - Federal Highway Administration  
Dennis Passman - ACEC Representative  
Nick Ferlito - ACEC Representative

### ***Directorate Implementation Sponsor***

Christopher P. Knotts, P.E.  
DOTD Chief Engineer



# **Assessment of Consultant Plan Development and Performance Rating Process Final Report**

By  
Ron Hamilton, P.E.  
Principal Investigator

Dye Management Group, Inc.  
601 108<sup>th</sup> Ave. N.E., Suite 1900  
Bellevue, WA 98004

LTRC Project No. 18-6SS  
SIO No. DOTLTI000224

conducted for  
Louisiana Department of Transportation and Development  
Louisiana Transportation Research Center

The contents of this report reflect the views of the author/principal investigator who is responsible for the facts and the accuracy of the data presented herein.

The contents do not necessarily reflect the views or policies of the Louisiana Department of Transportation and Development, the Federal Highway Administration or the Louisiana Transportation Research Center. This report does not constitute a standard, specification, or regulation.

November 2020

## **Abstract**

High-quality engineering plans are essential: errors and omissions in design plans can impact public safety, cause construction delays, and cost overruns. The Louisiana Department of Transportation and Development (DOTD) undertook an assessment of its consultant plan development and consultant past performance rating (CPPR) processes to identify opportunities for improving consultant plan quality.

Dye Management Group, Inc. (DMG) assisted DOTD on the project. DMG performed a comprehensive literature search, conducted individual interviews and focus groups with internal and external stakeholders, completed a best practice survey and interviews with other state departments of transportations (DOTs), and evaluated DOTD's existing practices for plan development quality control and consultant rating processes.

The assessment found that DOTD's plan development quality control policies and procedures are in line with prevailing practices in other state DOTs. The opportunity for DOTD to improve upon plan quality lies in more consistent application and stricter adherence to its established policies and procedures.

While consultant rating practices vary considerably among DOTs, DOTD's policies are in line with established norms and comply with statutory guidelines and regulations. Achieving consistency among raters is an issue within DOTD, just as it is with many state DOTs. Opportunities to improve the CPPR system include simplifying the rating process and forms, reducing the number of ratings required, training raters in how to conduct the rating, and requiring better compliance with established DOTD policies and guidelines

## **Acknowledgments**

Numerous individuals within DOTD's central and district offices made significant contributions to the project. They contributed their time in sitting for interviews, attending focus groups, and providing data and information. Their insights and candid input on plan quality and performance rating issues provided valuable guidance to the project team.

Several members of the American Council of Engineering Companies (ACEC) also contributed to the project through interviews and focus group sessions.

The Federal Highway Administration's (FHWA) Consultant Services Program Manager provided valuable information by soliciting feedback from all of its division offices on best practices of their partner states.



## **Implementation Statement**

This report presents several recommendations for DOTD's consideration. The recommendations address DOTD's plan development quality control and quality assurance (QC/QA) and CPPR processes. The recommendations are DMG's independent assessment of how DOTD might achieve better plan quality through business process improvements that affect both in-house and consultant practices.

Nearly all individuals and organizations associated with DOTD plan development will be affected by implementing the recommendations. A thoughtful and systematic implementation effort will help ensure that DOTD achieves its basic objective of improved consultant plan quality. A recommended implementation approach is described in this section.

### **Management Support**

Any business process improvement initiative must have top management support to be successful. DOTD management has demonstrated its support and recognized the need to improve plan quality, as evidenced by the initiation of this project. As DOTD moves from assessment to implementation, continued support will be required to:

- Communicate top management's sponsorship for the implementation to all stakeholders, both internal and external;
- Provide the human and capital resources required for effective implementation; and
- Actively engage in the implementation effort through oversight, liaison with the project team, and approval of outcomes.

### **Implementation Organization**

Implementation will require a business process improvement champion to lead the effort. As outlined in the Recommendations section of this report, DMG recommends establishing a QC/QA manager position within the new Plan Check Unit. The QC/QA manager could fulfill the champion position and lead the implementation team.

The implementation team should include a steering committee and one or more technical panels. The steering committee should provide overall senior-level project guidance and approve all project outcomes. Senior managers in DOTD and members of the FHWA and

consultant community should be included on the committee. The committee should meet bi-monthly to review project status and approve outcomes.

Technical panel(s) will be required for some implementation activities and may consist of ad hoc members empaneled for specific activities. For instance, a panel to review and update existing consultant rating forms and criteria would be appropriate. The technical panel(s) should comprise members of all engineering disciplines and include central and district members.

Whether DOTD will require outside support for the implementation effort depends on whether there are sufficient in-house resources to commit to the project effort.

## **Implementation Approach**

An implementation plan will be needed for the implementation effort. The specifics of the plan will depend on which activities DOTD adopts from this report. Key elements of the plan are discussed in this section.

## **Project Work Plan**

As with any project, a work plan laying out specific implementation activities will be required. The project can be undertaken on two tracks: (1) QC/QA process improvements, and (2) CPPR process improvements. A project schedule of 18 to 24 months, including training, should be expected. The project activities will include:

- Reviewing current relevant guides – manuals and directives – to ensure there is consistency among them;
- Conducting technical review sessions of the existing guides to identify needed updates and changes;
- Assessing needs and defining requirements for document tracking software such as DrChecks™ in reviewing process improvement opportunities;
- Preparing updated materials and language for existing guides;
- Preparing new guides and directives as needed;
- Preparing training materials; and
- Conducting training.

## **Leveraging Practices from Other States**

As part of the Task 4 Best Practice Review, DMG identified state practices that could potentially have value in DOTD. Two examples are Florida DOT's (FDOT) comment tracking software and Idaho DOT's (IDT) constructability/biddability review process. As part of the implementation effort, it would be appropriate to do a more in-depth analysis as to their potential benefit and value for DOTD. This approach leverages already tested and proven practices from other states, making the implementation process more efficient.

## **Communication**

Effective communication is always important in business process improvement efforts. The implementation effort will be a major project that will affect a large population of DOTD staff. Communication strategies should include:

- Initial communication from the Secretary or Chief Engineer announcing the project and advocating their support;
- Periodic project status communications to staff in newsletters or other channels consistent with DOTD practices;
- Social media communication; and
- Communication on status updates and news posted on the DOTD website.

## **Staff Involvement**

Staff involvement is an important change management strategy. By involving staff, they become part of the solution and buy-in will be more successful.

The project organization includes technical panels to provide subject matter expertise. The use of focus groups in certain project tasks may also be helpful.

## **Training**

Implementation of new business processes in QC/QA and CPPR will require a considerable training effort. Training will be needed for in-house staff, consultants, and Local Public Agencies (LPAs). The training should be tailored to the specific audience. Depending on the

extent of process changes made, the training may be done most effectively in short sessions provided over a longer time period.

# Table of Contents

Technical Report Standard Page .....	1
Project Review Committee.....	1
Assessment of Consultant Plan Development and Performance Rating Process Final Report.....	3
Abstract .....	4
Acknowledgments .....	5
Implementation Statement.....	6
Table of Contents.....	10
List of Tables .....	11
List of Figures .....	12
Introduction .....	13
Objective .....	14
Scope .....	15
Methodology .....	16
Discussion of Results .....	21
Conclusions and Recommendations.....	49
Appendix A: Federal Acquisition Regulations Table 42-1, Evaluation Rating Definitions .....	1
Appendix B: Michigan DOT Common Design Errors/Omissions.....	1
Appendix C: Sample Contractor Performance Rating Forms and Evaluation Criteria...	1
Appendix D: List of Interviewees .....	1
Appendix E: Internal Focus Group Survey Results .....	1
Appendix F: LTRC Consultant Questionnaire For ACEC .....	1
Appendix G: Summary of Peer State Survey .....	1
Appendix H: Federal Highway Administration Best Practices Survey.....	1
Appendix I. Research on DrChecks™ Software Functionality, Benefits, and Cost (Addendum No. 1).....	0

## List of Tables

Table 1. DOTD Rating Form Categories and Criteria .....	39
Table 2. EDSM I.1.1.24 Plan Quality Measures .....	43
Table 3. CPPR Rating Form Scale and Definitions .....	47

## List of Figures

Figure 1. Three-year average overall scores .....	40
Figure 2. Contract management average scores .....	40
Figure 3. Average technical scores by project type.....	41
Figure 4. DOTD – Utah scoring comparison.....	42
Figure 5. Example of potential rating criteria overlap.....	48

# **Introduction**

DOTD has experienced issues with the quality of completed plans submitted by consultants, such as plans that are incomplete, contain errors in quantities, or do not follow DOTD-specific design guidelines. DOTD conducted this project with the basic objective of improving upon plan quality.

This report presents the results of DMG's assessment. Findings from each of the project tasks are summarized, and a set of recommendations for improving consultant plan quality and the CPPR system are offered for DOTD's consideration.



# Objective

DOTD initiated the assessment with the basic objective of identifying opportunities to improve consultant plan quality. DOTD's request for proposal (RFP) identified five specific project objectives:

1. Identify best practices among other state DOTs for the evaluation of consultant plan deliverables.
2. Conduct a thorough review and assessment of the DOTD consultant plan delivery process.
3. Identify best practices among other state DOTs for the evaluation of consultant rating systems.
4. Evaluate the effectiveness and subjectivity of DOTD's current consultant rating system.
5. Provide recommendations for objectives 2 and 4.

The four major tasks described in the Methodology section of this report were built around the project's five specific objectives.

## Scope

The scope of the assessment involved two primary areas of work:

- The quality of consultant developed construction plans and DOTD's QC/QA processes for plan development
- DOTD's CPPR processes

To assess plan quality, the researchers first attempted to quantify the extent of the problem using data from past performance rating scores and construction change orders. The assessment did not look at in-house developed plans. The researchers then conducted an assessment of DOTD's QC/QA processes including organizational responsibilities, policies and procedures, and tools.

To assess the CPPR system, the researchers compared DOTD's practices with other state DOTs and looked at how effectively and consistently DOTD's existing policies and procedures were being applied in practice.

# Methodology

The methodology for completing the assessment is represented by four major tasks, which were built around the specific project objectives. The four tasks are:

- A **comprehensive literature search and review** to identify contemporary relevant literature on consultant plan quality and performance ratings systems
- Individual **interviews and focus groups** with internal and external stakeholders
- A **best practice review** of peer state DOTs to identify best practices that could be implementable in DOTD
- An **evaluation of DOTD's current practices** in relation to established policies, guides, and manuals

## Task 1: Literature Search and Review

DMG searched a large number of websites and databases for available literature on the two primary areas of work—consultant plan quality and performance rating systems—including:

- Federal Highway Administration (FHWA)
- Transportation Research Board (TRB) databases contained in Transportation Research Information Services (TRIS) and Transportation Research International Documents (TRID)
- TRB Annual Meetings, papers, and presentations
- American Association of State Highway and Transportation Officials (AASHTO)
- US Army Corps of Engineers (USACE)
- ISO 9000 Standards for Quality Management
- State DOT websites: Alabama, Arkansas, Colorado, Connecticut, Florida, Georgia, Massachusetts, Mississippi, New Jersey, New Mexico, North Carolina, Texas, Utah, Virginia, and Washington
- General internet search

The literature search was conducted in two phases. The first phase was a comprehensive search of available information sources to identify potentially relevant reports, white papers, webinars, conference presentations, and other literature. High-level reviews of the documents were initially performed to determine their content and assess their relevance and usefulness.

Next, documents and literature discovered in the first phase were reviewed in more detail to identify information useful to the project, such as:

- Statutes and regulations governing consultant quality control and performance ratings
- Common plan development practices and issues that affect plan quality and potential solutions
- Case examples showing common plan errors
- Consultant rating and evaluation systems, processes, and software
- Contemporary initiatives by state DOTs to improve plan quality or performance rating systems

## **Task 2: Interviews and Focus Groups**

DMG solicited input from many internal and external stakeholders through individual interviews, focus groups, and electronic surveys. The aim was to obtain a broad cross-section of opinions on the issue of consultant plan quality and the CPPR system. Stakeholders were also asked to provide input on potential improvement opportunities for plan quality and consultant ratings.

### **Individual Interviews**

DMG conducted individual interviews with sixteen internal and external stakeholders, including representatives from the ACEC and FHWA. To facilitate the interviews, DMG used standard interview guides, which were tailored based on each internal management level and each external stakeholder's relationship with DOTD.

### **Focus Groups**

DMG conducted four focus group sessions, one each with attendees from ACEC, Districts, Bridge Design, and Road Design. Approximately 40 DOTD and ACEC members participated in the sessions.

To facilitate the sessions, DMG developed an electronic questionnaire to collect input and comments on a standard set of questions pertaining to plan quality and the CPPR system. The sessions also included a free-form discussion to obtain general comments and views from the participants. The results of the three internal focus groups presented a broad cross section of opinions from DOTD managers.

### **Electronic Survey**

Electronic surveys were completed by nine ACEC member firms. The survey contained similar questions as those asked of the internal stakeholders.

### **Task 3: Best Practice Review**

DMG conducted a best practice review of peer state DOTs to identify the state-of-the-practice related to plan development QC/QA and consultant performance rating processes. The review sought to identify best practices that might offer opportunities for implementation in DOTD.

DMG created an online survey form to gather information about current practices and innovative solutions related to the project study areas. Seven state DOTs were initially targeted for the best practice review:

- Alabama
- Arkansas
- Florida
- Georgia
- Mississippi
- Utah
- Washington State

All seven peer states responded to the survey and DMG conducted follow-up telephone interviews with each state. DMG also conducted telephone interviews with three other states and researched the websites of 15 state DOTs.

## **FHWA Survey**

The FHWA Consultant Services Program Manager volunteered to assist with the best practice review by sending a request to all FHWA division offices. The request elicited input from the division offices on the project focus areas. The division offices, in turn, sought input from their partner states.

The FHWA survey resulted in 21 division office responses with the responses compiled and submitted to DMG.

## **Follow-Up Phone Interviews**

DMG conducted telephone interviews with all seven states that participated in the best practice review. The purpose of the follow-up calls was to clarify the state responses and to better understand the details of their processes. DMG also conducted telephone interviews with several of the states that responded to the FHWA request.

## **DOT Website Search**

DMG researched several state DOT websites to review policy and procedures, guidance documents, and evaluation forms pertaining to plan development quality control and consultant performance evaluations that were available online.

# **Task 4: Evaluation of DOTD's Current Practices**

DMG reviewed DOTD's existing policies and procedures for plan development and the CPPR system to assess the following:

- The extent of the plan quality problem;
- Actual DOTD practices compared to established policies, directives, and guides;
- Comparison of DOTD practices with other states; and
- Potential business process improvement opportunities.

To complete the evaluation, DMG reviewed current DOTD manuals, guides, and directives to understand DOTD's documented policies and procedures. The researchers conducted process review sessions with the bridge, roadway, and traffic divisions to see how the policies and procedures are applied and followed. The researchers also

conducted a review session with ACEC members to obtain their perspective of DOTD processes.

## Discussion of Results

The project results are presented in this section and are organized around each of the four major project tasks.

### Task 1: Literature Search and Review

The literature search did not find an exhaustive body of literature directly related to plan quality or performance rating systems. There is a considerable volume of literature addressing errors and omissions (E&O) on consultant-prepared plans, however, primarily dealing with how to assign E&O responsibility, determine cost implications, and establish restitution. It does not pertain directly to the scope of the DOTD assessment but does touch on the role of plan quality in the E&O process.

Two NCHRP reports, discussed below, provided information pertinent to the assessment. A few TRB Annual Meeting presentations were found on indirectly related topics, but they did not contain substantive materials of value to the assessment.

A search of 15 state DOT websites did not turn up any reports of studies on plan quality or the effectiveness of performance rating systems. However, all states have documented QC/QA policies and procedures for plan development, and all but one had documented procedures for consultant ratings. There appears to be considerable variation among the states in the level of detail and sophistication of the programs.

### Governing Statutes and Regulations

There are a substantial number of federal and Louisiana laws and regulations dealing with how state agencies procure consultant services and manage consultant contracts. A discussion of key statutes and regulations follows.

**Federal Statutes.** Federal statutes governing the procurement and management of consultant services are contained in Title 23 – Highways, and Title 40 – Public Buildings, Property, and Works. Chapter 11 of Title 40, commonly known as the Brooks Act, requires that selection of consultants be based on, among other criteria, “performance data on file with the agency.” The statutes do not specify the process or methods for measuring performance, only that agencies must maintain such performance data.

The US Code of Federal Regulations (CFR) codifies the administrative rules promulgated by federal agencies to comply with the federal statutes. Two sections of the CFR



significant to consultant contract management and performance ratings are contained in 23 CFR 172 and 48 CFR 42. Selected relevant excerpts follow.

### **23 CFR 172.5 Program management and oversight**

This section discusses the requirement for written policies and procedures but does not specify the form and content. It does require that they be approved by the FHWA.

*c) Written policies and procedures. The contracting agency **shall prepare and maintain written policies and procedures** for the procurement, management, and administration of engineering and design related consultant services. The FHWA shall approve the written policies and procedures ... These policies and procedures shall address ... the following items ...*

*(13) Preparing a **consultant's performance evaluation** when services are completed and using such performance data in future evaluation and ranking of consultant to provide similar services. (Emphasis added.)*

### **23 CFR 172.9 Contracts and administration**

This section of the CFR is more specific as to the form and content of consultant performance evaluations.

*(2) The contracting agency shall prepare an evaluation summarizing the consultant's performance on a contract. **The performance evaluation should include, but not be limited to, an assessment of the timely completion of work, adherence to contract scope and budget, and quality of the work conducted.** The contracting agency shall provide the consultant a copy of the performance evaluation and an opportunity to provide written comments to be attached to the evaluation. The contracting agency **should prepare additional interim performance evaluations** based on the scope, complexity, and size of the contract as a means to provide feedback, foster communication, and achieve desired changes or improvements. Completed performance evaluations should be archived for consideration as an element of past performance in the future evaluation of the consultant to provide similar services. (Emphasis added.)*

Note the use of “should” and “shall” in the previous CFR language.

## CFR Title 48, Chapter 1, Federal Acquisition Regulations (FAR)

FAR addresses contractor performance in Part 42 – Contract Administration and Audit Services, as shown in the following excerpts.

*§42.1501(a). Past performance information (including the ratings and supporting narratives) is relevant information, for future source selection purposes, ...*

*§42.1502(a). General. Past performance evaluations shall be prepared at least annually and at the time the work under a contract or order is completed.*

*§42.1502(f). Past performance evaluations shall be prepared for each architect-engineer services contract of \$35,000 or more, and for each architect-engineer services contract that is terminated for default regardless of contract value.*

*§42.1503(b)(2). Evaluation factors for each assessment **shall** include, at a minimum, the following:*

*(i) Technical (**quality** of product or service).*

*(ii) Cost control ...*

*(iii) Schedule/timeliness.*

*(iv) Management or business relations.*

*(v) Small business subcontracting ...*

*(vi) Other ...*

*§42.1503(b)(4). Each factor and subfactor used **shall** be evaluated and a supporting narrative provided. Each evaluation factor, as listed in paragraph (b)(2) of this section, **shall** be rated in accordance with a five-scale rating system (i.e. exceptional, very good, satisfactory, marginal, and unsatisfactory). The ratings and narratives **must** reflect the definitions in the tables 42-1 or 42-2 of this section.*

*§42.1503(d). Agency evaluations of contractor performance ... shall be provided to the contractor as soon as practicable after completion of the evaluation. ... Contractors shall be afforded up to 14 calendar days ... to submit comments, rebutting statements, or additional information. (Emphasis added)*

Again, note the use of “shall” and “must” in the previous regulations. Here, the regulations provide strict guidance on:

- Performance evaluation factors
- The use of a five-point scale
- Evaluation ratings definitions

CFR table 42-1 showing FAR’s rating definitions is contained in Appendix A.

**FHWA Guidance.** FHWA guidance is contained in a document on its website titled *Procurement, Management, and Administration of Engineering and Design Related Services - Questions and Answers*. Only one question was found to be relevant to the DOTD assessment, noted as follows:

Are contracting agencies required to conduct performance evaluations of consulting firms working on FAHP funded engineering and design related services contracts? (Updated 08.01.2016)

*Yes. In accordance with 23 CFR 172.9(d)(2), contracting agencies are required to prepare an evaluation summarizing the consultant’s performance on a contract. The performance evaluation should include, but not be limited to, an assessment of the timely completion of work, adherence to contract scope and budget, and quality of the work conducted. ... Some contracting agencies even perform a construction quality assessment during or after construction to capture the role that the quality of design plans may have in the construction of the project.*

An important note in FHWA’s guidance is that some agencies perform post-construction reviews to assess design plan quality. The FHWA also provides guidance for mega projects over \$500 million in its *Project Management Plan (PMP) Guidance*. PMPs are required by US Code Title 23, §106(h) for projects of this size. That guidance document specifies that all mega projects must have a PMP which contains a formal quality control plan to document, monitor, and control project quality throughout the project life. The guidance does not provide specifics on what constitutes a quality control plan, only that the PMP contain one.

**Louisiana Statutes.** Louisiana statutes covering consultant contract management are contained in Title 48 – Roads, Bridges, and Ferries. The statutes require that consultant past performance be included as part of the selection criteria. Although the statutes do not

specify how past performance is to be measured, they do specify how much weight past performance is to be given, as follows:

**§293. Competitive Selection.**

*A.(1) A point-based rating system based upon the evaluation criteria and weighting factors provided for in this Section shall be used ...*

*B.(1) The general criteria and weighting factors to be used by the evaluation team in evaluating responses to requests for consultant services are as follows:*

*(a) Experience, both firm and individual, key staff personnel, as related to the project under consideration, weighting factors of three and four respectively.*

*(b) Past performance on department projects, weighting factor of six.*

*(c) Current work load, weighting factor of five.*

*(d) Firm size as related to project magnitude, weighting factor of three.*

*(e) Location where work will be performed, weighting factor of four except that a weighting factor of six is used for Urban System projects.*

*(f) Any special evaluation criteria specified in the advertisement required to meet particular project needs. (Emphasis added.)*

This statute places significant emphasis on past performance, evidenced by the fact that it is the highest weighted of all the factors.

RS 48 addresses past performance in relation to potential debarment of consultants, as follows:

**§295.2.C. Causes for debarment.**

*The debarment committee may debar a contractor, subcontractor, consultant, or subconsultant for any of the following causes:*

*(2) Upon a preponderance of the evidence for any of the following purposes:*

*(i) Willful failure to perform in accordance with the terms of one or more contracts.*

(ii) *A history of **failure to perform, or of unsatisfactory performance** of one or more contracts. (Emphasis added)*

## Other Literature

DMG searched for project-relevant literature in the form of reports, white papers, conference presentations (such as at the Transportation Research Board Annual Conference), and other dissertations on the subjects of plan quality control and consultant performance ratings. The most relevant documents are summarized here.

**AASHTO Guide for Consulting Contracting (2008).** AASHTO's *Guide for Consulting Contracting* is a comprehensive reference document for DOTs to organize, develop, and manage a consultant program. It provides guidance on training staff, selecting consultants, and developing and managing consultant contracts. The Guide documents contemporaneous state DOT practices but provides only general guidance with respect to QC/QA and consultant performance rating processes. The Guide provides that:

- A project management system should include a module for monitoring quality.
- The consultant be required to provide documentation of their quality control program prior to notice to proceed.
- For quality assurance purposes, on-site visits by the (DOT's) project manager should be conducted to verify the consultant's use of their quality control program.
- Periodic written evaluations regarding the consultant's performance should be provided.

The Guide does not recommend specific criteria or scoring methods for consultant evaluations. The Guide's appendix contains example consultant evaluation forms in use at the time of publication.

As part of the project to develop the Guide, AASHTO conducted a survey of all state DOTs with questions pertaining to consultant contract management. The questions relevant to the DOTD assessment documented the following DOT practices:

- Four states reported that they do not have a formal consultant performance evaluation process. Most states conduct an evaluation at the completion of the project, although several states also conduct interim evaluations which may be conducted at regular intervals, such as annually, or at project milestones.

- Slightly more than half of the states provide training programs for internal staff on contract management. However, the need for additional training was identified as an important future need as states rely more and more on consultants to perform design work.
- About 60 percent of responding states have training programs for consultants that range from administrative procedures to highly technical courses.

**Witthof, David K., (1999). NCHRP Synthesis of Highway Practice 277, Consultants for DOT Preconstruction Engineering Work, TRB National Research Council, Washington, D.C.** A survey of all state DOTs was performed to synthesize contemporaneous practices related to DOT consultant management. Although the survey is somewhat dated, the findings are still relevant today and align with many of the current issues found in this assessment. Key findings include the following:

- The need for staff training in contract management skills was identified as a key element in successful consultant contract management. About half of the responding states provided structured training, and the remainder said that skills are improved informally or through on-the-job training.
- Liaison activities between state DOTs and consultant organizations, typically local affiliates of ACEC, were reported by 29 out of 33 responding states. The report noted the value of maintaining frequent DOT-consultant liaison activities.
- Many states evaluate consultant performance during the life of a project to provide guidance and feedback to improve work. The reviews may be at regular intervals, like six months or one year, or may be performed at specified project milestones.
- All states performed a consultant evaluation at the completion of a project.
- The following general evaluation criteria were identified in order of the number of responses. Completing work on schedule was the criterion most frequently listed by responders.
  - Timeliness (14)
  - Technical performance (12)
  - Quality of work (10)
  - Cooperation/human relations (10)
  - Administrative performance (8)
  - Budget conformity (4)

- Professionalism (2)
- DBE considerations (2)
- Report quality (1)
- One state routinely schedules a post-evaluation conference rather than simply providing the consultant with a written report.
- Consultants who were surveyed cited the following most critical shortcomings of DOT performance evaluations:
  - Subjectivity of the evaluation process
  - Evidence of negative bias on the part of DOT staff
  - Lack of uniformity among the raters
  - Lack of feedback processes

**Marco, Michael J., (2009). NCHRP Research Report 20-07, Task 225, Best Practices in the Management of Design Errors and Omissions, TRB of the National Academies, Washington, D.C.** This report discusses managing design E&O from initial avoidance through investigation of causes to recovery and restitution. Although the report focuses mainly on E&O, it does provide information on state DOT initiatives to improve plan quality and avoid E&O in the first place. Notable initiatives include the following:

- Alabama DOT plans to involve contractors to a greater extent in reviewing project plans at an early stage to advise on constructability.
- Indiana DOT is improving plan quality and reducing cost overruns by charging consultant designers for E&O.
- The Maine DOT highway program has been reorganized to include a Production Support and Construction Support group that will check plans at different project milestones to eliminate plan errors, evaluate constructability, and look for ways to cut costs.
- Virginia DOT has implemented a new program to reduce the risk of E&O.
- Wisconsin DOT has initiated a constructability review process by encouraging public and private group recommendations.

**Alabama DOT, (2014). Plan Review Submittals and Common Mistakes in Plan Assemblies.** This PowerPoint presentation identified the most common recurring errors in plan development, including:

- Title sheet items
- Index and legend sheets
- Geometrics
- Typical sections
- Quantities
- Plan sheets
- Paving/stripping layout sheets
- Drainage sections
- Sequence of construction and traffic control plans
- Cross sections
- General

One of the critical errors noted by the Alabama DOT was “Comments from prior reviews not addressed and/or completed.”

**Michigan DOT, (2003). Common Design Errors/Omissions.** This document provides another reference identifying common errors in plan development and provides guidance on corrective measures. A listing of the errors is shown in Appendix B.

**Florida DOT, (2006). Quality Control Plan: District IV Transportation Development.** Florida statutes require that the Florida DOT have quality control plans for project development. This document outlines the District Four QC Program. All District Four roadway plans, specifications, and estimates are prepared—either by in-house design managers or consultants—in accordance with a documented quality control plan. Significant elements of the QC plan include the following:

- Phase reviews are performed to allow other District Office units and outside agencies an opportunity to provide input regarding the development of the project and to review the adequacy and completeness of the plans.
- Peer reviews are performed by an engineer or review team not directly associated with the project design team.
- Phase reviews are held at key project milestones, using detailed checklists to aid in checking plan thoroughness and accuracy. (Note: In the telephone interview that



DMG conducted with Florida DOT during this assessment, the DOT said that they discontinued use of checklists.)

- A constructability coordination meeting is required to ensure that the project can be economically built as designed without undue hardship to the contractor or the traveling public.
- A biddability review is conducted to ensure the plans, summary of quantities, computation book, and pay item/general notes are correct and compatible with the project scope.
- Electronic review comment (ERC) software is used to document all engineering reviews.
- Twice each year, a District Construction Review Team evaluates the supplemental agreements generated during the previous six months. This review concentrates on contract changes that result in cost over-runs and increases in construction time. The district uses this information to improve plan quality.

**Texas DOT, (2016). The Impacts of Design Errors and Omissions Change Orders on Highway Projects.** This report, documenting a study of the change orders in Texas DOT projects over eleven years, shows that 31 percent of the total change orders (\$45 million per year, on average) are related to design E&O. The report identifies some patterns, such as particular project types experiencing more change orders than others. It also concluded that estimation and measurement of quantities was one of the major factors contributing to the need for change orders.

### **Search of State DOT Websites**

The assessment team searched the websites of 15 state DOTs to identify pertinent information related to the project, such as:

- Policies and procedures for consultant plan quality control
- Performance rating systems
- Previous reports on consultant plan quality history or ongoing initiatives

All of the states were found to have QC procedures in place for plan development. The level of detail and sophistication of the QC programs appear to vary from basic plan review checklists to full-scale QC/QA programs.

All state DOTs, except one, have consultant performance rating systems as required by federal and state regulations. There is considerable variation among the states in the evaluation factors used and the timing and frequency of the evaluations. Several examples of performance rating forms are shown in Appendix C.

## **Task 2: Stakeholder Interviews and Focus Groups**

This report section summarizes the comments and opinions expressed by the stakeholders in the interviews and focus groups. Appendix D lists the interviewees. Appendix E contains detailed internal staff responses provided in the focus groups. Appendix F contains responses from the electronic survey of ACEC members.

### **Plan Quality**

Stakeholders expressed many positive opinions of DOTD's QC/QA process, including:

- Management's focus and efforts to improve quality in recent years
- The structured approach laid out in DOTD's manuals and guides – multiple checklists and reviews, assignment of responsibilities
- Use of CADconform for consistency in plan preparation
- Improvements in bridge design plans as the result of a rigorous QC/QA requirement

Notwithstanding the many positive opinions, internal DOTD staff perception is that consultant plan quality is a significant issue and that in-house plans are of higher quality than consultant plans. When asked their opinion on a 1 to 5 scale, they rated in-house quality as 4.0 and consultant quality as 2.9.

ACEC members generally consider the quality problem to be minor, although one in five of the responding members felt that the problem was significant. ACEC members believe that consultants are held to higher standards than in-house staff and that many errors are more a case of preference than actual mistakes.

LPA projects appear to be a major source of plan quality errors. LPAs tend not to select the most qualified consultants, and many of the consultants are not experienced in the use of DOTD standards and methods.

**Reasons for Plan Errors.** The stakeholders were asked to identify common reasons why plan errors occur. Unfamiliarity or lack of knowledge of DOTD standards and guidelines was by far the most commonly cited factor. Other major reasons include the following:

- LPA plan errors are high because LPAs do not always select the most qualified consultants.
- There are inconsistencies within DOTD as to how plan checking is performed, comments are assembled and communicated to the consultant, and how comments and responses are tracked.
- Consultant QC/QA processes need to be more rigorous. Several ACEC members felt that DOTD does not regularly provide the hours and fees to perform rigorous QC/QA.
- General inexperience of plan checkers. DOTD is losing design staff.
- Most stakeholders felt there is adequate time in the schedule to perform QC/QA, except when schedules become tight near the project end and QC/QA tasks can suffer.

**Suggestions for Improving Plan Quality.** Asked to identify how DOTD's QC/QA processes and plan quality could be improved, the stakeholders made the following suggestions:

- **Plan-checking unit.** DOTD is already in the process of instituting a Plan Checking Unit to be housed within Consultant Contract Services.
- **QC/QA training.** There is a need for more QC/QA training, especially for junior engineers, to instruct them on how to review plans, spot mistakes, and focus on common plan errors.
- **LPA training.** There is also a need to train LPAs on DOTD design policies, procedures, and standards.
- **Plan review process.** The plan review process needs to be strengthened and standardized on all projects with respect to plan checking, communicating with the consultant, and tracking comments and responses.
- **Electronic comment tracking.** DOTD could benefit from an automated comment tracking application such as DrChecks™, a system used by the US Army Corps of Engineers.
- **Communication.** There is a need for more effective communication between DOTD and consultants. Communication is needed upfront to establish and agree on

expectations. Review of plan comments is also an area where communication could be improved.

- **Post-construction reviews.** Post-construction reviews should become standard practice.
- **Knowledge sharing.** There should be a knowledge sharing forum as a way of transferring knowledge to improve plan quality.

### **Consultant Past Performance Rating System**

Stakeholders said that the lack of rating consistency is the most significant issue related to the CPPR system. This problem is not unique to DOTD, as pointed out in NCHRP Synthesis 277 discussed previously. Peer states also recognized inconsistency as a significant issue, as discussed in the next section of this report.

The lack of consistency comes from the varying interpretations of the rating criteria and scales. Some raters view a score of “3” as good while others view “4” as a good score. There are also inconsistencies in the general ways that the rating process is implemented by the various DOTD units. The inconsistencies include:

- **Differences in when ratings are done.** Different raters use different project milestones; some staff indicated that the ratings may not be completed at all.
- **Timeliness of ratings.** Some raters perform the ratings immediately after the project milestone; for others the rating could be done months afterwards.
- **Verbal feedback.** Some raters regularly meet and discuss the rating with the consultant; most do not.

A number of stakeholders said that the fear of being questioned by upper management causes some raters to not do the rating at all or to give higher ratings than merited. Although none of the stakeholders could cite an incident where raters were forced to change their ratings, the raters’ fear of being questioned is common.

Generally, ACEC members tend to feel that DOTD is overly harsh in their ratings. Some members feel that there is bias against consultants, which causes the ratings to be punitive.

The current rating forms do not provide measures that allow for project complexity. Some stakeholders said that they intuitively consider project complexity in their determination of consultant performance.

**Suggestions for Improving the CPPR.** Stakeholders were asked to provide their opinions on how to improve the CPPR system. The most common responses include the following:

- Provide more training on how to interpret the rating criteria.
- Make the rating criteria more objective and less subjective to improve consistency.
- Require that ratings be done in a timely manner in line with DOTD policy.
- Require a face-to-face meeting with DOTD and the consultant to review the rating.
- Strengthen the rating process and make it standard practice for:
  - Milestones that require ratings
  - Timeliness of ratings
  - DOTD-consultant communication
- Create a system to alert project managers and task managers when ratings are due. (Technical Services indicated that they are working on this.)
- Simplify the rating form.
- Make post-construction reviews a standard part of the consultant rating process.

### **Task 3: Best Practice Review**

Three overarching themes emerged from the best practice review:

- All state DOTs employ QC/QA programs for consultant (and in-house) plan development. To a large extent, the plan QC process is uniform among the states, such as when phase reviews are conducted, how checklists are used, and how comments are logged and tracked. The biggest differences in DOT practices are in the sophistication and level of detail in preparing and executing a formal and documented QC/QA plan for consultant projects.
- Reasons for plan errors are similar among the states and generally align with the reasons noted in the DOTD stakeholder interviews. Most states said that lack of experience and knowledge of DOT standards and processes was the biggest reason for errors.

- There is considerable variation in DOT practices related to consultant performance rating systems. All states except one conduct consultant performance ratings; however, each state has its own unique rating criteria and scales.

Full responses from the peer state survey are contained Appendix G. Documentation of responses in the FHWA survey of regional offices are contained in Appendix H. The following are key findings from the best practice review.

### **Consultant Plan Quality**

When asked to characterize the problem of consultant plan quality in their agencies, none of the seven peer states said the problem was significant to warrant action; however, two characterized it as “considerable.” Similar to findings from the stakeholder interviews in Task 3, lack of knowledge and experience with DOT standards and methods was identified as the major reason for errors.

The types of errors that commonly occur in plan development were also similar to those found in DOTD and include:

- Quantities not matching throughout the plans
- Cross sections not being checked for constructability
- Maintenance of traffic issues
- Lack of clarity in the plans

The following are some key state practices related to plan development QC/QA.

**Formal QC/QA Plan Requirements.** Florida, Montana, Utah, and Washington require consultants to prepare formal QC/QA plans for all projects except minor overlays. Consultants in Utah must use the department’s QC/QA template unless they receive an exception, which is rare. In Florida, each consultant produces their own QC/QA plan, but the agency is moving toward a standardized QC/QA plan for all consultant projects.

**Separate Fee Proposal Line Items.** Florida, Mississippi, Montana, and Washington provide separate line items in the consultant’s fee proposal for QC/QA hours.

**Plan-checking Units.** Alabama, Mississippi, and Washington have separate plan-checking units. In Alabama, the unit is the eight-person Quality Control Bureau. Mississippi has a two-person plan-checking unit within the roadway division. Washington has plan-checking units in both central and region offices.

**Use of Checklists.** All states except Florida use plan review checklists. Florida stopped using phase or milestone checklists for plan review about five years ago because they felt plan checkers were merely going down the checklist without proper consideration for design needs and concepts. Florida reported that plan quality improved after they stopped using the checklists.

**Electronic Comment Tracking Systems.** Only Florida uses an electronic comment tracking system. The system was developed by the agency about ten years ago and is currently being updated to a more modern platform. Washington previously used an electronic comment tracking system but stopped the practice about ten years ago.

**Plan Review Process.** Most states use an Excel spreadsheet or Word document to log plan review comments. Typically, the log is maintained in the agency's project documentation system, such as ProjectWise®.

**Use of Consultants for Plan Checking.** Alabama, Florida, and Utah use consultants to plan check another consultant's work, mostly due to the shortage of in-house resources.

**Constructability/biddability (C/B) reviews.** All states perform some level of C/B reviews, with most being done informally as part of the plan review process. Idaho is the only state found to have a formal systematic process with a designated C/B team that is engaged at the beginning of the project.

**Post-construction Reviews.** About half of the states perform post-construction reviews to varying degrees of detail. Generally, the reviews are used to improve plan quality through a lessons-learned approach. However, one state uses the review in the consultant rating system.

### **Consultant Past Performance Rating Systems**

Among the states surveyed, there are considerable variations in CPPR systems and practices, including performance ratings processes, rating scales, and rating criteria. The following are key findings related to CPPR.

**When Ratings are Performed.** One state reported that it does not do consultant performance ratings. All other states perform consultant ratings, with the timing for the ratings ranging as follows:

- One evaluation per project, usually at the end, with at least one annually
- One evaluation annually

- Multiple evaluations at key project milestones

All states said that additional evaluations are performed when needed, for example if a consultant is performing poorly.

**Interim Monthly Ratings.** Only Idaho reported the use of interim monthly ratings. Idaho does only one evaluation, at the end of the project, but also requires interim ratings with each monthly invoice. The monthly evaluations are qualitative assessments, with no scores given, of the consultant's progress and acceptability of the work product.

**Meet and Discuss.** Only Florida requires that the project manager meet and discuss the consultant's evaluation prior to entering the score into their evaluation system. All states meet and discuss the evaluations if the consultant requests a review meeting, but they are not done routinely as part of the rating process.

**Ratings Retention Period.** Of the six peer states that responded to the question on retention periods, two keep scores for three years, two keep them for five years, and two keep them for more than five years.

**Rating Scales and Criteria.** All of the states have unique rating criteria and scales, as follows:

- One state does not perform consultant evaluations at all.
- Some states use letter grades instead of numeric scores.
- Some states make only qualitative evaluations (excellent, acceptable, does not meet expectations, etc.) with no numeric scores or grades.
- Most states use a five-point grading scale, although two use a ten-point scale, and one uses half-point increments (e.g., 3.5).

Sample rating forms for several state DOTs are shown in Appendix C.

**Common Consultant Rating Problems.** Common problems identified by the peer states are similar to those identified by DOTD's stakeholders and include:

- Inconsistency among raters in interpreting scale
- Inconsistencies in timing; when or if the ratings are done
- Ratings are too subjective and open to interpretation
- Rating form is too detailed



**Post-construction Reviews.** Wisconsin performs post-construction reviews to assess plan quality. The reviews may result in an adjustment to the consultant's evaluation score.

**Use of Ratings in Selection.** Alabama and Arkansas do not use evaluation scores in the consultant selection process. Both states consider past performance in selection, but the consideration is subjective based on the department's experience with the consultant and first-hand knowledge of the consultant's quality of work.

## **Task 4: Evaluation of DOTD's Current Processes**

The following are major findings from the review of DOTD current practices.

### **Extent of the Plan Quality Problem**

DOTD initiated the assessment because the quality of consultant plans is not at an acceptable level. This opinion was repeated by several DOTD stakeholders during the interviews and focus group sessions. In an attempt to quantify the extent of the plan quality problem, DMG analyzed consultant past performance scores for the 2016–2018 period and construction change order data for 2018.

First, it is necessary to understand DOTD's performance rating system and scales. The performance rating form has six rating categories, each with specific criteria to be rated. There are approximately twenty-five rating forms in use by DOTD, each designed for a specific project type and scope of services performed by the consultant. For example, the Road Design – Controlled Access Facilities form is specific to that type of project.

Table 1 shows the six rating categories on the forms. The first five categories are the same for all project types. The sixth category is specific to the scope of work and generally rates the consultant on technical aspects of the work performed. Some criteria within the six categories are not always applicable and may not be scored.

**Table 1. DOTD Rating Form Categories and Criteria**

Rating Category	Number of Criteria within Category
Contract Management – Administration of the Contract	6
Contract Management – Management of Issues and Resources	5
Contract Management – Communication, Documentation, and Coordination	6
Contract Management – Execution of Work	7
Contract Management – Post-Design Activities	5
Technical Scoring Specific to Scope of Work	5 to 25

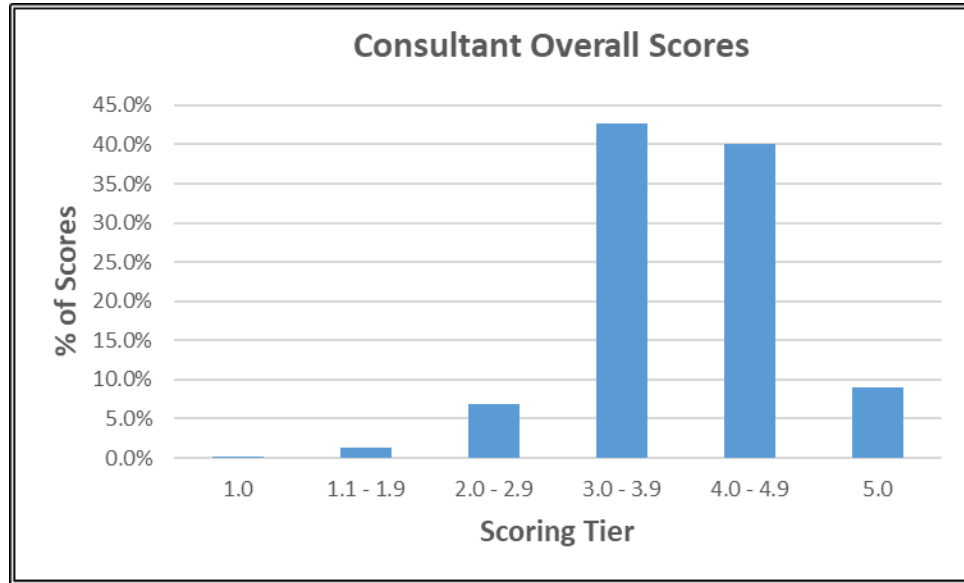
The first five categories rate how well the consultant administers the contract and manages the project. While they are important in rating the consultant’s overall performance, they are generally not a direct measure of plan quality. The technical scores in the last category generally do address plan quality.

**Average Overall Performance Scores.** Figure 1 shows the average overall consultant scores for the three-year period of 2016 – 2018. Analysis of the data shows the following:

- The overall average consultant score was 3.9
- 8.4 percent of the scores were below 3.0
- 49 percent of the scores were 4.0 or higher

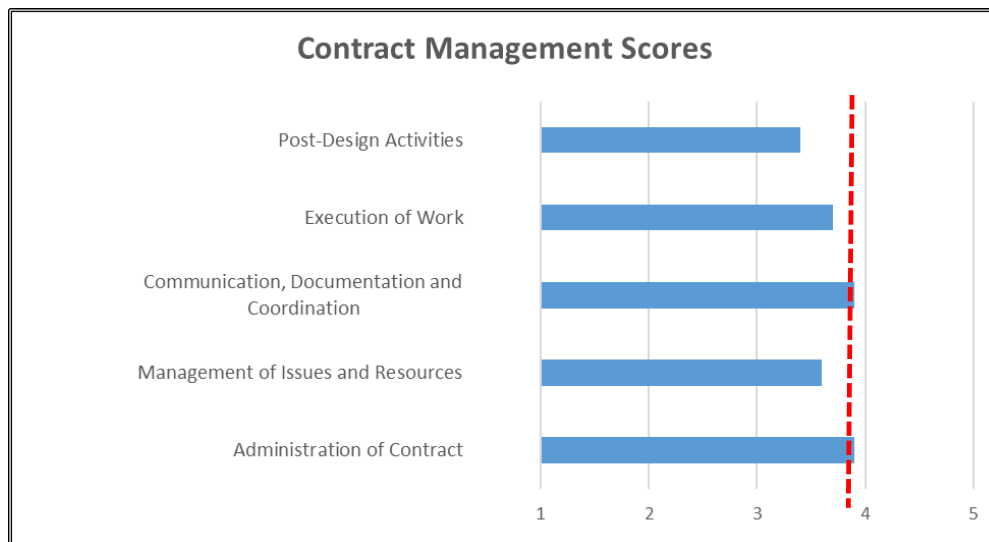
DOTD’s rating form stipulates that “an overall score of 3 is considered satisfactory performance” and a score of 4 or better is “above satisfactory performance.” Given that only 8.4 percent of the scores are below 3.0 and that nearly half of the scores are “above satisfactory,” the analysis seems to indicate that overall consultant performance is generally good.

**Figure 1. Three-year average overall scores**



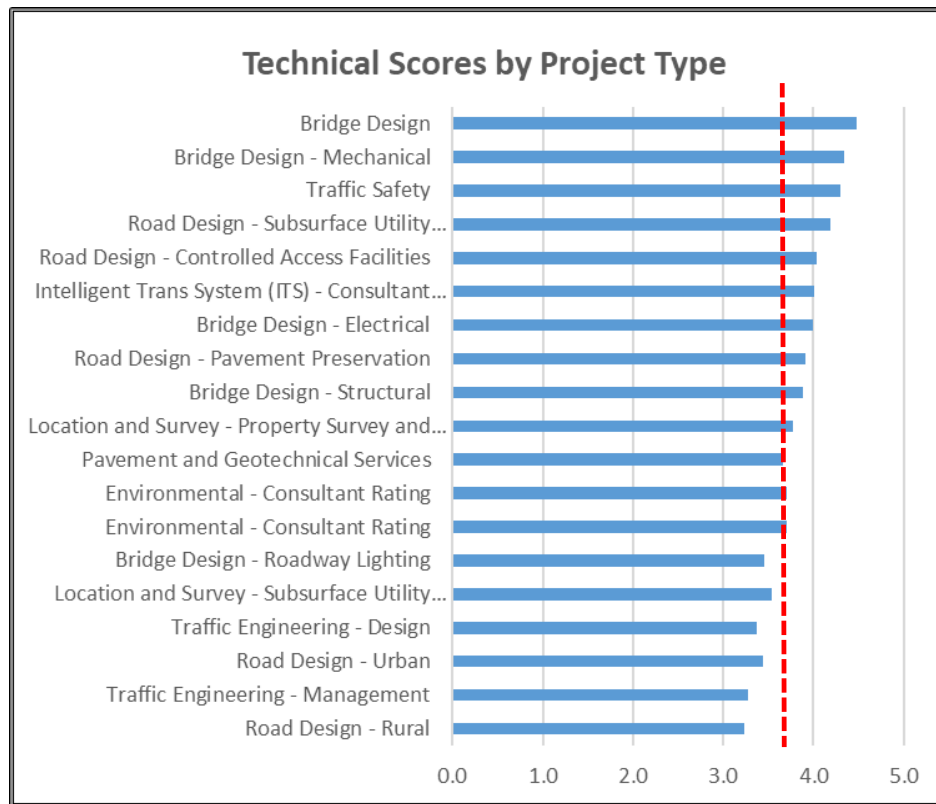
**Average Contract Management Scores.** Because the overall score might not be a direct representation of plan quality, DMG analyzed the scores in each of the rating categories to better understand the scoring composition. Figure 2 shows the contract management scores. With average scores of 3.9, the scores represent generally good performance. Post-design activities received the lowest ratings with an average score of 3.4.

**Figure 2. Contract management average scores**



**Average Technical Scores.** A similar analysis of the technical scores also shows generally good performance, with an overall average score of 3.7. Figure 3 shows the average scores by project type, or scope of work.

**Figure 3. Average technical scores by project type**



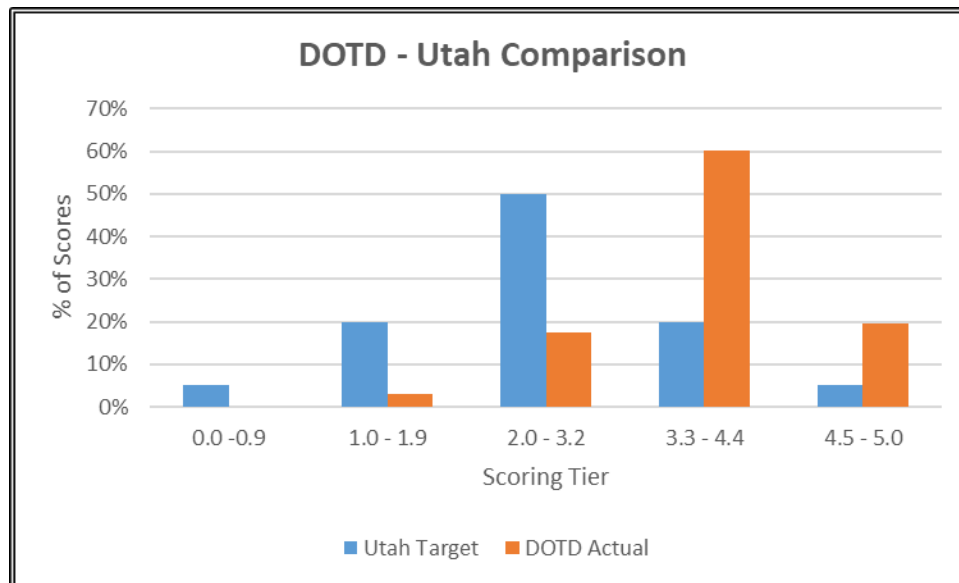
**Scores for QC/QA Plan.** There is one criterion within the Execution of Work category that more directly relates to the consultant’s QC/QA performance. Criterion #6 rates the consultant on the following:

“Developed a Quality Control/Quality Assurance Plan and adhered to the plan throughout the project.”

For this criterion, the average consultant score was 3.3, the second lowest of the 29 criteria making up the contract management scores. This would seem to indicate the need for improvement in this area.

**Comparison with Peer States.** Because DOTs use different criteria and rating scales, it is difficult to compare DOTD’s consultant performance with other states; however, the Utah DOT provides one benchmark that may be useful for comparison. Utah’s guidance to their raters is that, done properly and without bias, consultant scores are expected to fall within a standard normal distribution, or bell-shaped curve. Utah’s 0–10 scale was converted and matched with DOTD’s 1–5 scale. Figure 4 shows that DOTD’s actual scores fall well above the normal distribution of Utah’s expected scores.

**Figure 4. DOTD – Utah scoring comparison**



**Construction Change Order Data.** DMG analyzed construction change order data as another metric for gauging plan quality. From data provided by the Roadway Design Division for 2018, 111 change orders were processed for design errors on consultant prepared plans on forty-four separate projects. The total value of change orders was \$7.5 million, or 1.1 percent of the normal \$690 million annual construction program.

### **DOTD QC/QA Policies and Procedures**

DOTD's QC/QA policies are contained in six manuals and directives dealing with project delivery:

- Engineering Directives and Standards Manual, (EDSM) Sections I.1.1.24 and III.1.1.32
- Construction Plans Quality Control/Quality Assurance Manual (QC/QA Manual)
- Bridge Design and Evaluation Manual (BDEM)
- Consultant Contract Services Manual
- Roadway Design Procedures and Details Manual
- Project Delivery Manual

DMG reviewed each of these documents to identify DOTD's established QC/QA policies and procedures and assessed how they are applied in actual practice. Key findings follow.

**EDSM I.1.1.24, Plan QC/QA of Construction Plans.** This directive establishes DOTD’s basic policy on plan quality. It stipulates five quality measures for plan quality, known as the 5 C’s, as shown in Table 2.

**Table 2. EDSM I.1.1.24 Plan Quality Measures**

Complete	Accurate and thorough representation of existing site, terrain, proposed features, and details of construction
Consistent	Comply with all standards and guidelines set by DOTD
Clear	No design errors or omissions requiring > 1 addendum during advertisement
Correct	No design errors or omissions which will cause the delay, postponement, or cancellation of the letting
Constructible	No more than one change order due to design errors or omissions which individually causes > 3% +/- original amount or contract time > 1 day

The last three criteria establish objective measures for determining plan quality; however, no mechanism is in place to capture the data with which to make the measurements. EDSM I.1.1.24 establishes that the QC/QA Manual as the authoritative reference for plan quality policies and procedures.

Two other significant QC/QA requirements specified in EDSM I.1.1.24 are:

- That the Project Engineer complete a Post Construction Plan Quality Assurance Rating Form to provide feedback to help improve plan quality
- That the Consultant Contracts Service Administrator compile and maintain Plan QA Rating data for stage 3 (design) and stage 5 (construction) for use in future consultant selection considerations

DOTD has not fully implemented either of these policy directives. It appears that the post-construction rating form is seldom completed at the end of the project. Without the form, there is no plan quality rating data for stage 5.

**EDSM III.1.1.32, Constructability/Biddability (C/B) Review.** This directive specifies that the Project Engineer perform a C/B review at the 95 percent final plan phase using DOTD’s C/B review form. The QC/QA Manual stipulates the constructability review is to occur at the 60 percent preliminary plan phase.

The C/B rating form is a detailed form that, if consistently completed, should discover potential problems in either the bid letting or construction phase. From comments received in the interview process, it appears that the C/B review and use of the form are not consistently performed on projects. Introducing the C/B reviews earlier in the design process would be beneficial in improving plan quality.

**QC/QA Manual.** The QC/QA Manual, 2013 edition, describes a thorough QC/QA process for plan development. It also references the 5 C's; however, the definitions are slightly different from EDSM I.1.1.24 and do not contain the objective measures.

The manual specifies that every set of construction plans prepared by or for DOTD are to follow the processes outlined therein. Both in-house and consultant plans must comply with the manual. In practice, however, not all DOTD consultant projects have formal QC/QA plans.

Section 3.2 of the manual clearly lays out specific responsibilities for each person involved in preparing plans. The project manager (PM) is ultimately responsible for each project's adherence to the quality control plan.

Section 4 specifies the quality reviews that are required during plan development. Minimum phase reviews are stipulated, and discipline specific checklists and sufficiency lists are further detailed in separate manuals.

**BDEM.** Chapter 3 of the BDEM outlines a comprehensive QC/QA plan for bridge design projects. The plan supplements the QC/QA Manual and is based on the FHWA/AASHTO guidance document for bridge plan. Chapter 3 establishes the minimum requirements that must be implemented on all projects. Consultants are expected to add to the minimum requirements as warranted.

**Plan-checking unit.** DOTD has instituted a Plan Checking Unit (PCU) to be housed within the Contract Services Section. The PCU will provide DOTD with focused resources for plan checking and other QC activities. Having a dedicated plan-checking unit is consistent with the practices of many of the DOTs contacted in Task 4.

**Plan review checklists.** DOTD has a comprehensive set of discipline-specific plan review checklists contained in the various project delivery manuals. The checklists are detailed and provide guidance that is especially helpful for less experienced plan checkers. In accordance with the QC/QA Manual, the checklists should not be considered as including all items for a review but rather should be used as a guide.

As found in the Task 4 best practice review, some DOTs believe that the use of a checklist tends to focus the plan checker on only the checklist items. More appropriately, the plan checker should be looking at the plans from a broader perspective, focusing on design concepts and purpose, plan clarity, and best engineering practices. While the use of checklists is common practice in state DOTs, some DOTD staff feel that the checklists do not always improve quality and that more training on plan checking is needed.

**Plan Review Comments, Tracking, and Responses.** There are considerable variations in methods used by DOTD PMs and task managers to record, assemble, track, and monitor plan review comments and responses.

Sometimes the comments are funneled through the PM but in some cases they go directly to the consultant. There are also inconsistencies in how consultants respond and how the responses are handled. If a comment is significant or unclear, the response to an individual comment may be returned promptly by the consultant. More commonly, the consultant provides responses with the next plan submittal.

No comment tracking software is used by DOTD. Comments may be made by plan markups, written as a memo or email, or contained in spreadsheets. Bluebeam® is used by some PMs for tracking comments and responses, but its use is not widespread.

**QC/QA Training.** Most of DOTD’s QC/QA training is through an on-the-job approach with senior staff mentoring new and younger staff. The Traffic Division has implemented training courses for some of their consultant services. DOTD could benefit from more QC/QA training, including training in plan checking.

**Process Improvement Guidelines.** The QC/QA Manual specifies that DOTD will implement processes to help improve the “quality and accuracy of construction plans.” Those processes include:

1. The project engineer is required to prepare a post-construction checklist to provide feedback to the PM to serve as “lessons learned to the designer” and “to be considered in the final rating of consultant designed plans.”
2. The construction section should “schedule a semiannual construction feedback meeting with the design sections.”
3. The design section will establish a plan change review committee to hold monthly meeting review recent plan changes.

Items 1 and 2 are not accomplished consistently or on a formal basis. If formally implemented, these processes would help improve plan quality.



For item 3, the Roadway Design Section holds monthly meetings to review change orders. This meeting provides an effective forum for identifying potential improvements in plan quality.

### **DOTD Consultant Past Performance Rating Processes**

DOTD's CPPR system is used to rate consultant performance on the various types of services and scopes of work provided to DOTD. The ratings are used as one factor in selecting consultants for future work. The following presents the key findings from the evaluation of DOTD's CPPR processes.

**Need for Manuals and Guides for Raters.** EDSM I.1.1.24 and the *Consultant Contract Services Manual* provide the basic policies and directives for completing consultant ratings. These documents specify when, but not how, the ratings are to be completed. The rating form itself has some minimal guidance, but beyond it there is little guidance to help the rater. A formal guidance document for the CPPR system and processes would help improve the rating process and result in more consistency among the raters.

**When Ratings are Performed.** The *Consultant Contract Services Manual* stipulates that performance ratings are to be completed "at major milestones and/or deliverables as identified at the project kickoff meeting..." From the interviews and focus groups, there is considerable variation among PMs and task managers as to when or if the ratings are done. A number of staff indicated that they do not complete the ratings at all.

Most DOTD staff interpret "major milestones" to generally coincide with major phase submittals; e.g., 30 percent, 60 percent, 90 percent preliminary and final phases. Given that the ratings are frequently not done at all, it may be more effective to reduce the number of ratings required and then compel DOTD staff to complete them in line with established policies.

DOTD has begun work on an electronic notification system to alert PMs and task managers when ratings are due. The system should improve compliance with completing the ratings when they are required.

The timing of the ratings varies, with some PMs completing the ratings immediately after the milestone and others waiting weeks before completing them. There is no guidance specifying how soon the ratings should be completed after a major milestone. To be most effective, the ratings should be done very soon after the milestone so that any deficiencies in the consultant performance can be addressed. The consultant could then take immediate steps to rectify the deficiencies.

**Interpretation of Rating Criteria and Scales.** The CPPR’s 5-point scale and definitions for each score are shown in Table 3.

**Table 3. CPPR Rating Form Scale and Definitions**

Scale	Performance Rating	Requirements
5	Outstanding	Consistently exceeded expectations
4	Above Satisfactory	Often exceeded expectations
3	Satisfactory	Met expectations
2	Marginal	Occasionally below expectations
1	Unacceptable	Consistently below expectations

The rating criteria are subjective evaluations, which leaves them open to interpretation. Throughout the Task 3 interviews, stakeholders regularly identified inconsistencies in interpreting the rating scales as a major issue with the CPPR process.

As mentioned previously, the 5 C’s outlined in EDSM I.1.1.24 provide some objective measures of plan quality. These could be expanded upon and added to the rating criteria to make the ratings more objective.

A CPPR guide that includes expanded definitions of the rating scales with guidance on how to determine the proper score would be beneficial to the rater and help to ensure more uniformity.

**Rating Form.** As shown in Table 1, the consultant rating form has 29 criteria for rating a consultant’s contract management performance. Not all 29 are applicable on all projects. The number of criteria for rating a consultant’s technical performance ranges from approximately five to 25 criteria depending on the type of project or scope of services. In total, there are approximately 34 to 54 potential criteria that could be rated. The number of criteria on the DOTD form was among the highest found in other states in the Task 4 best practice review.

A review of the individual criteria shows overlap in some areas. Figure 4 illustrates an example. Under the Communication, Documentation and Coordination category, criterion #1 rates how the consultant “Provided the necessary information...” This requirement could be interpreted to include project status reports, which is also called for in criterion #4 of Execution of Work.

Figure 5. Example of potential rating criteria overlap

Contract Management - Communicaton, Documentation and Coordination		1	2	3	4	5	N/A
1	Provided the necessary project information to the Department and all project stakeholders in a timely manner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contract Management - Execution of Work		1	2	3	4	5	N/A
4	Provide project status updates in a timely manner,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

There are other examples within the form where potential overlap of the criteria occurs. Simplifying the rating form would improve the rating process while maintaining an effective measure of consultant performance.

**Training for Consultant Ratings.** Currently, there is no formal training on completing the consultant rating form. DOTD should develop such training and provide it to internal staff and consultants.

**Post-Construction Reviews.** As discussed previously, DOTD’s policies stipulate that post-construction reviews be conducted and that they become part of the consultant’s rating. This policy has not been implemented.

**Project Complexity.** The consultant rating form does not directly address project complexity, although to some degree complexity is implicit in that the technical criteria section of the form is specific to the type of project and scope of work. Some states were found to have a complexity rating on their forms, but it is not certain how the complexity is calculated into the consultant’s performance score. Some DOTD staff say that they intuitively incorporate project complexity when considering how to rate the consultant.

**Weighting of Rating Criteria.** Currently, DOTD’s rating criteria do not contain weighting factors. Several of the state DOTs surveyed in the best practice review include weighting factors in their scoring system, with “quality of work” typically given the highest weight. In any scoring system, the weighting of factors can often provide a better indication of performance, and DOTD’s scoring system could benefit from including such factors.

## **Conclusions and Recommendations**

The conclusions and recommendations presented in this section are based on the assessment results and the findings outlined in the preceding chapter. They present DMG's independent assessment of ways to improve business processes that will ultimately lead to the assessment's basic objective of improved plan quality. The recommendations are offered for DOTD's consideration with the recognition that DOTD will need to consider each within the broader context of its operating environment and organizational framework.

### **Conclusions**

#### **Plan Quality**

The quality of construction plans is difficult to quantify in objective terms. While there is a general perception within DOTD that consultant plan quality is substandard, the analysis of consultant past performance scores indicate that consultant performance is generally good, with an overall average score of 3.9.

Ultimately, the construction plans prepared by or for DOTD are of high quality before they are advertised for bids. Staff assessments of quality may not lie in the actual quality of the final plans developed but rather in the amount of "hand holding" that many within DOTD feel is required. "Design by comment" was a common opinion expressed by many.

Objective measures are needed to truly assess the level of plan quality. Objective measures could be established for specified deliverables and be included as part of the consultant performance ratings.

#### **QC/QA Processes**

DOTD's QC/QA program is in line with prevailing DOT practices. DOTD's QC/QA policies and standard procedures are well defined and documented, and responsibilities are clearly delineated.

While policies and procedures are well defined, they are not uniformly implemented across DOTD. To improve plan quality, DOTD will need to review and update some of

its existing policies and procedures, implement some new business processes, train staff, and then compel compliance with established policies and procedures.

### **Consultant Past Performance Rating System**

Although each state generally has some unique evaluation criteria and rating scales, DOTD's CPPR system and processes are in line with other state practices.

Inconsistencies among DOTD staff in interpreting performance scales is the major weakness in current practices. Simplifying the rating form and providing additional written instructions could help improve consistency.

## **Recommendations**

The recommendations presented below are numbered in order of general priority and are grouped by the two key work areas of plan quality and CPPR.

### **Plan Quality**

#### **1. Create a plan development Quality Assurance Manager position within the new Plan Checking Unit (PCU).**

This position could potentially be the leader of the PCU, depending on how the leader's duties and responsibilities are ultimately defined and how PCU is staffed. This recommendation does not envision the QA Manager in a plan checking role. Initially, he/she would be responsible for leading the implementation of any recommendations adopted from this assessment. In the long term, the position would have four primary roles:

- Foremost, acting in a business process improvement capacity to improve QC/QA processes, systems, and technology. In this capacity, he/she would strive for continuous quality improvement by analyzing existing practices, identifying opportunities, and implementing best practices.
- Training in-house staff, consultants, LPAs, and others in QC/QA.
- Conducting QA audits on in-house and consultant projects to ensure compliance.
- Assuming the responsibility for monthly change order reviews now being performed by the Road Design Section.

DOTD will need to flesh out specific duties for this position consistent with the makeup of the PCU.

**2. Review all DOTD manuals, directives, policy guides, and other documents dealing with QC/QA for consistency and needed updates.**

There were inconsistencies noted among some of DOTD manuals dealing with QC/QA, and some of the practices required by the manuals have not been implemented or are applied inconsistently. There is a need to consider whether the standard practices contained in the documents remain applicable. Depending on the recommendations adopted from this assessment, it will be necessary to update the QC/QA Manual to include newly adopted processes.

**3. Implement standard practices for plan review comments and responses.**

This effort should be undertaken in conjunction with recommendation number 2. The process used for plan review comments and responses is where most QC/QA inconsistencies occur within DOTD. Standard procedures for plan review comments and responses should be updated as needed and included in DOTD's QC/QA policies and procedures manuals. DMG's recommendations for standardized processes include the following:

- DOTD comments should always be funneled through the PM who would assemble them into a consistent format, review them for duplication, resolve any ambiguities, and reconcile any internal conflicts before sending them to the consultant.
- The consultant's responses should be returned to DOTD in a standard format and in a timely manner. The response should not wait until the next submission. If considerable time elapses between submittals, design team staff changes could occur, and the institutional memory and perspective of the comments could be lost.
- Meetings between DOTD and the consultant should take place to review the comments, even if there is no disagreement or lack of understanding the comment by the consultant. The meetings may require face-to-face conferences for major deliverables. Conference calls may be appropriate in cases when there are few comments or when the comments are simple and straightforward. There should be minutes of the meetings, with decisions and action items documented.
- All comments, responses, and meeting minutes would become part of the project records and subject to QA audits.

- Standard software or applications such as Bluebeam, Word, or Excel should be used consistently by the PMs.

Based on the feedback received at a presentation of these recommendations to DOTD's Executive Leadership near the conclusion of the project, it was determined that additional research into the Design Review and Checking System (DrChecks™) plan review comment tracking software would be beneficial. The results of that additional research can be found in Appendix I which discusses DrChecks™ functionality, benefits, and cost to help DOTD determine how the software might lead to improved consultant plan quality.

#### **4. Provide QC/QA training.**

A considerable QC/QA training effort will be needed to improve consistency and should involve in-house staff, consultants, and LPAs. The training should take place after recommendations 2 and 3 have been completed. Plan checking training should be included.

#### **5. Require that consultants prepare formal QC/QA plans for all projects of a specified size.**

All consultant design projects with a specified fee amount, or larger, should have a formal QC/QA plan. Per FAR regulations, consultant performance ratings are required for consultant fees of \$35,000 or higher and could be used as a benchmark for determining when the formal QC/QA plans are required. The QC/QA Manual lays out specific requirements that should be incorporated into QC/QA plans prepared by the consultant. Chapter 3 of the BDEM contains a template specifying minimum elements for bridge QC/QA plan development which could be the basis for use department wide. Any new processes adopted from this assessment would need to be incorporated in the QC/QA plans.

#### **6. Consider creating a constructability-biddability (C/B) review team to engage early in the project development phases.**

Early involvement of a C/B review team would be beneficial in improving plan quality.

#### **7. Strengthen the post-construction review process.**

A formalized post-construction review process would help improve plan quality by reviewing the project generally and change orders specifically. A review meeting attended by the project engineer, design PM, design team, and consultant could identify problem areas and, as part of the continuous improvement process, provide feedback to

improve construction plans through a lessons-learned approach. The post-construction review could also be used as part of the plan quality rating in the CPPR.

#### **8. Consider adding QC/QA line items within the consultant's fee proposal.**

Adding QC/QA line items should not cause an increase in hours in the fee proposal as consultants routinely incorporate QC/QA efforts into their hours and fees. Identifying the QC/QA hours separately would: (1) focus the consultant's attention on the need to accomplish the QC/QA tasks; (2) allow DOTD to track the hours actually used by the consultant; and (3) on very complex design problems or projects, allow DOTD and the consultant to negotiate an appropriate level of effort commensurate with the complexity of the project or task.

#### **9. Conduct an annual design conference.**

An annual conference focused specifically design plan quality would incorporate and replace the semiannual construction feedback meeting required by Section 6.3 of the QC/QA Manual. It should include design and construction personnel from DOTD and consultants. It would serve as a knowledge transfer medium to allow senior staff to impart technical experience and expertise to junior staff. It could also be part of the broader QC/QA training program.

DOTD is already conducting annual transportation conferences and other design review forums. It is possible that the conference proposed here could be held in conjunction with existing conferences.

### **Consultant Past Performance Rating System**

#### **1. Prepare a CPPR guide.**

The CPPR guide should outline DOTD's policies and standard procedures for completing performance ratings. It would address when ratings are to be performed, responsibilities, how to review ratings with the consultant, and the overall rating process.

It should also provide guidance on the rating scales as to what constitutes "outstanding performance," "satisfactory performance," etc. The FAR rating definitions shown in Appendix A could serve as a reference. Definitions from other states are also provided in Appendix C.

#### **2. Provide CPPR training.**



To improve consistency, DOTD should develop and provide training for raters in the CPPR process, including how to gauge the consultant's performance and how to determine the proper rating.

### **3. Reduce the number of ratings.**

The Consultant Contract Services Manual specifies that performance ratings are required at "major milestones and/or deliverables." Because the ratings are not performed consistently, or not at all, the number of ratings could be reduced while increasing the effectiveness of the CPPR through improved consistency.

DMG recommends that two ratings be performed: (1) at 100 percent preliminary plans, and (2) at 100% percent final plans, with at least one annually. Supplemental ratings could be done if needed. After reducing the frequency of ratings, DOTD should monitor compliance to ensure that PMs and task managers complete ratings in a timely manner.

Reducing to two ratings, with at least one annually, would be in line with prevailing state DOT practices and would comply with federal statutes and regulations.

### **4. Reduce the number of rating criteria.**

DOTD has a very detailed rating form compared to other state DOT practices. As noted previously, there are instances where the criteria overlap. The rating form could be simplified without reducing its effectiveness.

If adopted, implementing this recommendation will be a major activity in the implementation work plan. A technical committee of senior staff would be needed to review and update the criteria.

### **5. Develop objective measures of plan quality.**

This effort should be undertaken in conjunction with recommendation 4. Currently, the CPPR measures a consultant's adherence to processes. For example, the consultant is rated on how well the firm developed and executed a QC/QA plan, or on adherence to specific design standards and guides. These criteria measure compliance with a process, but do not directly measure plan quality.

EDSM I.1.1.24 provides for objective measures of plan quality through the 5 C's, which could be formally adopted and expanded. With objective measures, DOTD would identify common errors and monitor whether plan quality is improving over time, a key element of business process improvement.

## **6. Identify performance expectations at the project kickoff meeting.**

While there is a need to standardize rating guidelines and train DOTD personnel in interpreting the ratings, there will always be human judgment involved. The project kickoff meeting should include a standard agenda item to discuss DOTD performance expectations. The discussion on expectations should be documented in the kickoff meeting minutes.

## **7. Require DOTD-consultant meeting after each performance rating.**

Both DOTD and consultant stakeholders identified improved communication as a key opportunity to improve plan quality. DOTD-consultant meetings would allow both parties to understand why the consultant received a specific rating. The consultant would be allowed to comment or object, but the responsibility for final rating would continue to lie with the PM.

In line with 23 CFR 172.9(d)(2), this meeting would provide the opportunity for the consultant to provide written comments to be attached to the evaluation.

## **8. Use a notification system.**

DOTD already has an effort underway to provide electronic notification to PMs and task managers when ratings are due. DOTD should proceed as quickly as time permits to bring the notification system online.



## Appendix A: Federal Acquisition Regulations Table 42-1, Evaluation Rating Definitions

Rating	Definition	Note
(a) Exceptional	Performance meets contractual requirements and exceeds many to the Government's benefit. The contractual performance of the element or sub-element being evaluated was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.	To justify an Exceptional rating, identify multiple significant events and state how they were of benefit to the Government. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(b) Very Good	Performance meets contractual requirements and exceeds some to the Government's benefit. The contractual performance of the element or sub-element being evaluated was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	To justify a Very Good rating, identify a significant event and state how it was a benefit to the Government. There should have been no significant weaknesses identified.
(c) Satisfactory	Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	To justify a Satisfactory rating, there should have been only minor problems, or major problems the contractor recovered from without impact to the contract/order. There should have been NO significant weaknesses identified. A fundamental principle of assigning ratings is that contractors will not be evaluated with a rating lower than Satisfactory solely for not performing beyond the requirements of the contract/order.
(d) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being evaluated reflects	To justify Marginal performance, identify a significant event in each category that the contractor had trouble overcoming and state how it impacted the Government. A

Rating	Definition	Note
	a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented	Marginal rating should be supported by referencing the management tool that notified the contractor of the contractual deficiency (e.g., management, quality, safety, or environmental deficiency report or letter).
(e) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective.	To justify an Unsatisfactory rating, identify multiple significant events in each category that the contractor had trouble overcoming and state how it impacted the Government. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating. An Unsatisfactory rating should be supported by referencing the management tools used to notify the contractor of the contractual deficiencies (e.g., management, quality, safety, or environmental deficiency reports, or letters).

# **Appendix B: Michigan DOT Common Design Errors/Omissions**

## **2003-1, Jan. 22, 2003**

### **Title Sheet**

- Physical Reference Numbers must be included in the P.O.B. and P.O.E. stationing blocks along with Control Section Mile Points.
- It is not necessary to list “C” phase on Title/Plan Sheets (i.e., JN 11111C), simply list the “A” phase. However, ROW plans must list the “B” phase.
- List ESALs along with other traffic data. Flexible ESALs for full depth HMA and composite pavements, Rigid ESALs for Concrete pavement.
- Title Sheet map should include Township & Range; e.g., T1N, R1E. The “T1N” goes on the side of the map and the “R1E” goes on the top of the map.
- Make sure stationing difference between P.O.B. and P.O.E. matches the corresponding M.P.s that are listed. If station equations exist they must be shown on the Title Sheet. The length of the project (miles) should be listed just above the upper-left corner of the “Contract For:” box located in the lower-right hand corner of the Title Sheet.

### **Typical Cross Sections - Misc Details**

- Make sure that the grading/earthwork on your project is addressed appropriately; e.g., Excavation, Earth; Roadway Grading, Machine Grading, Intersection Grading, Trenching, etc., and that the Special Provision (if required) clearly states which items of work are included. Typelines should be shown on the Typical indicating lateral pay limits of the specific item being used. Also, a note and leader to the bottom of excavation stating “Grade To This Line, Paid for as pay item name.”
- Driveway widths and types - Detail M openings on commercial drives, Min 30' opening face to face of curb. Dimensions should be shown edge to edge of curb & gutter at the throat.
- Side road approaches - Min 30' width edge to edge for Det III approach.
- Min. ditch width should be 4' for hydraulics, safety, future cleanout and ease of construction.
- When profile cold-milling for cross slope modification, be sure to identify the Cold-Milling Control Point (usually the outside edge of the traveled lane).
- Proposed widenings should be dimensioned from existing edge of pavement that will remain to the proposed edge of metal. Proposed lane widths should be dimensioned above.
- When excavating adjacent to existing pavement, the limits of excavation should be shown at a 1:1 slope from the bottom of existing pavement to remain.
- Circles should be placed at points where proposed cross slope changes.

- A berm should be constructed behind proposed curb and gutter. The berm should be a min. of 2 ft wide, preferably 5-6 ft wide, and may slope either towards the curb and gutter or away (preferably towards), typically at 6%.
- HMA application estimate:
  - Use the proper PG (Performance Grade) number for each mix.
  - Identify the mix(es) that are to be used as HMA Approach in the REMARKS column.
  - Hand Patching, if used, should be listed as an item and the mixture to be used should be listed in the REMARKS column.
  - High Stress mixes are to be used for top and leveling courses only and should be identified as “HMA, (Type), High Stress” in the ITEM column.
  - Where High Stress mixtures are to be used as HMA Approach, top and leveling courses will be paid for as “HMA Approach, High Stress.” Associated base course, if applicable, would be paid for simply as “HMA Approach.”
  - The latest HMA Mixture Selection Guide (dated January, 2002) states that when all of the HMA on a project is High Stress, it should be paid for as standard HMA mixtures listing the High Stress PG number. This has changed and will be reflected in the next version of the Guide. Wherever High Stress mixtures are used they are to be paid for as such.
  - “Bituminous Bond Coat” should be just “Bond Coat.” Don’t change it to “HMA Bond Coat.” The standard cell will be updated to reflect this.

### **Notesheet**

- Fill in the survey data, if applicable, in the upper left corner of the notesheet.
- Make sure the Standard Plan list is up to date. Due to the fact that OECs should now be held 6 months prior to letting and it’s likely that Standard Plans/Special Details will change during that time period, prints of Special Details do not need to be sent in with the OEC package.
- Make sure that any pay items triggered by a FUSP or SS are included.
- Ride Quality is not a Federal participating item. See IM02-22 which can be found on the MDOT website by clicking on “Maps & Publications”>”Publications”>”Highways Instructional Memos.” This should be coded correctly in TrnsPort.
- HMA Quality Initiative quantity should be estimated @ 1 dlr per ton of mix to be tested.
- The item of “Videotaping Sewer and Culv Pipe” should be set up on projects with new storm sewer. See 402.03.K of the 2003 specbook for pipe size limitations.

### **Plan/Profile Sheets**

- Ex/Prop bridge underclearance on profile sheets.

- Pavement widths dimensioned, centerline to edge, at all locations where the width changes. Include stationing at these points.
- Meet minimum sewer and ditch grades.
- List Drainage Structure Cover types.
- List Sidewalk Ramp types, as per the Standard Plan.
- Try to figure out how to maintain traffic first, then do the design.
- Widening should be dimensioned from the existing edge of pavement to remain to the proposed EOM.
- If you can come up with reasonable estimates, it's good to have estimated earthwork quantities to be included in items such as "Roadway Grading" etc. It's better to not give estimates than to guess. This also applies to estimated quantities of each mixture to be paid as HMA Approach.

### **General**

- Breakdown ID summary is not necessary at the Plan Review. A copy of the cost estimate is sufficient.
- It is extremely helpful for OEC review if project documents such as The Plan Review Letter, Design Exceptions, Pavement Design Letter, etc are included. See Requirements for the OEC meeting.
- Copies of FUSPs and SSs do not need to be included in the Plan Review and OEC packages. The checklists will be sufficient. However, a copy of applicable FUSPs and SSs must be available at these meetings in case questions arise.
- Quantity checks between the plans and Transport are essential. Pay items must match Transport EXACTLY. The exception is with pay items like Dr Structure Cover where the number and types of covers can be listed after the pay item in parentheses and in zero line weight. "**Dr Structure Cover** (2G, 4B)."
- Adding items of work to Standard Pay Items by note is to be avoided. All non-standard pay items need a Special Provision.
- When in doubt, check the Design Manual.



# **Appendix C: Sample Contractor Performance Rating Forms and Evaluation Criteria**

This appendix includes rating forms from the following states:

- Alabama
- Colorado
- Georgia
- Idaho
- Massachusetts
- Montana
- New Jersey
- New Mexico
- Virginia
- Utah
- Washington
- Wisconsin

# A. Alabama

Form CE-1 (Revised 7-16-2014)

ALDOT Consultant Evaluation Form

Page 1 of 2

Project Number: \_\_\_\_\_

Description: \_\_\_\_\_

County: \_\_\_\_\_

Consultant: \_\_\_\_\_

Consultant Location: \_\_\_\_\_

Contract ID Number: \_\_\_\_\_

Discipline Filling out Form: \_\_\_\_\_  
(i.e. bridge, consultant management, division, traffic design, etc.)

**Engineering Studies:** Applies (Yes or No): \_\_\_\_\_

ALDOT Discipline Contact: \_\_\_\_\_

	Does Not Apply	Did Not Meet Expectations	Acceptable Work	Exceeded Expectations	Far Exceeded Expectations
Data Collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification of Alternates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refinement of Alternates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparation and presentation of reports and information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Example: Interchange Justification Study)

Comments: \_\_\_\_\_

\_\_\_\_\_

Project manager recommends that this consultant be selected again for similar work (Yes or No): \_\_\_\_\_

**Preliminary Design:** Applies (Yes or No): \_\_\_\_\_

ALDOT Discipline Contact: \_\_\_\_\_

	Does Not Apply	Did Not Meet Expectations	Acceptable Work	Exceeded Expectations	Far Exceeded Expectations
Traffic Analysis, Reports, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification and Presentation of concepts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refinement of Preferred Alternate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presentations to Public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparation and presentation of final reports and deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparation and presentation of bridge TS&Ls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: \_\_\_\_\_

\_\_\_\_\_

Project manager recommends that this consultant be selected again for similar work (Yes or No): \_\_\_\_\_

Form CE-1 (Revised 7-16-2014)

ALDOT Consultant Evaluation Form

Page 2 of 2

**Final Plans:** Applies (Yes or No): \_\_\_\_\_

ALDOT Discipline Contact: \_\_\_\_\_

	Does Not Apply	Did Not Meet Expectations	Acceptable Work	Exceeded Expectations	Far Exceeded Expectations
Geometric Design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic Design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion and Sediment Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quantity Calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30% Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan In Hand Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PS&E Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final Back Check Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Bureau Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Office Engineer (Contract Plans)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bridge Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: \_\_\_\_\_

Project manager recommends that this consultant be selected again for similar work (Yes or No): \_\_\_\_\_

**General:**

ALDOT Discipline Contact: \_\_\_\_\_

	Does Not Apply	Did Not Meet Expectations	Acceptable	Exceeded Expectations	Far Exceeded Expectations
Project Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedule Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordination with ALDOT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsiveness of Consultant Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attention to Details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuity of Consultant Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall opinion: Would you recommend this consultant be hired again for similar type work?

<input type="checkbox"/> Not Recommended	<input type="checkbox"/> Recommend
<input type="checkbox"/> Recommended with Reservations	<input type="checkbox"/> Highly Recommend

Comments: \_\_\_\_\_

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

## B. Colorado Department of Transportation

<b>COLORADO DEPARTMENT OF TRANSPORTATION CONSULTANT PERFORMANCE EVALUATION</b>		Project no.:		Subacct#:
		Project name:		

To: (Appropriate Division Head)		Rating dates:		Item II
Subject: Consultant Performance Evaluation Report		Item I		
		Item III		Item IV
Name of Consultant:		Rating key (see instructions):		
Type of work:		Excellent (E)      Good (G)      Poor (P) Very Good (VG)      Acceptable (A)      Not Applicable (NA)		

	CONTRACT PHASE	PRECONSTRUCTION PHASE		CONSTRUCTION PHASE
FACTOR	ITEM I	ITEM II	ITEM III	ITEM IV
A. Knowledge of department needs				
B. Cooperation with department, public, other agencies				
C. Adequacy of personnel, supervision and management				
D. Prosecution and submission of work				
E. Clarity of work				
F. Support calculations, data, reports				
G. Completion of work within contract budget				
H. Accurate billing records				
I. Overall quality, accuracy and competence				
J. Prudent plans/creative design				
<b>Rater:</b> Project Manager/Engineer (signature required)				
<b>Reviewer:</b> Preconstruction/ Construction Engineer (signature required)				
Region Engineer/Branch Manager				

**Remarks:**

# INSTRUCTIONS FOR CONSULTANT PERFORMANCE EVALUATION REPORT

## A. Purpose of evaluation:

The completed evaluation report of a consultant's performance will be used as input for selection of the consultant for future assignments.

## B. Rating procedure:

The raters and the time periods in which evaluations are performed shall be as follows:

### Item I - Contract Phase

The rater will be the contract administrator (Consultant Management Unit) and/or the Project Manager.

The rating will be performed after the consultant's work has been accepted or at appropriate contract stages. The rating will be reviewed by the Preconstruction Engineer, Region Transportation Director,

Branch Head or other official directly responsible.

### Item II - Preconstruction Phase (Preliminary Engineering)

The rater will be the Project Manager or other official directly responsible for incorporating the consultants work into Department plans, reports, etc. The rating will be performed promptly after the consultant's work has been used (ie., after the FIR). The rating will be reviewed by the Preconstruction Engineer, Region Transportation Director, Branch Head or other official directly responsible.

### Item III - Preconstruction Phase (Final Design)

The rating will be completed and reviewed by the same individuals as indicated for Item II and as promptly as practical after the FOR.

### Item IV - Construction Phase

The rater will be the Project Engineer or other official directly responsible for completing the construction project on which the consultant's work was used. The rating will be performed promptly after construction of the project has been completed. The rating will be reviewed by the Construction Engineer, Region Transportation Director or other official directly responsible.

## C. Basis of ratings:

Ratings of the consultant's performance will be accomplished by marking poor, acceptable, good, very good, excellent or not applicable for each of the indicated factors on the evaluation report. **All poor and excellent evaluations for any factor shall have an explanation in the "Remarks" section provided on the form.**

The keys to the various rating levels are as follows:

Excellent (E)	Consultant <u>consistently exceeded</u> expectations
Very Good (VG)	Consultant <u>frequently exceeded</u> expectations
Good (G)	Consultant <u>consistently met</u> expectations
Acceptable (A)	Consultant <u>occasionally failed</u> to meet expectations
Poor (P)	Consultant <u>consistently failed</u> to meet expectations
Not Applicable (NA)	As indicated on form or as determined by rater

## RATING FACTORS

Ratings for each factor should be based on how often, how quickly and to what degree the following criteria were met by the consultant during the performance of the work.

### Factor A - Knowledge of Department needs

- \* Consultant was knowledgeable and fulfilled his contractual obligation with the Department.
- \* Consultant maintained the scope of services sought by the Department.
- \* Consultant was familiar with the Department's policies and procedures.
- \* Consultant maintained the flexibility necessary for meeting the changing Departmental needs.
- \* Consultant served the Department, but was not subservient to it. This means that occasionally the Consultant must give the Department unpleasant news such as: costs of a design concept exceed the budget.

### Factor B - Cooperation with Department, Public, Other Agencies

- \* Consultant displayed a willingness to work as a team member in the development of a project. Liaison with the Department's Project Manager was undertaken at the earliest possible time (prior to the signing of contract documents if possible) ensuring a common understanding of the scope of the project as well as conformity with the Department's standards, practices, accuracy requirements, format, computer data compatibility, survey practices and such other items as the Project Manager considered to be critical to the project.
- \* Consultant mediated disagreements between disciplines and/or agencies always in the best interest of the project.
- \* Consultant was accessible to Department staff and responsive to their questions, needs and concerns.
- \* Consultant maintained working relationship with the Department and other agencies.
- \* Consultant participated in community workshops/public meetings and responded to citizens/groups seeking information or assistance.

## RATING FACTORS (continued)

### Factor C - Adequacy of Personnel, Supervision and Management

- \* Consultant did not over extend their human resources to where their personnel were inadequate to maintain schedules.
- \* The work was accomplished at the lowest possible level without sacrificing quality of the design.
- \* The work was checked prior to submission to the Department.
- \* Consultant knew when to take charge and utilized the authority granted them.

### Factor D - Prosecution and Submission of Work

- \* Consultant obtained approvals and decisions from the Department in a timely manner, thereby permitting the project to flow smoothly and quickly.
- \* The Project Manager was informed of any change in scope, lack of information, or decisions by the department or other agencies that adversely affected the schedule or did not permit the work to progress in a logical manner.
- \* Consultant developed project schedules and communicated with the Project Manager with regard to the progress of work.
- \* Consultant participated and contributed to the decision making process.
- \* Consultant submitted plans, specifications and supporting documentation to the Department in a timely manner; maintaining schedules and meeting deadlines for project milestones (ie., Financial Package, Scope of Work, Man Hour Estimates, FIR, FOR, etc.).
- \* Work was checked for accuracy and content prior to submission to the Department.

### Factor E - Clarity of Work

- \* Consultant provided the Department with plans and specifications that met Department standards for content and format. These plans and specifications were therefore readily understood by all those persons who were required to work with them.
- \* Reports, calculations, correspondence and other written materials exhibited completeness, clarity and conciseness and addressed Department concerns and questions.

### Factor F - Support Calculations, Data, Reports, etc.

- \* Consultant explained, defended and justified technical decisions and actions.
- \* Consultant provided hard copy documentation concerning design decisions, calculations, and other supporting data so that a project history was maintained.

### Factor G - Completion of Work Within Contract Budget

- \* Consultant prepared plans and specifications for the project that considered the project budget (preliminary engineering and construction). If the project approached a budget overrun, the consultant brought this fact to the attention of the Project Manager in a prompt and timely manner and offered alternative solutions to the budget problems.
- \* Consultant preformed the scope of services within the anticipated man-hours, scheduled completion date and actual estimated fee.
- \* Supplemental contracts to the original contract were minimized through careful planning and forethought when establishing the original scope of services and contract agreement with the Department.

### Factor H - Accurate Billing Records

- \* Consultant provided the Department with mathematically correct and itemized breakdowns of billing charges in accordance with commonly accepted accounting practices both upon completion of the project and when requested.
- \* Salaries, indirect costs, fixed fees and other rates submitted agreed with the contract cost proposal.
- \* Supporting documentation for charges were provided and questions were answered in a timely manner.

### Factor I - Overall Quality, Accuracy and Competence

- \* Consultant provided work that was technically accurate and complete, and displayed professional competence with regard to content.
- \* Construction oversights were not the result of omissions or confusing details provided by the consultant in the plans or specifications.
- \* Consultant's work was checked prior to submission to the Department to ensure quality and accuracy of the work in meeting the scope of services under the contract.

### Factor J - Prudent Plans/Creative Design

- \* Although new and innovative solutions are permitted, the consultant ensured that only appropriate design alternatives meeting the Department's objectives were selected.
- \* Innovative and/or state-of-the-art methods, procedures, designs or theories in solving problems were used.
- \* Although a design was unique, innovative and creative; the project remained constructible.

### Factor K - DBE Participation

- \* Consultant participated in the Department's DBE goals within the terms of the contract.

# C. Georgia Department of Transportation

DOT – OCD 100  
Revised: 02/22/05

## CONSULTANT PERFORMANCE EVALUATION FORM

For all consultant services contracts that required Prequalification as a condition of selection, the prime and all subconsultants will be rated.

+

Report Date:  Contract Ownership: DOT ☐ Local Gov't ☐ Evaluation period: Annual ☐ Final ☐

P.I. No.:  Project No.:  County:  Contract Completion Date:

Consultant:  ☐ Prime ☐ Sub Consultant Project Manager:

DOT Project Manager:  DOT Office:  Phone No:

Amount of Contract:  Subconsultant Amount (applies to rated sub only):

+

INDICATE YOUR EVALUATION OF THE CONSULTANT OR SUBCONSULTANTS PERFORMANCE USING A SCALE FROM 1 TO 5 TO ESTABLISH A PERFORMANCE FACTOR SEE BELOW*	PERFORMANCE FACTOR (a)	IMPORTANCE FACTOR (%) (b)	RATING POINTS (a) x (b)
MANAGEMENT: Understands and effectively manages the project contract, including, but not limited to the following: Accomplishes the intent and scope of the contracted services by managing the personnel, budget, and schedule. Manages subconsultants to ensure performance. Maintains appropriate documentation. Minimizes the involvement of DOT staff in the management of the consultant and subconsultant staff. Maintains appropriate cost records, logs, and other documentation.	<input type="text"/>	25%	0.00
PROSECUTION & PROGRESS: Attains schedule and accomplishes established milestone and completion dates. Adjusts resources in response to demands of the project delivery schedule. Provides timely completion of tasks, including reviews, revisions, and intermediate and final deliverables.	<input type="text"/>	25%	0.00
QUALITY OF WORK: Consistently meets the Department's quality expectations and exercises quality control measures. Applies the Department's established guidelines, standards and procedures, design policies, studies, reports, tests, calculations and/or other available information to produce accurate and technically correct design plans, reports, documents, studies, tests and/or other specified deliverables to the Department.	<input type="text"/>	30%	0.00
COOPERATION/COORDINATION: Works cooperatively with DOT staff, other consultants, local, state and federal agencies, utility companies and/or citizen stakeholders. Proactively coordinates all activities that may impact or interface with the project. Communicates issues and information effectively. Responds to the demands of the project; actively defines problems, suggests alternatives, and recommends solutions.	<input type="text"/>	10%	0.00
ADEQUACY/AVAILABILITY OF WORK FORCE: Possesses and maintains adequate resources to meet the demands of contract, including sufficient numbers of qualified staff, properly equipped and available for the required tasks.	<input type="text"/>	10%	0.00
OVERALL RATING (SUM OF THE ABOVE RATINGS)			0.00

### PERFORMANCE FACTORS

1	2	3	4	5
Consistently Falls Below	Frequently Falls Below	Meets	Frequently Exceeds	Consistently Exceeds

**Note: An overall point rating of 3 is considered satisfactory performance. The maximum point rating attainable is 5.**

\_\_\_\_\_  
DOT Project Manager  
(Route to Office of Consultant Design)

Date: \_\_\_\_\_

For all contracts with a planned duration in excess of 12 months, this form will be completed by the DOT Project Manager (or designee) once a year and immediately after final deliverables are submitted by the Prime Consultant at the completion of the contract. This form will also be used for all Subconsultants in the contract as soon as their work is complete. For projects with contract durations of less than a year, this form must be completed on the Prime Consultants or Subconsultants as soon as final deliverables are submitted to the Department. The resultant rating for the given consultant or subconsultants may be considered in the future by the Department in the consultant selection process for professional services and also in the Prequalification process.

(See Page 2)

## **CONSULTANT PERFORMANCE EVALUATION FORM**

**DOT Comments:** *(Optional)*

**Management:**

**Prosecution & Progress:**

**Quality of Work:**

**Cooperation/Coordination :**

**Adequacy/Availability of  
Work Force:**

Project Manager: \_\_\_\_\_  
(Signature) *(Required)*

Date: \_\_\_\_\_

**Consultant Comments:** *(Optional)*

**Management:**

**Prosecution & Progress:**

**Quality of Work:**

**Cooperation/Coordination :**

**Adequacy/Availability of  
Work Force:**

Consultant Project Manager: \_\_\_\_\_  
(Signature) *(Required)*

Date: \_\_\_\_\_

**Return original completed form to the Office of Consultant Design**



# D. Idaho Department of Transportation

ITD 2759 (Rev. 9-01)

## Consultant Services Performance Evaluation



See Instructions on page 4

Name and Address of Consultant		Evaluation Type <input type="checkbox"/> Consultant <input type="checkbox"/> Subconsultant	
		Project No.	Key No.
		Project Title	
Type of Work <input type="checkbox"/> Study <input type="checkbox"/> Right of Way <input type="checkbox"/> Design <input type="checkbox"/> Other (Specify)		Agreement Number	
Complexity of Work <input type="checkbox"/> Difficult <input type="checkbox"/> Routine	Date Agreement Approved	Type of Agreement <input type="checkbox"/> Lump Sum <input type="checkbox"/> Cost Plus Fixed Fee <input type="checkbox"/> Other (Specify)	
Amount of Original Agreement	Total Amount of Supplemental Agreements	Total Agreement Amount	
Agreement Completion Date (Including Extensions)	Actual Completion Date	Actual Total Paid	
Type and Extent of Subcontracting		DBE GOALS: % Committed % Met	
Performance Rating Scale (For Average Score Below)			
<div style="display: flex; justify-content: space-around; text-align: center;"> <div><u>5</u> Superior</div> <div><u>4</u> Above Requirements</div> <div><u>3</u> Meets Requirements</div> <div><u>2</u> Below Requirements</div> <div><u>1</u> Poor</div> </div>			
Criteria	Comment		Score
1. Negotiations and Cost/Budget Cooperative and responsive Completed within agreement budget, including supplements			
2. Schedule Completed within agreement schedule, including supplements			
3. Technical Quality Met standards			
4. Communications Clear, concise communication (oral, written, drawings)			
5. Management Team player, managed subs, accurate and timely invoices, appropriate periodic progress reports			
6. DBE (to score, use only 2, 3, or 4) Met goals			
<b>Total Score</b>			
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>			
Rated by Agreement Administrator (Name and Title)	Agreement Administrator Signature	Date	
Rated by Consultant Representative (Name and Title)	Consultant Representative Signature	Date	
Rated by Consultant Administration Unit (Name and Title)	Consultant Administration Unit Signature	Date	

Distribution: Original to Consultant Administration Unit; Copies to Agreement Administrator and Consultant

# Consultant Services Performance Evaluation

## Criteria

Consultant Name	
Project	Agreement No.
<b>1. Negotiation and Cost/Budget Criteria</b>	<b>Score</b>
A. Recognized ITD guidelines for overhead and fee	
B. Finished within budget, including supplements	
C. Maintained appropriate level of effort	
D. Maintained reasonable, direct, and non-salary expenses	
E.	
<b>Total</b>	
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>	
<b>2. Schedule Criteria</b>	<b>Score</b>
A. Met negotiation schedule	
B. Achieved schedule, including all supplements	
C. Responded promptly to review comments	
D. Adapted to changes by ITD	
E. Notified ITD early regarding schedule "impactor"	
F.	
<b>Total</b>	
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>	
<b>3. Technical Quality Criteria</b>	<b>Score</b>
A. Met work products standards where "practical" and as negotiated on the scope of work	
B. Performed appropriate quality control	
C. Responded to review comments in subsequent submission	
D. Sought opportunities to incorporate innovative designs	
E. Delivered "compatible" electronic files	
F. Implemented procedures to control construction cost	
G.	
<b>Total</b>	
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>	

## Consultant Services Performance Evaluation

### Criteria

Consultant Name	
Project	Agreement No.
4. Communication Criteria	Score
A. Produced clear, concise oral and written communications	
B. Demonstrated an understanding of oral and written instructions	
C. Communicated at intervals appropriate for the work	
D. Respected and used acceptable lines of communication	
E. Communicated openly and honestly	
F.	
<b>Total</b>	
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>	
5. Management Criteria	Score
A. Provided effective cost control measures and ideas	
B. Submitted appropriate, periodic, and accurate process reports	
C. Produced accurate and timely invoices	
D. Conducted meetings efficiently	
E. Limited the number of consultant-initiated contract modifications and supplementals	
F. Coordinated with ITD effectively; was a "team player"	
G. Demonstrated responsiveness	
H. Managed subconsultants effectively	
I. Adhered to schedule on time	
J.	
<b>Total</b>	
<b>Average Score (Total Score ÷ Number of Criteria Rated)</b>	
Additional Comments (Optional)	

## Consultant Services Performance Evaluation

### Instructions

#### Why

- Scores from these evaluations factor into "Past Performance" ratings, which are used to help determine selection of future consultants. Meaningful evaluations help us hire the very best.

#### How

- The form should be reviewed and discussed with the consultant during contract negotiations to establish your expectations.
- Supplementary forms are available from the Consultant Administration Unit. Further details about the considerations for each criterion (i.e., 2. Schedule Criteria: A. Met negotiation schedule; B. Achieved schedule; C. Responded promptly to review comments; D. Adapted to changes by ITD; and E. Notified ITD early regarding schedule "impactor") are available.
- Score accurately. A "4" is respectable. A "5" is exceptional and should rarely be used.
- Send the form to the consultant for a signature after evaluation totals are completed.

#### When

- Final Evaluation
  - Always complete and distribute a performance evaluation at the point of termination of the agreement.
  - Distribute as noted at the bottom of the page 1.
  - Meet with the consultant if evaluation is below requirements.
- Subconsultant Evaluation
  - Subconsultants with significant project participation (more than \$25,000) should also be evaluated. Coordinate the review with the prime consultant's review prior to distribution.
  - Distribute the same as regular reviews and include the prime consultant and subconsultant.
  - When assessing the schedule completion, address ITD delays if any.

## E. Massachusetts Department of Transportation



Number: E-10-005

Date: 8-12-2010

### **ENGINEERING DIRECTIVE**

Frank Tramontozzi (signature on original)

CHIEF ENGINEER

#### **Design Consultant Performance Evaluations**

The purpose of this Engineering Directive is to establish a formal procedure for evaluating the performance of consultant engineering firms during the design phase of projects advanced by the MassDOT Highway Division. This procedure is effective immediately and replaces all previous procedures used by the MassDOT Highway Division to evaluate the performance of design consultants.

This procedure applies to design services completed directly under MassDOT contracts and to design services completed under contracts administered by municipalities or other outside entities. This procedure does not apply to non-design architect and engineering services, such as bridge inspection, bridge rating, materials inspection, planning and survey.

All Project Managers shall complete a Consultant Evaluation Workbook (MS Excel format) for every prime consultant design assignment and for each subconsultant design assignment with a fee in excess of \$50,000. Project Managers are responsible for entering all information into the Workbook, including scores provided by Reviewing Sections throughout the design phase. Reviewing Sections are responsible for providing evaluation scores to the Project Manager as part of their design reviews at each design submission stage.

The Workbook contains a two-page Performance Evaluation Form which shall be completed/generated either immediately following project bid opening or at the conclusion of the contract, whichever comes first. The Performance Evaluation Forms shall be signed by the Project Manager and forwarded to the design consultant for review and signature. Typically, a Principal-in-Charge shall review, sign and return the Performance Evaluation Form for the design consultant. The Director/Section Head of the unit responsible for the design consultant assignment shall review and sign all completed Performance Evaluation Forms and shall then forward each completed form to the Architects and Engineers Review Board for review.

Project Managers shall retain copies of completed Performance Evaluations as part of the project file for each design assignment.

The Consultant Evaluation Workbook and Performance Evaluation Form shall not be altered by individuals, but may be updated periodically by MassDOT. These materials shall be made available to Project Managers through e-mail, shared electronic work spaces, or other similar method.

Attachment: Performance Evaluation Form

PERFORMANCE EVALUATION ARCHITECT-ENGINEER PROFESSIONAL SERVICES CONSULTANT					
Name & Address of Consultant				Project No	
				Project Description	
Type of Services				Complexity of Project	
Contract Data					
Contract No		NTP Date		Maximum Obligation	
Contract Assignment		Completion Date		Amount Paid	
Method of Payment		Percent of Work Complete			
Description and Costs of Sub-Contracts (if any)					
Project Manager Evaluation					
Responsiveness to comments			Efficient Use of Workhours		
Involvement of Key Personnel in Engineering Services			Ability to work within budget amount or fee		
Manner in which Work was Organized and Accomplished			Overall Design Schedule Adherence		
Clearness & Completeness of Presentation			Local Office Staffing and Equipment		
Evidence of Ingenuity and Experience in Design			Capability for doing more complex work		
Performance at Public Hearings and Other Meetings			Preparation of Invoices and Other Billing Material		
		Project Manager Evaluation			
Reasons for Delays (if any)					
Project Manager Comments					
Overall Evaluation		<div style="display: flex; align-items: center;"> <div style="width: 50px; height: 20px; background-color: #cccccc; margin-right: 10px;"></div> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>0</span><span>1</span><span>2</span><span>3</span><span>4</span><span>5</span><span>6</span><span>7</span><span>8</span><span>9</span><span>10</span> </div> <div style="width: 100%; border-top: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px;"> </div> <div style="position: absolute; left: 12.5%; top: -5px;"> </div> <div style="position: absolute; left: 25%; top: -5px;"> </div> <div style="position: absolute; left: 37.5%; top: -5px;"> </div> <div style="position: absolute; left: 50%; top: -5px;"> </div> <div style="position: absolute; left: 62.5%; top: -5px;"> </div> <div style="position: absolute; left: 75%; top: -5px;"> </div> <div style="position: absolute; left: 87.5%; top: -5px;"> </div> <div style="position: absolute; left: 100%; top: -5px;"> </div> </div> </div> </div>			
(See Page 2 for Reviewing Section Scores)		<div style="display: flex; justify-content: space-around; text-align: center;"> <span>Unacceptable</span> <span>Below Average</span> <span>Average</span> <span>Above Average</span> <span>Exceptional</span> </div>			
Submitted by: _____		Title: _____		Evaluation Date _____	
		Section: _____			

PERFORMANCE EVALUATION								EVALUATION DATE:
ARCHITECT-ENGINEER PROFESSIONAL SERVICES CONSULTANT								
Consultant:		Contract No:			Project No:			
<b>DISTRICT ROADWAY REVIEWS:</b>								
25%		ABP CONTROLS:						
75%		Design Schedules						
100%		Construction Time Determination Study						
		Construction Estimating						
		Planning Considerations						
<b>BRIDGE REVIEWS:</b>								
Type Study/Sketch Plans	35%		OTHER REVIEWS:					
Final Design	35%		AAB/ADA					
Specs & Estimate	30%		Bike/Ped					
			Landscape					
<b>BOSTON TRAFFIC REVIEWS:</b>								
25%		ROW:						
75%		Preliminary ROW Plans						
100%		Layout Plans and Instruments						
<b>ENVIRONMENTAL REVIEWS:</b>								
25%/Early Env Coordination		PROJECT MANAGER:						
MEPA/NEPA								
Wetlands/Water Quality								
Cultural Resources								
Hazardous Materials								
<b>OVERALL QUALITY OF DESIGN:</b>								
	Distr.	Bridge	Envir.	Traffic	ROW	Other	Proj. Mgr. Controls	
Evaluation:								
Weight:								Weighted
Weighted Score:								Score
<b>CONSULTANT COMMENTS - Additional comments may be submitted separately.</b>								
Reviewed by PIC*:			Title:			Date:		
Approved by:			Title:			Date:		
			MassDOT - Highway Division					
This form is to be submitted by the Section Head to the Secretary of the Architects & Engineers Review Board at completion of work (not including construction stage) or at any other time when such a report may be pertinent.								
* Principal In Charge								Page 2 of 2

# F. Montana Department of Transportation

Updated: 3/31/2014

MDT Consultant Performance Evaluation Criteria & Standards		
Area of Evaluation	Letter Grade Descriptions and Point Values	
<b>Schedule and Deadlines</b> <b>Focus areas: Schedule, timeliness.</b> Questions to ask: Did the Consultant meet agreed upon schedule(s)? Were critical path deliverables met? Were non-critical path deliverables met?	<b>A</b> (30 pts.)	Exceeded schedule expectations and met numerous critical path deliverables before agreed upon deadlines, with no late deliverables. If an intentionally aggressive/accelerated schedule was used, it was achieved.
	<b>A-</b> (27 pts.)	Met or exceeded schedule expectations and delivered one or more critical path deliverable(s) early, with no late deliverables. If an intentionally aggressive/accelerated schedule was used, it was achieved.
	<b>B</b> (24 pts.)	Generally met agreed upon schedule. No late critical path deliverables. If an intentionally aggressive/accelerated schedule was used, it was mostly achieved.
	<b>C</b> (20 pts.)	Generally met agreed upon schedule with one or more late critical path deliverables and one or more non-critical path deliverables. If late on a critical path deliverable, the Consultant adjusted and met the agreed upon schedule for the next critical path deliverable.
	<b>D</b> (10 pts.)	Did not meet agreed upon schedule with numerous late critical path deliverable(s).
	<b>F</b> (0 pts.)	Repeatedly failed to meet agreed upon critical path deliverables. Late deliverables were caused by the Consultant and resulted in project delivery delay.
	<b>N/A</b> (not included)	Not applicable to this evaluation.
<b>Quality of Work</b> <b>Focus areas: Quality of product, quality assurance and control.</b> Questions to ask: Were appropriate guidelines, standards, design policies, and/or other available information used to produce an accurate and technically correct product(s)? Were review comments incorporated and/or addressed in subsequent submittals? Was design constructible and reasonable? Was work checked for accuracy and content prior to submission to the Department?	<b>A</b> (30 pts.)	Exceeded expectations for quality and accuracy. Clearly effective QA/QC process in place. Minimal corrections needed at plan reviews or review of deliverable(s). Comments were consistently addressed in subsequent submittals. Product was constructible and easy to read/interpret.
	<b>A-</b> (27 pts.)	Generally exceeded expectations for quality and accuracy. Effective QA/QC process in place. Some minor corrections (math errors, missing notes, font sizes, etc.) needed at plan reviews or review of deliverable(s). Comments were consistently addressed in subsequent submittals. Product was constructible and easy to read/interpret.
	<b>B</b> (24 pts.)	Met expectations for quality and accuracy. Good QA/QC process in place. Several minor corrections needed at plan reviews or review of deliverable(s). Comments were generally addressed in subsequent submittals. Product was constructible and generally easy to read/interpret.
	<b>C</b> (20 pts.)	Generally met expectations for quality and accuracy. Decent QA/QC process in place. Numerous minor corrections, and/or a few significant revisions needed at plan reviews or review of deliverable(s). Comments were generally addressed in subsequent submittals. Product was constructible and generally easy to read/interpret.
	<b>D</b> (10 pts.)	Generally did not meet expectations for quality and accuracy. Several major deficiencies and numerous minor deficiencies needed at plan reviews or review of deliverable(s). Comments were generally not addressed in subsequent submittals. Constructability of product was questionable and product was difficult to read/interpret.
	<b>F</b> (0 pts.)	Repeatedly failed to meet quality standards with numerous major deficiencies. The majority of comments were not addressed in subsequent submittals. Work product was difficult to read/interpret.
	<b>N/A</b> (not included)	Not applicable to this evaluation.

Updated: 3/31/2014

<b>Cooperation</b> <b>Focus areas: Communication, team work, responsiveness.</b> Questions to ask: How was the Consultant's overall responsiveness and timeliness? Did Consultant work cooperatively with Project Manager, other MDT staff, other consultants, and project stakeholders? Was information communicated clearly, concisely, and at appropriate intervals? How did the Consultant manage and inform MDT of decisions or changes that had the potential to affect the scope, schedule, and budget? Did they participate and contribute to the decision making process?	<b>A</b> (30 pts.)	Exceptional cooperation. Responses to inquiries were very prompt/expedient. Proactive in communicating information, regularly providing updates on the status of the project. Issues were resolved quickly. Obvious team player interested in the overall success of the project. Proactively managed and informed MDT of decisions and changes that had the potential to affect the scope, schedule, and budget.
	<b>A-</b> (27 pts.)	Very good cooperation. Responses to inquiries were prompt and did not require repeated requests. Proactive in communicating information. Issues were resolved quickly. Obvious team player interested in the overall success of the project. Proactively managed and informed MDT of decisions and changes that had the potential to affect the scope, schedule, and budget.
	<b>B</b> (24 pts.)	Good cooperation. Responses to inquiries were prompt, rarely requiring repeated requests. Proactive in communicating information. Issues were resolved quickly at the direction of MDT. Good team player interested in the overall success of the project. Effectively addressed decisions and changes that had the potential to affect the scope, schedule, and budget.
	<b>C</b> (20 pts.)	Satisfactory communication. Responses were reasonably prompt, sometimes requiring repeated requests. Issues took time to resolve and routinely required MDT input/decision. Decent team player, but on occasion looked out for interests of other parties instead of MDT's. Notified MDT of decisions and changes that had the potential to affect the scope, schedule, and budget.
	<b>D</b> (10 pts.)	Poor communication. Responses were delayed, and often times required repeated requests. Issues took time to resolve and routinely required MDT input/decision. Questionable team player, regularly looked out for interests of other parties instead of MDT's. Generally, but inconsistently, notified MDT of decisions and changes that had the potential to affect the scope, schedule, and budget.
	<b>F</b> (0 pts.)	Unsatisfactory communication. Often argumentative and/or unresponsive. Responses were seriously lacking, routinely requiring repeated requests. Issues were not resolved without significant MDT input/decision. Poor team player, regularly looked out for interests of other parties instead of MDT's. Failed to effectively manage or inform MDT of decisions or changes that had the potential to affect the scope, schedule, and budget.
	<b>N/A</b> (not included)	Not applicable to this evaluation.
<b>Management</b> <b>Focus Areas: Overall project/task management, ownership, efficiency.</b> Questions to ask: Were personnel, the budget, and subconsultants managed and used efficiently to provide the best possible value to the taxpayer? Was careful planning and forethought used when expending resources? Did Consultant demonstrate ownership of the work product? Were design decisions, memos, logs, etc. maintained? Were key personnel maintained throughout the project/task, or were personnel routinely reassigned? Were invoices and progress reports accurate and timely?	<b>A</b> (30 pts.)	Exceptional management of the project/task. Maximized efficient use of the budget, resulting in delivery of a quality product at a lower than expected cost. Clear personal investment in the project/product. Accurate and thorough records and invoices were maintained and timely. Coordination with subconsultants and their deliverables was very effective in all aspects.
	<b>A-</b> (27 pts.)	Very good management of the project/task. The budget was used efficiently, resulting in delivery of a quality product at a slightly lower than expected cost. Demonstrated investment in the project/product. Accurate and thorough records and invoices were maintained and timely. Coordination with subconsultants and their deliverables was effective in all aspects.
	<b>B</b> (24 pts.)	Good management of the project/task. The budget was used fairly efficiently, resulting in delivery of a quality product at or below the expected cost. There was some ownership in the project/product, with a good amount of pride in the work. Accurate and thorough records and invoices were maintained and timely. Coordination with subconsultants and their deliverables was effective in most aspects. Some work was needed by MDT to help manage subconsultants.
	<b>C</b> (20 pts.)	Satisfactory management of the project/task. The project/product was delivered on budget. Personal ownership in the project/product was slightly lacking. Records were maintained, but often at the request of MDT. Invoices were accurate for the most part, but were sometimes in error. Coordination with subconsultants and their deliverables was very effective for the most part; however some work was needed by MDT to help manage subconsultants.
	<b>D</b> (10 pts.)	Poor management of the project/task. The budget was overrun, and amendments were pursued to continue in-scope work. Little to no ownership in the project/product. Maintenance of records was lacking. Invoices were routinely inaccurate. Coordination with subconsultants and their deliverables was ineffective. Significant amount of work was needed by MDT to ensure progress of the project/task, and some corrective counseling was needed.
	<b>F</b> (0 pts.)	Unsatisfactory management of the project/task. The budget was overrun, and amendments were routinely pursued to continue in-scope work. No ownership in the project/product. Maintenance of records was seriously lacking. Invoices were routinely inaccurate. Coordination with subconsultants and their deliverables was ineffective. Extraordinary amount of work was needed by MDT to ensure progress of the project/task, despite repeated attempts at corrective counseling.
	<b>N/A</b> (not included)	Not applicable to this evaluation.



<b>Knowledge of Department Needs and Design Value</b> <b>Focus Areas: Value of work product(s), innovation, subject expertise.</b> Questions to ask: Did the Consultant deliver a product that met the Department's needs? Was extensive coaching needed to get a product that met expectations? Were viable alternative solutions presented to overcome construction budget constraints? Were opportunities to incorporate innovative features sought out (if applicable)? Was an appropriate level of design and risk analysis done?	<b>A</b> (30 pts.)	An exceptional work product(s) was delivered that met all of MDT's needs. Virtually no coaching or direction was needed. An appropriate number of alternatives and associated costs and risks were analyzed and Consultant provided viable recommendations.
	<b>A-</b> (27 pts.)	A very good work product(s) was delivered that met all of MDT's needs. Minimal coaching or direction was needed. A number of alternatives and associated costs and risks were analyzed, somewhat at the direction of MDT. Good recommendations were made.
	<b>B</b> (24 pts.)	A good work product(s) was delivered that met most of MDT's needs. An acceptable amount of coaching or direction was needed, with no repeated coaching needed. A number of alternatives and associated costs and risks were analyzed, somewhat at the direction of MDT. Recommendations were made, but may have slightly lacked overall value.
	<b>C</b> (20 pts.)	A satisfactory work product(s) was delivered that met most of MDT's needs. An acceptable amount of coaching or direction was needed, and there was some repeated coaching or direction needed. A limited number of alternatives and associated costs and risks were analyzed, primarily at the direction of MDT. Valuable recommendations may or may not have been provided.
	<b>D</b> (10 pts.)	A poor work product(s) was delivered that met some of MDT's needs. A significant amount of coaching or direction was needed, often times repeatedly. Limited, if any, alternatives and associated costs and risks were analyzed. Alternatives analyzed were either at the direction of MDT or were not viable. Recommendations that were made generally lacked overall value.
	<b>F</b> (0 pts.)	An unacceptable work product(s) was delivered. MDT had to repeatedly give direction to Consultant. Recommendations that were provided were unsatisfactory and showed lack of overall value.
	<b>N/A</b> (not included)	Not applicable to this evaluation.

# **G. New Jersey Department of Transportation: Excerpts from the Consultant Evaluation System Manual**

## **Introduction**

Consultant performance on Design projects will be rated in the following categories:

1. Schedule
2. Quality
3. Project Management

The rating criteria for each of the above will be as specifically defined in the Evaluation Forms for each discipline.

## **Consultant Evaluation Reports**

The rating key for consultant evaluations shall be as follows:

- 5** = outstanding performance
- 4** = above satisfactory performance
- 3** = satisfactory performance
- 2** = below satisfactory performance
- 1** = unacceptable performance

## **Rating Forms**

The Consultant ratings will be based upon the criteria and weights of the appropriate work disciplines, indicated below:

- Design - Scope Development/Preliminary & Final Design/Construction Phase/Overall Quality
- Planning
- Construction Inspection
- Structural Evaluation & Bridge Management
- Maintenance

The evaluations for Design contracts will be project specific and prepared by the appropriate CCM (Consultant Contract Manager).

## **Category Weighting Criteria**

For Design projects, the percentages indicated for "Design Phase" will be applicable for all six-month rating periods up to the Award of Project (construction). When the design consultant is retained by the department to perform Construction Engineering (CE) services, a rating will be performed for the CE (Design - Construction Phase) effort, with the weight factors indicated for "Design - Construction Phase."

## Weight Factors

Design	
Schedule	30%
Quality Errors & Omissions	40%
Project Management	30%
Construction Phase	
Schedule	60%
Quality	30%
Project Management	10%
Overall Quality	
Constructability of Design as Presented in the Contract Documents	100%
Planning Agreements	
Schedule	30%
Quality	40%
Project Management	30%
Construction Inspection Agreements	
Quality	90%
Project Management	10%
Structural Evaluation & Bridge Management Agreements	
Schedule	30%
Quality	50%
Project Management	20%
Maintenance Phase	
Quality	90%
Project Management	10%

## **Design Consultant Evaluation (Design Phase)**

### **I. Schedule Rating**

- 5** Work is completed in advance of the agreed scheduled date for critical path items. Projected schedule for deliverables or project completion can be accelerated.
- 4** Work is completed in advance of the agreed scheduled date for critical path items. Projected schedule for deliverables or project completion cannot be accelerated.
- 3** Work is completed at the agreed scheduled date for critical path items. Projected schedule for deliverables or project completion maintained but cannot be accelerated.
- 2** Work is completed after the agreed scheduled date for critical path items. Projected schedule for deliverables or project completion maintained.
- 1** Work is completed after the agreed scheduled date for critical path items. Projected schedule for deliverables or project completion delayed.

### **II. Quality Rating**

- 5** Changes were required for clarity of document presentation only. There were no technical errors and omissions that influenced the quality of the work.
- 4** There were documented errors and omissions that were corrected upon notification. A resubmission was not required.
- 3** There were documented errors and omissions. One resubmission, free of inaccuracies was required to correct the work.
- 2** There were documented errors and omissions. Two resubmissions were required to correct the work.
- 1** There were documented errors and omissions after three resubmissions of the work and/or reassignment of work by the Department was required.

### **III. Project Management Rating**

- 5** Has met all of the above requirements. No improvement needed.
- 4** Above average performance, does not meet one of the above requirements.
- 3** Average performance, does not meet two of the above requirements.
- 2** Below average performance, does not meet three of the above requirements.
- 1** Does not meet three of the above requirements and/or a change of the Consultant Contract Management is required by the Department.

## H. New Mexico Department of Transportation

### Explanation of Evaluation Form

The Project Development/Consultant Section is responsible for preparing performance evaluations for each project developed by outside consultants. The purpose of the evaluation is to provide feedback to the Consultant as well as the Department so that the quality of the highway program may be improved. The evaluations may be used as input for the selection of consultants in future projects.

The Consultant's performance on a design project is evaluated after each milestone of the contract. The evaluation for each phase of the contract is prepared after the work required by that phase of the contract has been completed and generally follows the outline of the work performed in the phase. The work elements have been broken down into two parts. Part I, Project Administration, evaluates how the project was managed and the interaction between the Consultant and the Department. Part II, Project Submittals, evaluates the quality of the final products required by the contract.

### Explanation of Terms

Rating	= Letter value describing the Consultant's performance on a particular work element.
General Rating	= Letter value given for this part of the evaluation based on a weighted average for these elements.
Overall Rating	= Letter value given based on all elements pertaining to this project.
E	= Performance that consistently exceeds expectations. Examples include substantial design and construction cost and time savings, complete and error free work products well beyond the average work product typically submitted by consultants.
G	= Performance that exceeds expectations. Performance on these elements is above the average expected for this project.
S	= Performance that met the requirements as described in the contract. Some comments made by the Department on the work products required resolution.
N/A	= Items that are not applicable to the specific contract/ task
NI	= Expectations were occasionally met and a significant amount of comments made by the Department required resolution.
U	= Performance consistently failed to meet expectations. Significant amount of rework was required to meet the requirements of the contract.

The Consultant may provide comments to the evaluation which shall be sent to:

New Mexico Department of Transportation  
Preliminary Design Bureau  
Consultant Management Unit, Room 133  
P. O. Box 1149  
Santa Fe, New Mexico 87504-1149

Phase I Services																																																			
Control Number:		Project Number:																																																	
Project Description:																																																			
Consultant:		Project Manager:																																																	
Project Development Engineer:		Contract Amount:																																																	
Sub-Consultants:																																																			
Surveying:		Other:																																																	
Environmental:		Other:																																																	
Right-of-Way:		Other:																																																	
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%; text-align: left; padding: 5px;">Elements</th> <th style="width: 10%; text-align: center; padding: 5px;">Rating</th> <th style="width: 45%;"></th> </tr> </thead> <tbody> <tr> <td colspan="3" style="padding: 5px;"> <b>I. Project Administration – 50%</b> </td> </tr> <tr> <td style="padding: 5px;">    A. Communication</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td rowspan="5" style="vertical-align: middle; padding: 5px;"> Ratings:   E = Exceeds Expectations*  G = Good, Above Average  S = Meets Expectations  NI = Needs Improvement*  U = Unsatisfactory*   * Provide Explanation </td> </tr> <tr> <td style="padding: 5px;">    B. Responsiveness</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    C. Schedule Adherence</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    D. Cooperation</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    E. Coordination</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">                    General Rating Part I:</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td></td> </tr> <tr> <td colspan="3" style="padding: 5px;"> <b>II. Project Activities - 50%</b> </td> </tr> <tr> <td style="padding: 5px;">    A. Alignment Study</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td rowspan="9" style="vertical-align: middle; padding: 5px;"> E = Exceeds Expectations*  G = Good, Above Average  S = Meets Expectations  NI = Needs Improvement*  U = Unsatisfactory*   * Provide Explanation </td> </tr> <tr> <td style="padding: 5px;">    B. Location Survey &amp; Mapping</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    C. Preliminary Property Ownership Maps</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    D. Traffic Studies</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    E. Environmental Process &amp; Documents</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    F. Utility Designation, Location &amp; Mapping</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    G. Drainage Reports</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    H. Preliminary Roadway &amp; Bridge Plans</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    I. Preliminary Right-of-Way Needs</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> </tr> <tr> <td style="padding: 5px;">    I. Quality Assurance and Quality check on deliverables.</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">                    General Rating Part II:</td> <td style="text-align: center; border-bottom: 1px solid black;"></td> <td></td> </tr> </tbody> </table>				Elements	Rating		<b>I. Project Administration – 50%</b>			A. Communication		Ratings:  E = Exceeds Expectations* G = Good, Above Average S = Meets Expectations NI = Needs Improvement* U = Unsatisfactory*  * Provide Explanation	B. Responsiveness		C. Schedule Adherence		D. Cooperation		E. Coordination		General Rating Part I:			<b>II. Project Activities - 50%</b>			A. Alignment Study		E = Exceeds Expectations* G = Good, Above Average S = Meets Expectations NI = Needs Improvement* U = Unsatisfactory*  * Provide Explanation	B. Location Survey & Mapping		C. Preliminary Property Ownership Maps		D. Traffic Studies		E. Environmental Process & Documents		F. Utility Designation, Location & Mapping		G. Drainage Reports		H. Preliminary Roadway & Bridge Plans		I. Preliminary Right-of-Way Needs		I. Quality Assurance and Quality check on deliverables.			General Rating Part II:		
Elements	Rating																																																		
<b>I. Project Administration – 50%</b>																																																			
A. Communication		Ratings:  E = Exceeds Expectations* G = Good, Above Average S = Meets Expectations NI = Needs Improvement* U = Unsatisfactory*  * Provide Explanation																																																	
B. Responsiveness																																																			
C. Schedule Adherence																																																			
D. Cooperation																																																			
E. Coordination																																																			
General Rating Part I:																																																			
<b>II. Project Activities - 50%</b>																																																			
A. Alignment Study		E = Exceeds Expectations* G = Good, Above Average S = Meets Expectations NI = Needs Improvement* U = Unsatisfactory*  * Provide Explanation																																																	
B. Location Survey & Mapping																																																			
C. Preliminary Property Ownership Maps																																																			
D. Traffic Studies																																																			
E. Environmental Process & Documents																																																			
F. Utility Designation, Location & Mapping																																																			
G. Drainage Reports																																																			
H. Preliminary Roadway & Bridge Plans																																																			
I. Preliminary Right-of-Way Needs																																																			
I. Quality Assurance and Quality check on deliverables.																																																			
General Rating Part II:																																																			
<b>III. Overall Rating</b> <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>																																																			
<b>IV. Remarks (Attach additional sheets as necessary):</b>   <div style="border: 1px solid black; height: 100px; width: 100%;"></div>																																																			
Evaluation By: <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>		Date: <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>																																																	

Phase II Services																																																											
<b>Control Number:</b> _____ <b>Project Description:</b> _____ <b>Consultant:</b> _____ <b>Project Development Engineer:</b> _____ <b>Sub-Consultants:</b> <b>Surveying:</b> _____ <b>Environmental:</b> _____ <b>Right-of-Way:</b> _____	<b>Project Number:</b> _____  <b>Project Manager:</b> _____  <b>Contract Amount:</b> _____  <b>Other:</b> _____ <b>Other:</b> _____ <b>Other:</b> _____																																																										
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Elements</th> <th style="text-align: center; width: 20%;">Rating</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>I. Project Administration - 50%</b></td> </tr> <tr> <td>A. Communication</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>B. Responsiveness</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>C. Schedule Adherence</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>D. Cooperation</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>E. Coordination</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td style="text-align: right;">General Rating Part I:</td> <td style="text-align: center;">_____</td> <td>Ratings:</td> </tr> <tr> <td colspan="3"><b>II. Project Activities - 50%</b></td> </tr> <tr> <td>A. Partnering</td> <td style="text-align: center;">_____</td> <td>E = Exceeds Expectations*</td> </tr> <tr> <td>B. Public Relations</td> <td style="text-align: center;">_____</td> <td>G = Good, Above Average</td> </tr> <tr> <td>C. Geotechnical Services</td> <td style="text-align: center;">_____</td> <td>S = Meets Expectations</td> </tr> <tr> <td>D. Right-of-Way Design</td> <td style="text-align: center;">_____</td> <td>NI = Needs Improvement*</td> </tr> <tr> <td>E. Final Design</td> <td style="text-align: center;">_____</td> <td>U = Unsatisfactory*</td> </tr> <tr> <td>F. Visual/Aesthetic Design</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>G. Environmental Follow-up</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>H. Permitting</td> <td style="text-align: center;">_____</td> <td>* Provide Explanation</td> </tr> <tr> <td>I. Quality Assurance &amp; Quality Check on deliverables</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td style="text-align: right;">General Rating Part II:</td> <td style="text-align: center;">_____</td> <td></td> </tr> </tbody> </table>			Elements	Rating		<b>I. Project Administration - 50%</b>			A. Communication	_____		B. Responsiveness	_____		C. Schedule Adherence	_____		D. Cooperation	_____		E. Coordination	_____		General Rating Part I:	_____	Ratings:	<b>II. Project Activities - 50%</b>			A. Partnering	_____	E = Exceeds Expectations*	B. Public Relations	_____	G = Good, Above Average	C. Geotechnical Services	_____	S = Meets Expectations	D. Right-of-Way Design	_____	NI = Needs Improvement*	E. Final Design	_____	U = Unsatisfactory*	F. Visual/Aesthetic Design	_____		G. Environmental Follow-up	_____		H. Permitting	_____	* Provide Explanation	I. Quality Assurance & Quality Check on deliverables	_____		General Rating Part II:	_____	
Elements	Rating																																																										
<b>I. Project Administration - 50%</b>																																																											
A. Communication	_____																																																										
B. Responsiveness	_____																																																										
C. Schedule Adherence	_____																																																										
D. Cooperation	_____																																																										
E. Coordination	_____																																																										
General Rating Part I:	_____	Ratings:																																																									
<b>II. Project Activities - 50%</b>																																																											
A. Partnering	_____	E = Exceeds Expectations*																																																									
B. Public Relations	_____	G = Good, Above Average																																																									
C. Geotechnical Services	_____	S = Meets Expectations																																																									
D. Right-of-Way Design	_____	NI = Needs Improvement*																																																									
E. Final Design	_____	U = Unsatisfactory*																																																									
F. Visual/Aesthetic Design	_____																																																										
G. Environmental Follow-up	_____																																																										
H. Permitting	_____	* Provide Explanation																																																									
I. Quality Assurance & Quality Check on deliverables	_____																																																										
General Rating Part II:	_____																																																										
<b>III. Overall Rating</b> _____																																																											
<b>IV. Remarks (Attach additional sheets as necessary):</b>																																																											
<table style="width: 100%;"> <tr> <td style="width: 50%;">Evaluation By: _____</td> <td style="width: 50%;">Date: _____</td> </tr> </table>			Evaluation By: _____	Date: _____																																																							
Evaluation By: _____	Date: _____																																																										

Phase III Services/ Construction Phase																																																											
<b>Control Number:</b> _____ <b>Project Description:</b> _____ <b>Consultant:</b> _____ <b>Project Development Engineer:</b> _____ <b>Sub-Consultants:</b> _____ <b>Surveying:</b> _____ <b>Environmental:</b> _____ <b>Right-of-Way:</b> _____	<b>Project Number:</b> _____  <b>Project Manager:</b> _____  <b>Contract Amount:</b> _____  <b>Other:</b> _____ <b>Other:</b> _____ <b>Other:</b> _____																																																										
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 45%;">Elements</th> <th style="text-align: center; width: 10%;">Rating</th> <th style="width: 45%;"></th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>I. Project Administration – 50%</b></td> </tr> <tr> <td>A. Communication</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>B. Responsiveness</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>C. Schedule Adherence</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>D. Cooperation</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>E. Coordination</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td style="text-align: right;">General Rating Part I:</td> <td style="text-align: center;">_____</td> <td>Ratings:</td> </tr> <tr> <td colspan="3"><b>II. Project Activities - 50%</b></td> </tr> <tr> <td>A. Design Change Orders Associated with oversight or errors</td> <td style="text-align: center;">_____</td> <td>E = Exceeds Expectations*</td> </tr> <tr> <td>B. Responsiveness to RFI's</td> <td style="text-align: center;">_____</td> <td>G = Good, Above Average</td> </tr> <tr> <td>C. Submittal Reviews</td> <td style="text-align: center;">_____</td> <td>S = Meets Expectations</td> </tr> <tr> <td>D. Project Specific Inquiries (in writing):</td> <td style="text-align: center;">_____</td> <td>NI = Needs Improvement*</td> </tr> <tr> <td>E. Other:</td> <td style="text-align: center;">_____</td> <td>U = Unsatisfactory*</td> </tr> <tr> <td>F. Other:</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">_____</td> <td>* Provide Explanation</td> </tr> <tr> <td style="text-align: right;">General Rating Part II:</td> <td style="text-align: center;">_____</td> <td></td> </tr> </tbody> </table>			Elements	Rating		<b>I. Project Administration – 50%</b>			A. Communication	_____		B. Responsiveness	_____		C. Schedule Adherence	_____		D. Cooperation	_____		E. Coordination	_____		General Rating Part I:	_____	Ratings:	<b>II. Project Activities - 50%</b>			A. Design Change Orders Associated with oversight or errors	_____	E = Exceeds Expectations*	B. Responsiveness to RFI's	_____	G = Good, Above Average	C. Submittal Reviews	_____	S = Meets Expectations	D. Project Specific Inquiries (in writing):	_____	NI = Needs Improvement*	E. Other:	_____	U = Unsatisfactory*	F. Other:	_____			_____			_____			_____	* Provide Explanation	General Rating Part II:	_____	
Elements	Rating																																																										
<b>I. Project Administration – 50%</b>																																																											
A. Communication	_____																																																										
B. Responsiveness	_____																																																										
C. Schedule Adherence	_____																																																										
D. Cooperation	_____																																																										
E. Coordination	_____																																																										
General Rating Part I:	_____	Ratings:																																																									
<b>II. Project Activities - 50%</b>																																																											
A. Design Change Orders Associated with oversight or errors	_____	E = Exceeds Expectations*																																																									
B. Responsiveness to RFI's	_____	G = Good, Above Average																																																									
C. Submittal Reviews	_____	S = Meets Expectations																																																									
D. Project Specific Inquiries (in writing):	_____	NI = Needs Improvement*																																																									
E. Other:	_____	U = Unsatisfactory*																																																									
F. Other:	_____																																																										
	_____																																																										
	_____																																																										
	_____	* Provide Explanation																																																									
General Rating Part II:	_____																																																										
<b>III. Overall Rating</b> _____																																																											
<b>IV. Remarks (Attach additional sheets as necessary):</b>     																																																											
<table style="width: 100%;"> <tr> <td style="width: 50%;">Evaluation By: _____</td> <td style="width: 50%;">Date: _____</td> </tr> </table>			Evaluation By: _____	Date: _____																																																							
Evaluation By: _____	Date: _____																																																										



**ON CALL  
SERVICES**

Control Number:	_____	Project Number:	_____
Task Description:	_____		
Consultant:	_____	Project Manager:	_____
Project Development Engineer:	_____	Contract Amount:	_____
Sub-Consultants:	_____	Other:	_____
	_____	Other:	_____
	_____	Other:	_____

Elements	Rating	
<b>I. Project Administration – 50%</b>		
A. Communication	_____	
B. Responsiveness	_____	
C. Schedule Adherence	_____	
D. Cooperation	_____	
E. Coordination	_____	
General Rating Part I:	_____	Ratings:
<b>II. Project Activities - 50%</b>		
A. Efficiency on Task	_____	E = Exceeds Expectations*
B. Timely in completing Task	_____	G = Good, Above Average
C. Consultant met Milestone dates on assigned task(s)	_____	S = Meets Expectations
D. Objectives of Task Met	_____	NI = Needs Improvement*
E. Consultant approach to issued task effective	_____	U = Unsatisfactory*
F. Project Impact	_____	
G. Value of work for price charged	_____	* Provide Explanation
H. Quality Assurance & Quality check on deliverable's	_____	
General Rating Part II:	_____	

**III. Overall Rating** \_\_\_\_\_**IV. Remarks** (Attach additional sheets as necessary):  
  
  

Evaluation By: \_\_\_\_\_ Date: \_\_\_\_\_

# **I. Virginia Department of Transportation**

## **Excerpts from Consultant Performance Evaluation Guidelines**

### **Performance Evaluation Criteria**

1. **MANAGEMENT:** Understands and effectively manages the project contract, including, but not limited to the following: Accomplishes the intent and scope of the contracted services by managing the personnel, resources, budget, and schedule. Manages sub-consultants to ensure performance. Maintains appropriate documentation. Optimizes (used when appropriate) the involvement of VDOT staff in the management of the consultant and subconsultant staff. Maintains appropriate cost records, logs, and other documentation. Meets DBE requirements and/or goals. Uses man-hours and resources efficiently. (CEI Contracts should consider: Knowledge of VDOT construction practices and roles; Adequacy of the quantity and quality of resumes provided for consideration; competency, training and timeliness of providing the service providers; monthly invoice timeliness and accuracy; timeliness and quality of task orders.)
2. **PROSECUTION & PROGRESS:** Attains schedule and meets established milestone and completion dates. Adjusts resources in response to demands of the project delivery schedule. Provides timely completion of tasks, including reviews, revisions, and intermediate and final deliverables. Applied knowledge of project management philosophy to control project schedule. Demonstrated skill in estimating project budgets and tracking and maintaining project costs. (CEI Contracts should consider: Proper and timely adjustment of service provider quantity and quality; Monthly Progress Reports are of high quality and submitted in a timely manner; Properly utilizes and returns in good working order any VDOT provided equipment such as laptops, ID badges, and testing equipment; Task orders are adjusted as needed prior to overrunning the task budget.)
3. **QUALITY OF WORK:** Consistently meets the Department's quality expectations and exercises quality control measures. Applies the Department's established guidelines, standards, and procedures, as well as established industry practices, to produce accurate and technically correct design plans, reports, documents, studies, tests, devices, and/or other specified deliverables to the Department. Deliverables are complete and correct. Demonstrates effective implementation of QA/QC plan. (CEI Contracts should consider: Safety is always put first; Service providers arrive on time and ready for work; Service providers independently and properly accept or reject contractor provided work/materials/documents; Writes complete, accurate, and timely Daily Work Reports; Completes and provides accurate timesheets and mileage logs in a timely manner.)
4. **COOPERATION/COORDINATION:** Works cooperatively with VDOT staff, other consultants/contractors, local, state and federal agencies, utility companies, contractors and/or citizen stakeholders. Proactively coordinates all activities that may impact or interface with the project. Communicates issues and information effectively. Responds to the demands of the project; actively defines problems, suggests alternatives, and

recommends solutions. (CEI Contracts should consider: Responds well to VDOT direction; Works well with Virginia State Police and other state and local entities; Presents themselves professionally to the public; Demonstrates a positive attitude.)

5. ADEQUACY/AVAILABILITY OF WORK FORCE: Possesses and maintains adequate resources and equipment throughout the project(s) to meet the demands of the contract, including sufficient numbers of qualified staff, properly equipped and available for the required tasks. Employees are qualified and possess appropriate technical knowledge skills and abilities for the assignment(s). (CEI Contracts should consider: Understands and applies all contract provisions/requirements; Properly utilizes all computer systems as required, such as Site Manager; Adheres to all VDOT administrative requirements and timeframes; Properly performs/inspects and documents testing activity.)

# J. Utah Department of Transportation

FORM FOR CONSULTANT ACTING AS UDOT PM ONLY - RETURN COMPLETED FORM TO UDOT PM  
ALL INFORMATION MUST BE ENTERED INTO INTERCHANGE



## Consultant Evaluation Form

Contract \*  PIN  Project Number

Project Location

Selection  Status

Scope Description  Work Discipline

Acting As

UDOT PM  Consultant PM \*

Firm  Evaluation Type \* Please select a value... ▼

Local Government  LG PM

Select the categories to be evaluated

Only complete the sections you are evaluating. There is no need to calculate the category score or the overall evaluation score at the end, as Interchange will figure scores when entered when entered.

General Management <input checked="" type="checkbox"/>	Construction Engineering Management <input checked="" type="checkbox"/>	Design <input checked="" type="checkbox"/>
Acting as UDOT PM <input checked="" type="checkbox"/>	Post Construction for Design <input checked="" type="checkbox"/>	Local Government <input checked="" type="checkbox"/>
Environmental Services <input checked="" type="checkbox"/>	Public Involvement <input checked="" type="checkbox"/>	Right of Way <input checked="" type="checkbox"/>

### General Management

1. Manages **RESOURCES** effectively (contract administration, milestones, tasks, subconsultants, schedules, progress reports, invoices, payments).
2. Develops, implements, follows and documents a **QUALITY CONTROL / QUALITY ASSURANCE PLAN** (scope of services).
3. **COMMUNICATES** effectively with the Project Team, subconsultants, stakeholders, and the public (meetings, scope, schedule, budget, progress of project, milestones, invoices, changes).
4. Manages **CONTRACT BUDGET** effectively.
5. **NEGOTIATES** the contract and modifications in a fair, collaborative and open manner.

6. Understands and conforms to **UDOT POLICY**, procedures, standards, manuals of instruction and, if applicable, federal-aid requirements. ☐
7. Develops updates and meets a realistic **SCHEDULE** for the project and scope of services. ☐
8. Ability to anticipate and **ADAPT** to changes. ☐

Category Score

#### Acting As UDOT Project Manager

1. Identifies tracks and manages **RISK** and develops mitigation strategies. ☐
2. Fosters a team environment that finds **INNOVATIVE SOLUTIONS** to project challenges. ☐
3. Effectively manages the **PROJECT BUDGET**. ☐
4. Defines **PROJECT SCOPE** and manages the team to deliver that scope. ☐
5. Exhibits strong **LEADERSHIP** (communications, collaboration, vision, etc.). ☐

Category Score

#### Construction Engineering Management

1. **PARTNERS** effectively with contractor, subconsultants, UDOT, Local Agency (if applicable), utilities and adjacent property owners. ☐
2. Performs and documents in a timely manner quality **MATERIALS TESTING** and **INSPECTION** consistent with UDOT standards. ☐
3. Ensures contractor **COMPLIES** with the construction contract. ☐
4. Monitors and supports a **SAFE** work environment for project personnel and the public. ☐
5. Timely and accurate **CONTRACT ADMINISTRATION** (change orders, progress payments, process reviews, ☐
6. Effectively **OVERSEES** project construction functions independently with minimal guidance from District Engineer and Project Manager, etc.). ☐

Category Score

## Environmental Services

1. Prepares a **QUALITY** environmental document. ☐
2. Understands and conforms to the **NEPA PROCESS** and other state and federal laws (Section 106, 4(f), Endangered Species Act, Clean Water Act). ☐
3. Proposes innovative **SOLUTIONS** to environmental challenges. ☐
4. Develops and follows a quality **PUBLIC INVOLVMENT** plan. ☐
5. Maintains a **COLLABORATIVE** atmosphere. ☐
6. Develops, implements, follows and documents a **QUALITY CONTROL/QUALITY ASSURANCE** process (discipline specific). ☐

Category Score

## Post Construction for Design

1. Provides timely and effective **DESIGN SUPPORT** during construction. ☐
2. Actively **INVOLVED** during the construction phase (meeting attendance, shop drawing review, transfer of project commitments). ☐
3. Produced a **HIGH QUALITY** plan set (accurate quantities, minimum design changes during construction, minimal design-related change orders). ☐

Category Score

## Public Involvement

1. **TIMELY** response to stakeholder inquiries. ☐
2. **COORDINATION** with the project team (UDOT, Local Gov., contractor, etc.). ☐
3. Provided **PROACTIVE** approach to public information and media relations. ☐

4. Updates UDOT's **SOCIAL MEDIA AND WEBSITE** in a timely manner.

Category Score

#### Local Government

1. Understands and demonstrates knowledge of federal and state **REGULATIONS**.

2. Consultant **COMMUNICATES** effectively with Local Government officials.

3. Consultant produces **QUALITY DELIVERABLES**.

4. Understands and follows the Local Government project **DELIVERY PROCESS**.

5. Manages **BUDGET** effectively (scope of services and project, progress reports, subconsultants, invoices, modification requests).

6. Develops and meets a realistic **SCHEDULE** for the project and scope of services.

Category Score

#### Design for: Roadway/Structures/Right of Way/Drainage

1. Follows **UDOT DESIGN PROCESS** (knowledge of Federal/State/industry standards, project delivery network (PDN), etc.).

2. Design fulfills the project mitigation **COMMITMENTS** (environmental, right of way, utility, railroad, etc.).

3. Design adheres to UDOT's **EMPHASIS AREAS**.

4. Develops quality **DELIVERABLES** (plans, specifications, estimates, reports).

5. Delivers a product that effectively applies **INNOVATIVE SOLUTIONS** to project challenges within the project requirements (scope, schedule and budget).

6. Develops implements, follows and documents a **QUALITY CONTROL/QUALITY ASSURANCE** process (discipline specific).

7. Maintains a **COLLABORATIVE** atmosphere.

## Right of Way

1. As the ROW Lead Agent (Complex and/or Non-Complex), Manages **RESOURCES** effectively (contract administration, milestones, task, subconsultants, schedules, progress reports, invoices, payments).
2. As the ROW Lead Agent (Complex and/or Non-Complex), Manages **BUDGET** effectively (scope and services and projects).
3. Understands and demonstrates a working knowledge of the federal and state **REGULATIONS** and is efficient and effective in implementing the UDOT Right of Way Operations Manual.
4. **NEGOTIATES** the contract and modifications in a fair, collaborative and open manner.
5. **COMMUNICATES** effectively with the Project Team, Landowners, Tenants and Stakeholders.
6. Performs and documents in a timely manner all **ACQUISITIONS** consistent with UDOT Policies and Procedures.
7. Performs and documents in a timely manner all **RELOCATIONS** consistent with UDOT Policies and Procedures.
8. Performs and documents in a timely manner all **APPRAISALS** consistent with UDOT Policies and Procedures.
9. Performs and documents in a timely manner all **APPRAISAL REVIEWS** consistent with UDOT Policies and Procedures.
10. WILLINGNESS to follow direction from UDOT Staff.

Category Score

Comments



Scale	Rating Description	Expected Occurrence
9.0 -10	Deliverables are exceptional with minimal UDOT direction; seeks opportunities for self-improvement; models, coaches and inspires excellent service; owns project problems and offers analysis of resolution options.	Rare ( < 5%)
6.5 – 8.9	Deliverables are above average with routine UDOT direction; frequently checks in on status of service and provides consistent quality service; identifies project problems in advance and offers timely alternative options.	Occasional (20%)
4.0 – 6.4	Deliverables are adequate and meet standards with routine UDOT direction. The proposer provides expected service and quality checks required by the contract; helps to analyze and resolve problems as they occur.	Frequent (50% or > )
2.0 – 3.9	Deliverables eventually meet minimum standards with frequent UDOT coaching required and needs improvements; provided mediocre service, rarely checking for feedback; unaware of problems until discovery by others, then provides weak solution analysis. <b>A comment is required.</b>	Occasional (20%)
0 – 1.9	Deliverables are unacceptable and fails to meet expectations in the stated requirements of this project, even with frequent UDOT coaching; rarely provides expected service and no quality service checks are evident; unaware of problems until discovery of other, then unable to provide analysis or resolution options. <b>A comment is required.</b>	As Required ( < 5%)

## Evaluation Score

**REQUIRED** Enter email address for consultant evaluation recipient:

SAVE

CANCEL

SUPPORT (MAILTO:KERIANNNOBLE@UTAH.GOV?SUBJECT=HELLO%20FROM%20THE%20CONTRACTOR%20PORTAL)  
 FEEDBACK (\\\\CONTROLTEMPLATES\\15\\ITG\\UDOT\\#FEEDBACKMODAL) | TERMS OF USE (HTTP://WWW.UTAH.GOV/DISCLAIMER.HTML)  
 UDOT.UTAH.GOV (HTTP://UDOT.UTAH.GOV) | US DOT (HTTP://DOT.GOV)

# K. Washington Department of Transportation



**Washington State  
Department of Transportation**

## Performance Evaluation Consultant Services

Consultant Name		Evaluation Type <input type="checkbox"/> Interim <input type="checkbox"/> Subconsultant <input type="checkbox"/> Final	
Consultant Address		Project Title	
		Agreement Number	
Type of Work <input type="checkbox"/> Study <input type="checkbox"/> Design <input type="checkbox"/> R/W <input type="checkbox"/> PS&E <input type="checkbox"/> Other (Specify Below):		Type of Agreement <input type="checkbox"/> Lump Sum <input type="checkbox"/> Hourly Rate <input type="checkbox"/> Cost Plus Fixed Fee <input type="checkbox"/> Other	
Complexity of Work <input type="checkbox"/> Difficult <input type="checkbox"/> Routine	Date Agreement Approved		
Amount of Original Agreement \$	Total Amount Modifications \$	Total Amount Agreement \$	
Completion Date Including Extensions	Actual Completion Date	Actual Total Paid \$	
Type and Extent of Subcontracting			

Performance Rating Scale (From Average Score Below)			
10	9	8	7
Superior		Above Reqmnts	Meets Reqmnts
		Below Reqmnts	Poor
		4	3
		2	1
Criteria	Comment	Score	
1. Negotiations Cooperative and responsive.			
2. Cost / Budget Complete within agreement budget including supplements.			
3. Schedule Complete within agreement schedule including supplements.			
4. Technical Quality Met Standards.			
5. Communications Clear, Concise Communication (Oral, written, drawings).			
6. Management Team player. Managed subs. Accurate, timely invoices. <del>Appropriate, periodic, accurate progress reports</del>			
<b>Total Score</b>			
<b>Average Score (Total Score / Number of criteria rated)</b>			

Rated By (Project Manager Name and Title)	Project Manager Signature	Date
Rated By (Area Consultant Liaison Name and Title)	Area Consultant Liaison Signature	Date
Executive Review (Name and Title)	Executive Signature	Date

DOT Form 272-019 EF  
Revised 3/2002

Distribution: Original: Consultant  
Copies: Project Manager - Area Consultant Liaison - Consultant Services Office

## Consultant Services Evaluation Supplement

Consultant Name	Evaluation Type <input type="checkbox"/> Interim <input type="checkbox"/> Subconsultant <input type="checkbox"/> Final																				
Consultant Address	Project Title																				
	Agreement Number																				
Performance Rating Scale (From Average Scores) <table style="width:100%; text-align:center;"> <tr> <td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td> </tr> <tr> <td colspan="2">Superior</td> <td colspan="2">Above Reqmnts</td> <td colspan="2">Meets Reqmnts</td> <td colspan="2">Below Reqmnts</td> <td colspan="2">Poor</td> </tr> </table>		10	9	8	7	6	5	4	3	2	1	Superior		Above Reqmnts		Meets Reqmnts		Below Reqmnts		Poor	
10	9	8	7	6	5	4	3	2	1												
Superior		Above Reqmnts		Meets Reqmnts		Below Reqmnts		Poor													

### Negotiation and Cost / Budget Criteria

1. Negotiations	
Sub-Criteria	Score
A. Adhered to WSDOT guidelines on fee.	
B. Met negotiation schedule.	
C. Open and honest communications.	
D. Willingness to compromise.	
E.	
F.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments	

2. Cost / Budget	
Sub-Criteria	Score
A. Finished within budget, including all supplements.	
B. Appropriate level of effort.	
C. Reasonable direct, non-salary expenses.	
D.	
E.	
F.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments	

## Schedule and Technical Quality Criteria

Consultant Name	Agreement Number
-----------------	------------------

3. Schedule	
Sub-Criteria	Score
A. Achieved schedule (Including all supplements).	
B. Prompt response to review comments.	
C. Adapted to changes by WSDOT.	
D. Notified WSDOT early regarding schedule "impactors."	
E.	
F.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments:	

4. Technical Quality	
Sub-Criteria	Score
A. Work products meet standards; where "practical."	
B. Performed appropriate quality control.	
C. Responds to review comments in subsequent submission.	
D. Sought opportunities to incorporate innovative designs.	
E. Delivered "compatible" electronic files.	
F. Implemented procedures to control construction costs.	
G.	
H.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments:	

## Communication and Management Criteria

Consultant Name	Agreement Number
-----------------	------------------

5. Communications	
Sub-Criteria	Score
A. Produced clear, concise oral and written communication.	
B. Demonstrates an understanding of oral and written instructions.	
C. Communicated at intervals appropriate for the work.	
D. Respects and uses lines of communications.	
E.	
F.	
G.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments:	

6. Management	
Sub-Criteria	Score
A. Provided creative cost control measures / ideas.	
B. Submitted appropriate, periodic, accurate progress reports.	
C. Accurate and timely invoicing.	
D. Conducted meetings efficiently.	
E. Limited the number of consultant-initiated contract modifications / supplements.	
F. Coordinated with WSDOT effectively; was a "team player."	
G. Responsive	
H. Managed subconsultants effectively.	
I.	
J.	
<b>Total Score</b>	
<b>Average Score (Total Score / Number of sub-criteria rated)</b>	
Comments:	

# L. Wisconsin Department of Transportation



## DESIGN CONSULTANT PERFORMANCE EVALUATION REPORT

Wisconsin Department of Transportation  
DT1558 1/2014 Ch. 84 Wis. Stats.

State Project ID	Master Contract ID (if applicable)	Work Order Number (if applicable)
Region / Bureau	County	Construction Year
Highway	Project Name	
Consultant Project Manager	(Area Code) Telephone Number	Subconsultant(s)
Consultant Name and Address		<input type="checkbox"/> Resurface <input type="checkbox"/> Recondition <input type="checkbox"/> Reconstruct <input type="checkbox"/> Pavement Replacement <input type="checkbox"/> Major <input type="checkbox"/> Bridge Maintenance <input type="checkbox"/> Brg Rehab <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> SHRM <input type="checkbox"/> Other
Description of Work Performed by Consultant		
Description of Work Performed by Subconsultant		
Evaluation Period From                      To	Percent of Project Complete                      Final                      Post Construction	
WisDOT Supervisor/Team Leader	WisDOT Project Manager	Project Complexity <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

### CONTRACT DATA

Type of Contract <input type="checkbox"/> 2 Party <input type="checkbox"/> 3 Party with                      (Municipality)	Number of Amendments
Date Contract Approved	Original Contract Completion Date                      Date Actual Completion

Rating of Structure Plans by CO Bridge (Maximum 5)	Average Design Consultant Rating (to nearest tenth)
--	---

### EVALUATION SCORE

1 = Unacceptable      2 = Below average      3 = Satisfactory      4 = Above average      5 = Outstanding

### EVALUATION CRITERIA

- Performance evaluation should be completed at least on an annual basis, more often if needed and upon contract completion.
- Rate each of the five performance items on the following pages based on the Evaluation Score (1–5) listed above.
- Indicate performance level by checking one of the options: exceeds, satisfactory or needs improvement. Consider the questions listed below each performance item and any unique issues where applicable.
- Comments pertaining to each item shall be entered in the Comments/Unique Issues space provided below each item.
- General comments or suggestions and comments from other specialty areas should be considered and attached if needed.
- A post-construction evaluation should be made when necessary for design projects. Adjustments to scores and ratings if necessary could be made based on the results and experience encountered during construction.
- Evaluation scores are recorded and kept on file in the Bureau of Financial Services for use in future selection processes.
- Evaluation of subconsultant should be considered and completed as needed.
- If project had a structure, contact Central Office Bridge for rating score.

## DESIGN CONSULTANT PERFORMANCE EVALUATION REPORT *(continued)*

Wisconsin Department of Transportation DT1558

### 1. PROJECT MANAGEMENT – Check as appropriate.

Exceeds	Satisfactory	Needs Improvement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Note:** Rate the consultant's representative you contact.

Was the consultant project manager/leader in control of the services provided to WisDOT?

Did the consultant project manager/leader assign appropriate staff to the services?

Was the communication between the consultant project manager/leader and the Department staff adequate?

Was the coordination with subconsultants and others involved in the project adequate?

Considering the above questions the overall **Rating is: (Maximum 5)**

Comments/Unique Issues:

### 2. HUMAN RELATIONS – Check as appropriate.

Exceeds	Satisfactory	Needs Improvement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Was consultant responsive to requests from the Department and other reviewing agencies?

Was consultant cooperative?

Did consultant react well to criticism?

Was it easy to work with consultant?

Was consultant courteous and helpful in dealing with the general public and agencies?

Did the consultant effectively develop the Public Involvement Plan?

Did the consultant properly represent WisDOT?

Considering the above questions the overall **Rating is: (Maximum 5)**

Comments/Unique Issues:

## DESIGN CONSULTANT PERFORMANCE EVALUATION REPORT *(continued)*

Wisconsin Department of Transportation DT1558

### 3. TECHNICAL SKILLS, Other – Check as appropriate.

Exceeds	Satisfactory	Needs Improvement	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did consultant's services reflect good engineering practice?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were good engineering thought and sound judgment applied?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were innovative or original concepts proposed where the opportunity presented itself?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was the evaluation of alternatives and trial solutions adequate?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the consultant work well independently, without significant help from Department staff?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were routine details properly utilized on this project?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was the consultants engineering estimate accurate? (0–5% Exceeds, 5–10% Satisfactory, >10% Needs Improvement)

Considering the above questions the overall **Rating is: (Maximum 5)**

Comments/Unique Issues:

### 4. QUALITY OF WORK – Check as appropriate.

Exceeds	Satisfactory	Needs Improvement	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the product reflect compliance with FDM procedures and requirements?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was a quality control plan in effect and is there evidence it was followed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were studies and reports complete and accurate? This includes surveys, quantities, estimates and special provisions.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was work well organized, properly presented, clear and concise?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were all PS&E submittal items (including plans) complete, accurate, and in compliance with WisDOT procedure in the FDM? (Make comments.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were errors or omissions, numerous, serious, significant or costly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did project result in the expenditure of reasonable time by Department staff?

Considering the above questions the overall **Rating is: (Maximum 5)**

Comments/Unique Issues:



## DESIGN CONSULTANT PERFORMANCE EVALUATION REPORT *(continued)*

Wisconsin Department of Transportation DT1558

### 5. TIMELINESS – Check as appropriate.

Exceeds	Satisfactory	Needs Improvement	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did consultant keep the Department informed of project work and schedule status?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did consultant meet final contract time requirements?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did consultant meet intermediate submittal dates?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did consultant make timely requests for amendments?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the consultant submit PS&E items (including final plans) with agreed upon lead time to meet PS&E dates?

Considering the above questions the overall **Rating is: (Maximum 5)**

Comments/Unique Issues:

---

Would you have reservations selecting this firm again for this type of project?

Describe strengths/weaknesses and provide suggestions for improvement.

Was this evaluation done at a face-to-face meeting?

**X**

\_\_\_\_\_  
(Evaluator – WisDOT Signature)

\_\_\_\_\_  
(Date – m/d/yyyy)

**X**

\_\_\_\_\_  
(Reviewer – Consultant Signature)

\_\_\_\_\_  
(Date – m/d/yyyy)

**Figure 2: Performance Evaluation Scoring Guidance**

PERFORMANCE EVALUATION SCORING GUIDANCE		
Rating	Score	Description of Rating
Exceptional	5	Performance for the rated evaluation criteria exceeds contract requirements to the Agency's benefit. Extraordinary performance may reflect some of the achievements: <ul style="list-style-type: none"> <li>• Cost savings, added value, innovative options, efficiencies, quality deliverables, quality service and overall the consultant going above and beyond the expectations of the Department, the contract and the Rater.</li> </ul>
Exceeds Expectations	4	Performance for the rated evaluation criteria exceeds contract requirements to the Agency's benefit. Extraordinary performance may reflect some of the achievements: <ul style="list-style-type: none"> <li>• Cost savings, added value, innovative options, efficiencies, quality deliverables, quality service and overall the consultant going above and beyond the expectations of the Department, the contract and the Rater.</li> </ul>
Meets Expectations	3	Performance for the rated evaluation criteria meets contract requirements. May have some problems; however, corrective actions were taken by the Consultant and are satisfactory.
Needs Improvement	2	Performance for the rated evaluation criteria does not meet some contractual, technical or professional requirements. Multiple or significant problems; corrective actions have not been satisfactory or have not been fully implemented.
Poor	1	Performance for the rated evaluation criteria does not meet contractual requirements and recovery is not likely in a timely or cost effective manner. Serious problems continue to exist and the contractor's corrective actions have been ineffective.

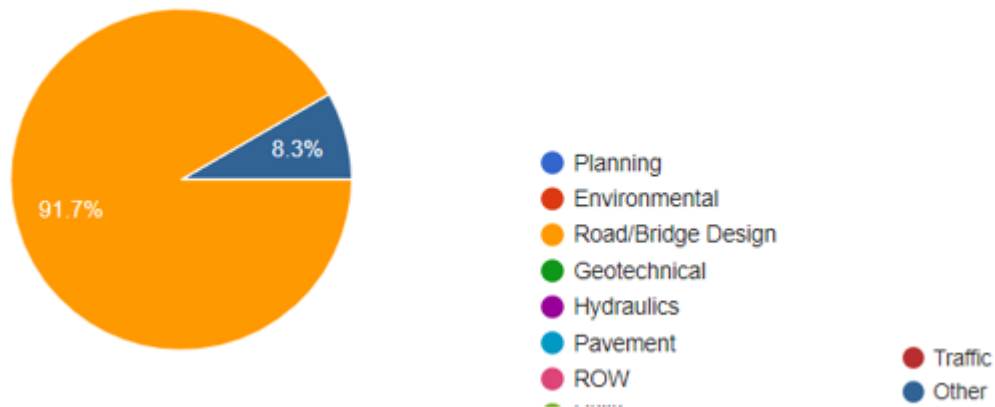
## **Appendix D: List of Interviewees**

Eric Kalivoda	Deputy Secretary
Chris Knotts	Chief Engineer
Ed Wedge	Deputy Chief Engineer
Chad Winchester	Project Development
David Smith	Road Design Engineer Administrator
Ryan Richard	Road Design QC/QA Engineer
Jenny Fu	Bridge Design Engineer Administrator
Brian Kendrick	Project Management Division
Mark Chenevert	Consultant Services Administrator
Jerry Mason	Office of Technical Services
Clyde Ashley	Office of Technical Services
Jerry Pitts	FHWA
Scott Nelson	FHWA
ACEC Representative #1	
ACEC Representative #2	
ACEC Representative #3	

## Appendix E: Internal Focus Group Survey Results

### A. LTRC Bridge Design Focus Groups

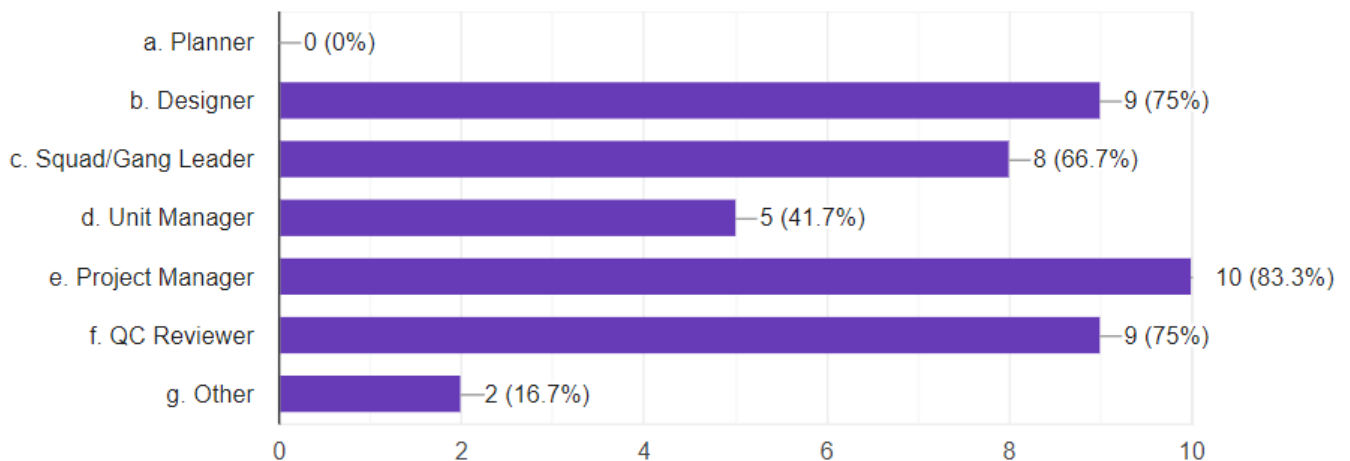
1.) Which discipline are you primarily involved with?



2.) If you selected "Other," please specify.

- “Bridge”
- “Electrical design”

3.) What is your role or function? Please mark all that apply.



4.) If you selected "Other", please specify.

- “Engineer”
- “Rater”

**5.) As succinctly as possible, please provide your definition of plan quality.**

- “Plans that are accurate, easy to understand, and conform to DOTD standards.”
- “Having minimal errors; adequately describes the work in a manner that permits bid development with reasonable effort; relays work requirements that are constructible by industrially accepted means and methods; represents a design that both 1.) solves the problem which underlies the need for the project, and 2.) is in accordance with good engineering judgement, and the design and construction specifications of the Department.”
- “The clarity, legibility and biddability of the plans.”
- “Plans conform to program and DOTD standards.”
- “Comprehensive, error free.”
- “Quality plans are plans that are, in and of themselves, biddable and constructible and are in harmony with all other contract documents.”
- “Plans shows understanding of the scope, respect towards the taxpayer, good understanding of the discipline, codes and owner’s preference.”
- “Biddable, construable, technically correct, few to no problems in construction.”
- “Plans that are correct, follow DOTD guidance, and are biddable & constructible.”
- “Sufficiently display required information to clearly and accurately relay desired final product.”
- “Accurate, complete and simple.”
- “Plans include all requirements of the contract, follow DOTD format, and have minimum errors.”

**6.) What are the three quantifiable measures of quality that are most important to you?**

- “Accurate, timely, and meet the desired intent.”
- “Biddability, Constructability, Represents Good Engineering Judgement and Conformance to Design and Construction Specifications.”
- “Legibility, accuracy and clarity.”
- “Clarity, accuracy, and constructability.”
- “Comprehensive, error free, meet or exceed specs.”
- “1. Work items are clearly defined and covered by corresponding pay items; 2. Specifications and Plans are not in conflict; 3. Details are clear, concise, and logically organized/arranged.”

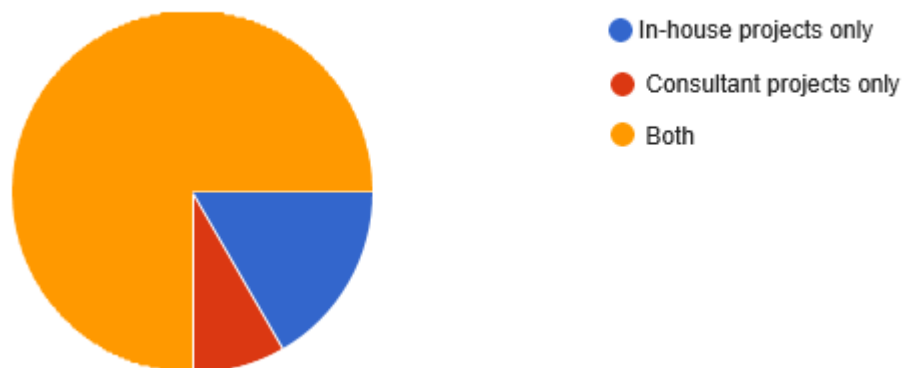
- “Deliverables are in accordance with contract, errors are limited, and willingness to address the plan mistakes without additional compensation.”
- “How many times I get called in to fix the consultant's errors.”
- “Accurate quantities & pay items, Conform to Standard Specifications, Design & Details rate for Design vehicles and don't contradict standard plans.”
- “1. Minimal Plan Review comments; 2. Meeting milestone deadlines; 3. Accurate cost estimates.”
- “Accurate, complete, simple.”
- “Complete, minimal errors, innovative solutions.”

**7.) What percentage of your time is performed on QA/QC functions?**

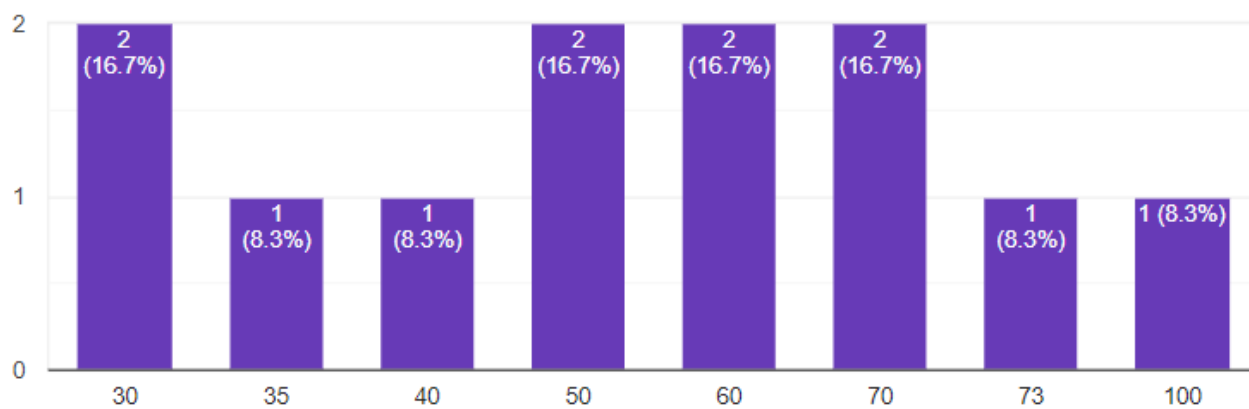
Answers:

- 20%
- 10%
- 10%
- 75%
- 30%
- 50%
- 15%
- 30%
- 60%

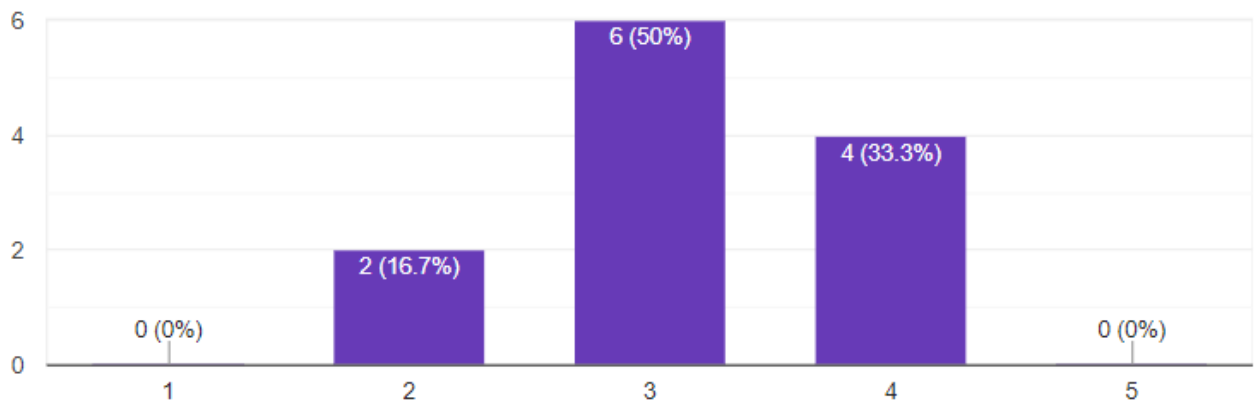
8.) Do you perform your QC/QA responsibilities on:



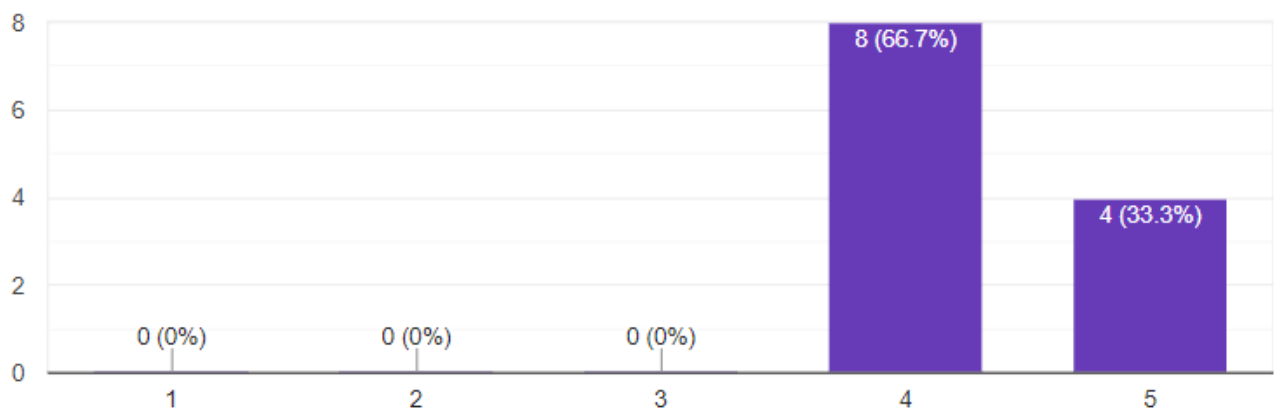
9.) For your discipline, what percentage of work is performed by consultants?



**10.) On a five-point scale, how would you rate consultant plan quality?**

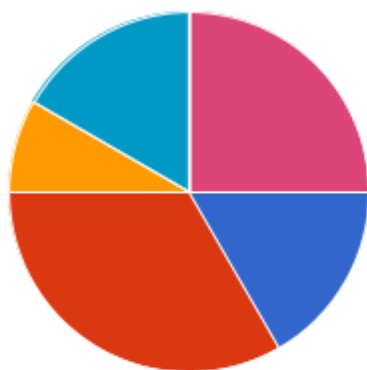


**11.) On a five-point scale, how would you rate in-house plan quality?**





12.) Where you experience consultant plan quality problems, what would you say is the root cause?

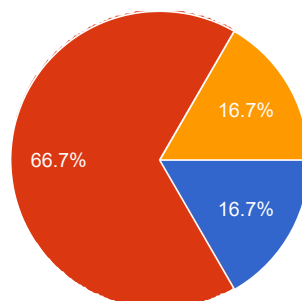


- a. Inexperience, or lack of training
- b. Lack of knowledge of DOTD standards and procedures
- c. Compressed time schedules
- d. Organizational issues – lack of accountability or no clear lines of authority/responsibility
- e. Insufficient communication, cooperation, and coordination between DOTD and consultant
- f. Inadequate PM processes by consultant re: QC/QA, project planning, scheduling, monitoring, and control
- g. Other

13.) If you selected "Other", please elaborate.

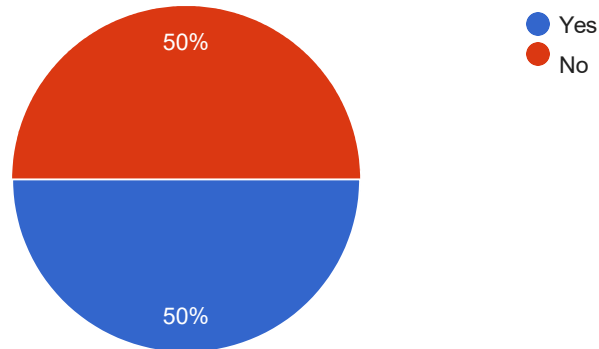
- “Consultant plans are sometimes hard to understand or do not show enough information.”
- “The cancellation of contracts performing poorly is rarely done therefore the consultant is just an overpaid civil servant that follows fewer rules. They are very capable of producing quality work but the Department's Contracts Philosophy is geared towards spending the allocated money than getting a good product.”
- “Option b. and c. apply, but additionally lack of quality is seen more on work from smaller firms (LPA projects usually). This is due to both lack of experience working with DOTD (historically these firms only answered to the local government) and sometimes seemingly purposeful "cutting corners" to save time and effort (Larger firms trying to get by doing less on LPA project because historically DOTD wasn't involved in the review process).”

14.) Is adequate time for plan checking, review and other QC tasks provided for in the project schedule?

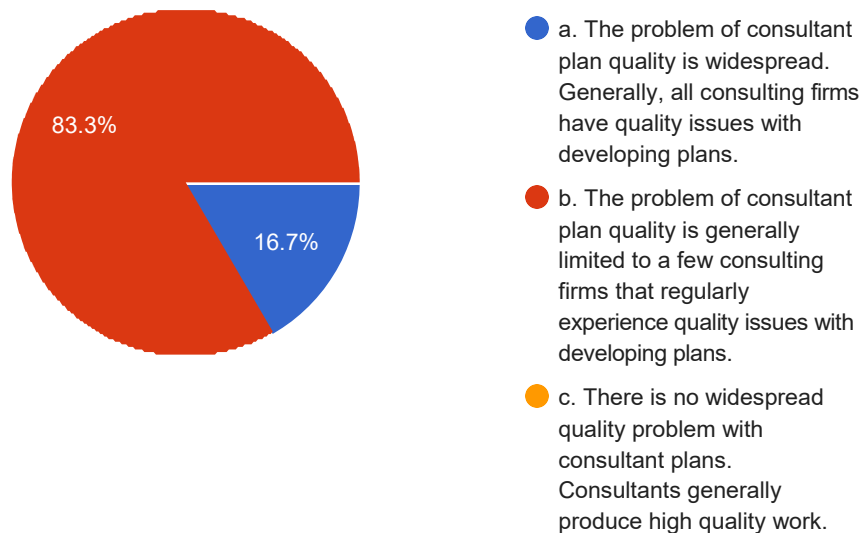


- a. No, project schedules seldom have adequate time to perform QC tasks effectively
- b. On most projects, there is adequate time for QC
- c. Yes, always have plenty of time to perform QC

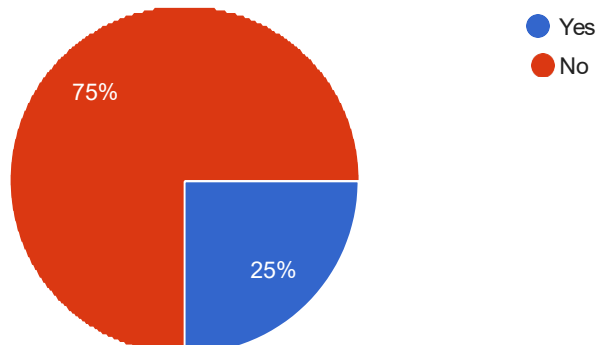
**15.) Is there a need for (more) QC training?**



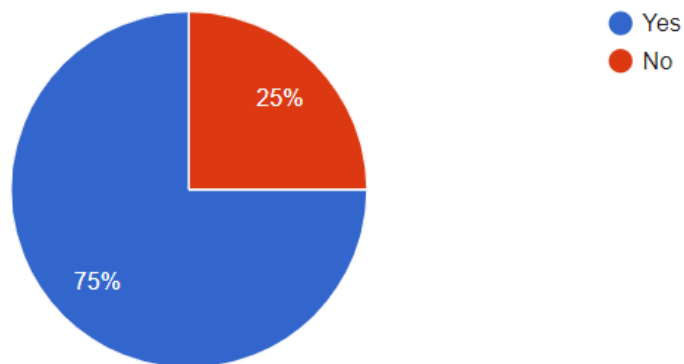
**16.) How widespread is the problem of poor plan quality by consultants? Please select the statement that best represents your opinion.**



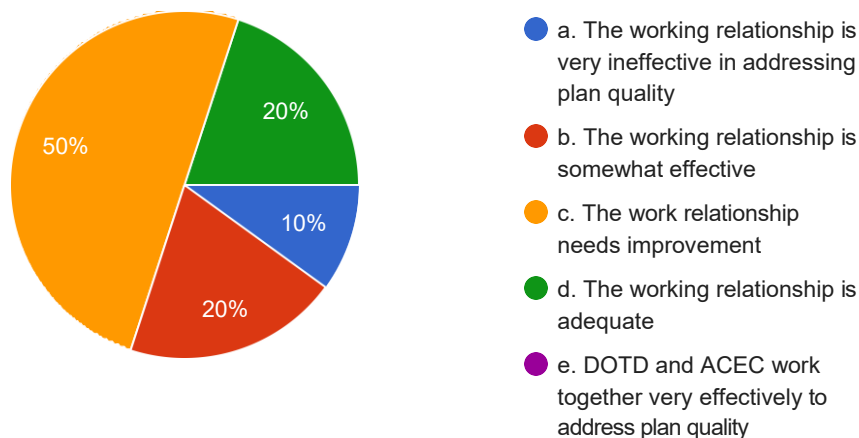
**17.) If project budgets and schedules are adhered to, should there be financial incentives for consultants who excel in plan quality?**



**18.) Other than the DOTD's E&O policy, should there be penalties for poor quality?**



**19.) Please select the statement that best describes the DOTD and ACEC working relationship for addressing plan quality issues.**



**20.) Thinking of plan quality in general, what are the “bright spots” of DOTD’s QC/QA processes? Put another way, what are the good things that DOTD is doing to address plan quality? List up to three bright spots.**

- “Collaborative DOTD reviews via Bluebeam software so that all comments are made in one document which avoids repetition. Also, multiple reviews are effective in detecting most plan errors.”
- “Maintaining the concept of independent design and detail checking.”
- “DOTD has guidelines set up for QC/QA.”
- “Rewards good consultants, consultants are held responsible for their work, the award of future contracts are influenced by the consultant's QC/QA.”

- “Require plans detail check, design calculation check, QC\QA certification.”
- “1.) DOTD requires consultant QC/QA policies to be in place. 2.) DOTD encourages promotes plan quality as a priority. 3.) In-house checking typically consists of independent review (as opposed to red-line checking).”
- “Nothing. Too many rules that are in conflict with the resources and the tools available to follow them.”
- “none that i know of.”
- “All consultants must submit a QC/QA plan for review and approval and must follow DOTD QC/QA for submittals. DOTD notifies consultants of changes in policies such as BDEM and BDTMs.
- 1. Bridge Design policy for QC/QA is published for all to see. Including expectations of completeness and required deliverables for each project delivery milestone. 2. CadConform subprogram in Drafting software is intended to ensure proper detailing features are used.”
- “DTOD design manuals, QC/QA manuals, high level DOTD engineer review.”
- “Requiring documentation that QC/QA was performed.”

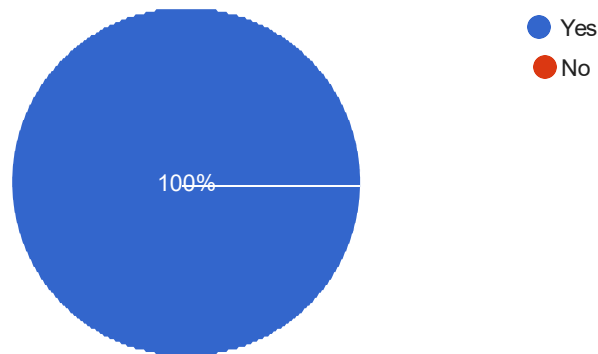
**21.) There is always room for business process improvement in any public or private organization. List up to three areas where you believe improvements in QC/QA can be made. (Examples: more training, updated policies and procedures, improved schedules/timelines)**

- “Pre-design / design kick-off meetings to ensure everybody understands the issues before beginning preliminary plans.”
- “More emphasis needs to be placed on identifying common plan errors, categorizing them, and developing ways to prevent the errors. Less time needs to be spent on relying on trying to inspect our way to quality - in other words, quality is more in the hands of the person doing the original work than the hands of the checkers and reviewers.”
- “More training, hire qualified people.”
- “Updated policies and procedures and improve the schedules and timelines Award project to most experienced and qualified firm.
- 1.) A knowledge-sharing forum to discuss on-going should be implemented; 2.) Lessons learned should direct policy update/change when appropriate (plan quality is definitively assessed during bidding and construction). 3.) QC/QA policies should be modified to aid the workflow (as opposed to functioning as additional levels of bureaucracy).
- 1.) Enforcement of a contract termination clause as deemed necessary by the project manager. 2.) Agency should only create contracts and projects commensurate with the resources and size and population of our State. First order of bussiness would be to remove the D form the neame and be just DOT like the other 49 states. Ladotd is currently involved in too many activities it cannot properly support or handle. Hiring

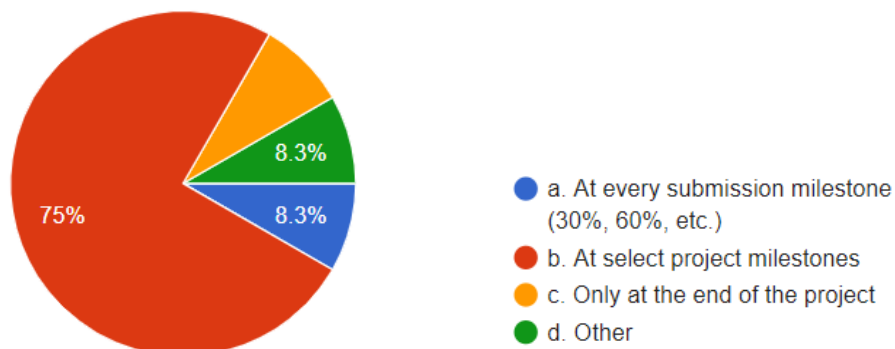
more consultants just accelerates the problems created by too many activities. 3.) Eliminate all unnecessary training in order to create more real work time.

- Training and followup. Followup may need to be in the area of consequences.”
- “More training and communication of our updated policies to junior consultant engineers.
- 1.) More enforcement of policies already set in place. 2.) More emphasis placed on quality in consultant selection process.”
- “DOTD update policy and keep the consistency, provide access for consultants, training.”
- “Provide Consultants with adequate time to develop plans. Provide Consultants with a well defined scope of services.”

**22.) Are you involved with rating consultant performance?**



**23.) At what point(s) in plan development are consultant's rated?**



**24.) If you selected B or D above, please elaborate below.**

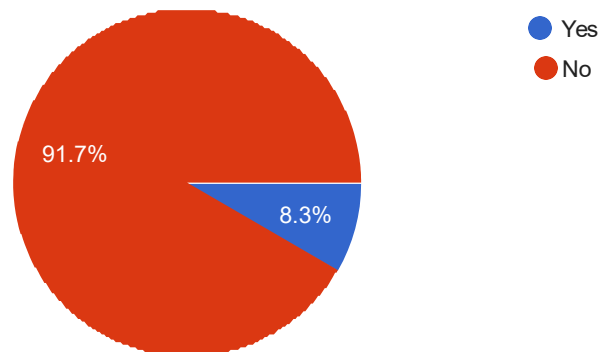
- “Not all projects have 30, 60, 90 submittals. Consultants are typically rated at the end of preliminary plans, and then again at the end of final plans.”
- “If very little work is represented at the milestone in question, or if very little progress/development since the last milestone exists in the submittal, a rating may not be necessary. For instance, when considering Bridge Plans, there may be other areas of the plans that have progressed while the Bridge Plans are basically the same. Ratings are definitely required at final milestones such as 100% Preliminary and 100% Final.”
- “Plan-in-hand, ACPs, Final Plans.”
- “At major milestones, Preliminary Plans, ACP, Final Plans, Construction phase.”
- “It may change depending on the contract period, but typically consultants should be rated at 100%PP, at 100%FP, and at substantial completion of construction.”
- “Rate at b and d if it is contact with problems.”
- “A plus at any point or in event the PM or grader believes is needed.”
- “Typically, 100% Preliminary and 100% Final Plans.”
- “Once in Preliminary Plans and once in Final Plans (Typical project). Larger projects have more.”
- “At submission milestones and when run into quality issues.”
- “Plan completion. Construction completion.”

**25.) How many days after a check point or project completion are performance ratings done?**

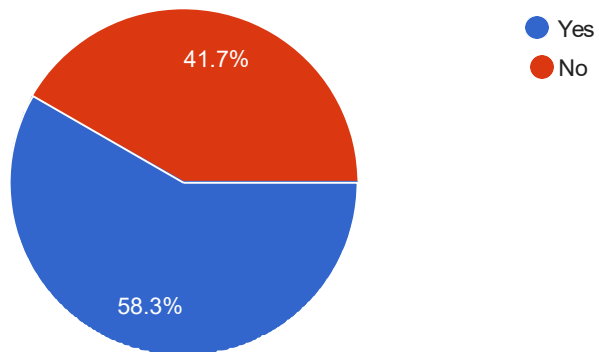
Answers:

- varies
- Usually within 60 days.
- Varies. Depending on workloads.
- 7
- 30
- Ideally, within 30 days
- should be as soon as possible
- Varies
- 1-5
- 1-30 days
- Could be several months

**26.) Do you perform post-construction quality reviews to measure the quality of the design plans?**



**27.) Are subconsultants rated as part of the prime consultant score?**

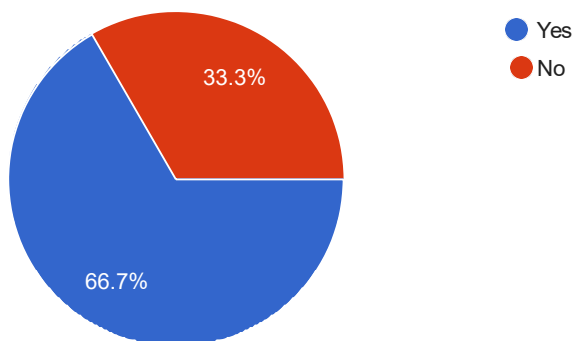


**28.) How many hours does it take you to complete a consultant performance rating?**

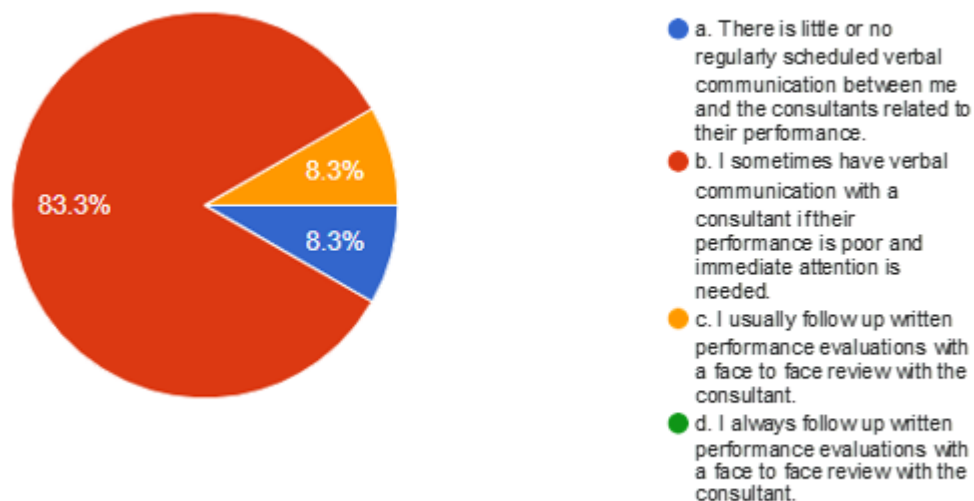
Answers:

- 2
- 1 - 2 hours
- 1 to 1.5
- 1-2 hours
- minimum 30 minutes pending rated area
- Less than one
- 1-2
- 1 Hour
- 1
- 1/2 hour

**29.) The consultant rating forms cover both project management and quality. Do you feel they are given equal weight in the scoring?**

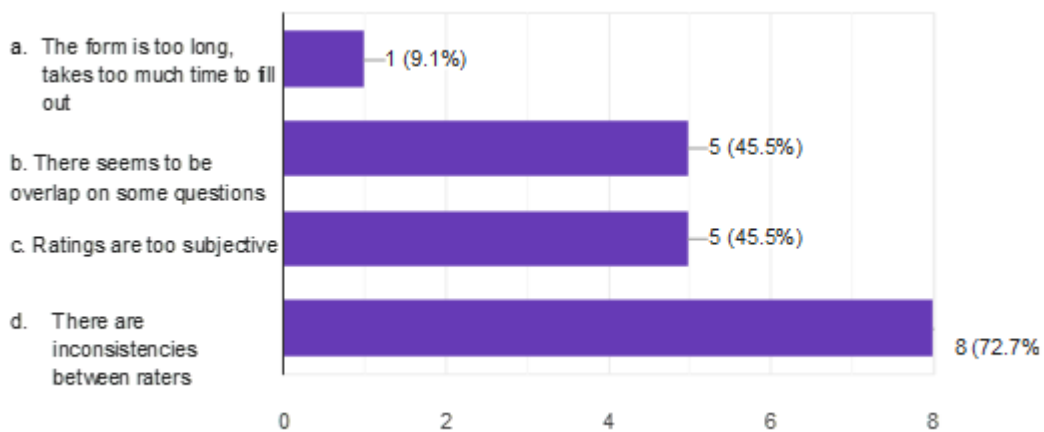


**30.) Which statement best describes your verbal communication or feedback to consultants?**

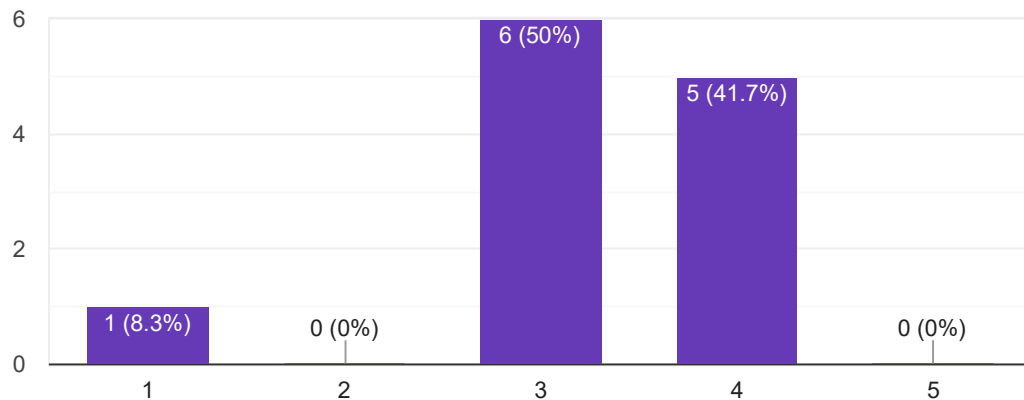




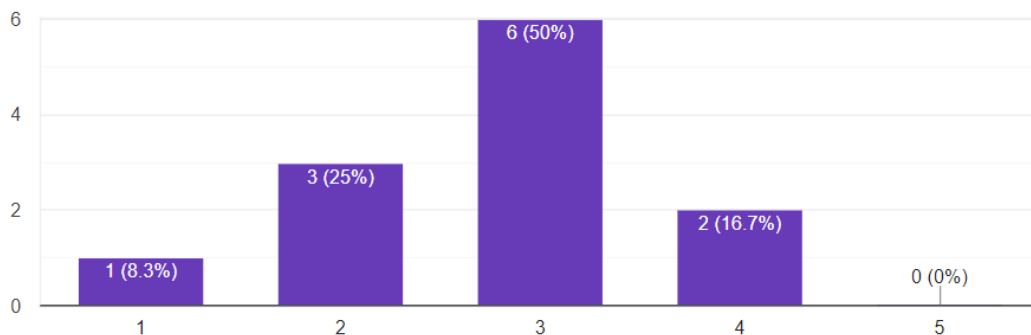
**31.) Would you say any of the following problems or shortcomings exist in the use of the rating forms or rating process in general? Mark all that apply.**



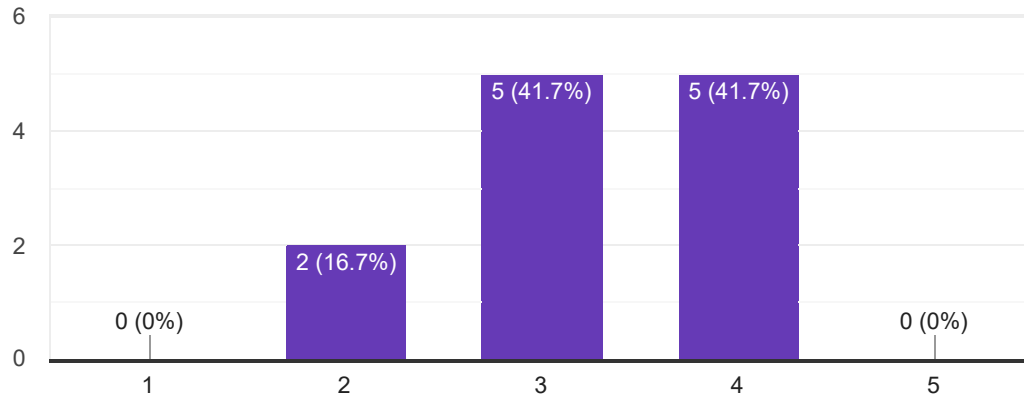
**32.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve plan quality.**



**33.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve project management.**



**34.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve consultant selection.**



**35.) List up to three major bright spots in the consultant rating process.**

- “Simplified form.”
- “Consultant Ratings represent "Past Performance" and carry a high weight in the selection process.”
- “The rating form is accessible on intranet.”
- “Acts as an incentive for consultants to strive to get better, gives consultant feedback in a timely manner, helps in the rating process during advertisements.”
- “Provide record of past performances; help to identify area need improvement; weight for future consultant selection.”
- “1.) Consultants care about their ratings (they are given significant weight in the consultant selection process); 2.) The consultant rating form simplifies/expedites the rating process and helps to ensure that all aspects of the consultant's performance are being evaluated; 3.) The breakdown by rating category allows targeted evaluation (a high-quality bridge consultant will be less impacted by a poor road design performance).”
- “Gives the contractor an opportunity to appreciate his standing with the Client in the performance of the Contract.”
- “It is not my prime task.”
- “Incentivizes consultants to produce better quality plans on schedule, gives DOTD an opportunity to review the consultant's plan development process and provide feedback.”
- "1.) Allows for better Consultants to be rewarded for their performance by factoring into future selections. 2.) Gives Consultants (good and bad) tangible feedback on their current performance to allow acknowledgement on good performance and

constructive criticism on poor performance.”

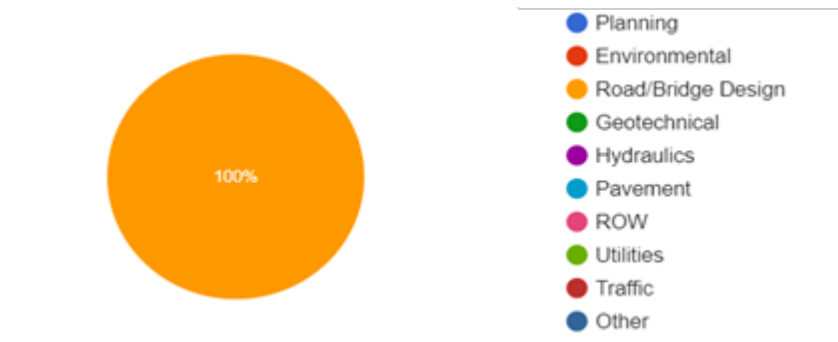
- “Good reference for future selection, easy, quick.”
- “Process is relatively short. New forms distinguish between different engineering disciplines.”

**36.) List up to three ways you feel that consultant performance ratings processes could be improved.**

- “More objective criteria. Anonymous grades.”
- “Ratings for each firm should be discipline specific and only be used when considering the consultant in question for selection for design work in the discipline rated (I believe DOTD is moving towards this endeavor).”
- “Improve rating consistency among raters. Make the rating form more user friendly.”
- “Make it simple but effective. As the personnel (designers) changes within consultant firms, it makes it harder to utilize past performance as an effective tool for consultant selection.”
- “1.) Raters should be provided with additional training to clarify how scores should be assigned (i.e. what constitutes a 3, a 5). 2.) Each rating category should have centralized oversight and approval (to minimize the effects of subjectivity). 3.) Consultants should have very limited recourse once a rating is issued (DOTD administrative approval for the rating should be obtained BEFORE it is issued and the DOTD administration should support it once issued).”
- “No flexibility. The questionnaires are geared towards only the classical type of engineering work. There many other types of work we contract that does not involve the delivery of plans. The manager of the contract is given no latitude to grade the actual work being performed if does not fit the cookie cutter questionnaire.”
- “Remove some of the reviewer's other job tasks.”
- “More training to achieve consistency between raters and reduce subjectivity.”
- “1.) More objectivity (quantitative) measures to score with. This would make the process less bias and give more of a measurable to compare consultants' performance.”
- “Simplified, increase consistency between different raters, add detail.”

## B. LTRC Road Design Focus Groups

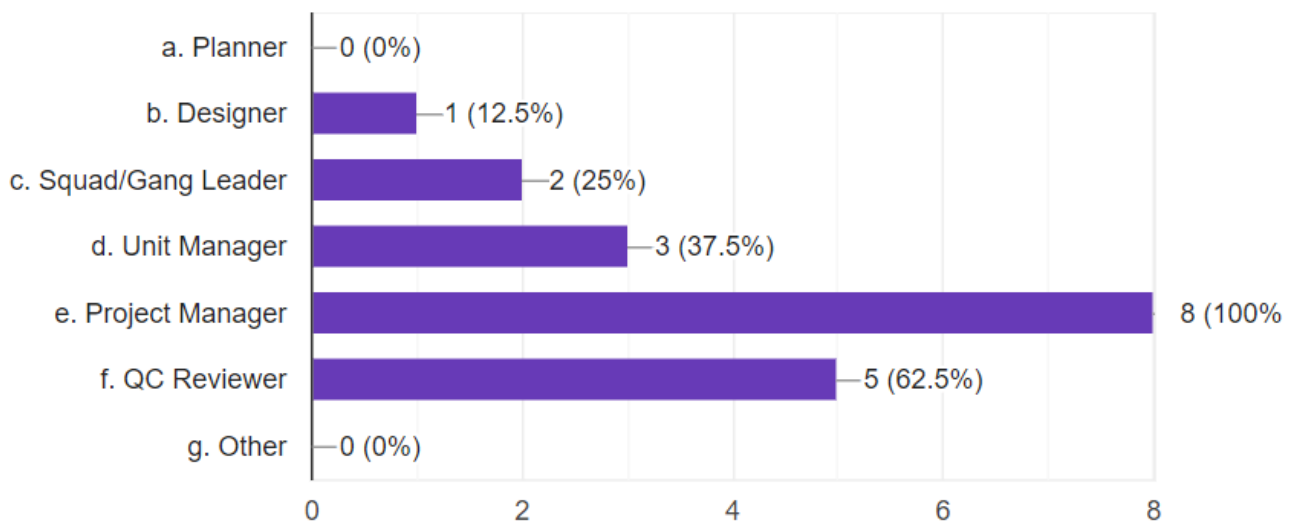
### 1.) Which discipline are you primarily involved with?



### 2.) If you selected "Other", please specify.

- No responses for this question.

### 3.) What is your role or function? Please mark all that apply.



### 4.) If you selected "Other", please specify.

- No responses yet for this question.

### 5.) As succinctly as possible, please provide your definition of plan quality.

- “A set of plans that contains all information required to construct a project that meets the scope with few errors.”
- “Plans which are complete, accurate, free of errors and omission of foreseeable issues and constructable.”

- “A set of plans that are legible, constructible and follow guidelines and policies. Also, a minimum number of significant deviations of quantities shown in the plans and in the field.”
- “Clearly explains the intent of the project while being concise and correct. Plans that follow all policies, guidelines and procedures.”
- “Plans adhere to all CAD standards and follow all LADOTD/ASHTO guidelines concerning design.”
- “Clear and concise plans that meet the owner's requirements and convey the intent of the designer to anticipated users (contractor).”
- “The project is constructible with very minimal change orders due to design errors.”

**6.) What are the three quantifiable measures of quality that are most important to you?**

- “Accurate quantities, meets cad conform requirements and a sequence of construction that is clear.”
- “Number of errors, constructability, and minimizes construction time and site impacts.”
- “1. Follow guidelines and policies. If the plans do not follow, then they should utilize design exceptions and waivers as needed. 2. Number of plan revisions. 3. Number of falcon questions received prior to letting.”
- “Clear/Correct/Concise.”
- “Correct information, biddable, meets all policies, guidelines and procedures.”
- “Plan errors, On-time deliverables, assistance required (not sure if that one is measurable).”
- “Appropriate Design based on required guidelines, quantity calculations, clarity of plans.”
- “Design guidelines followed (AASHTO & DOTD); correct pay items used; pay items quantified.”

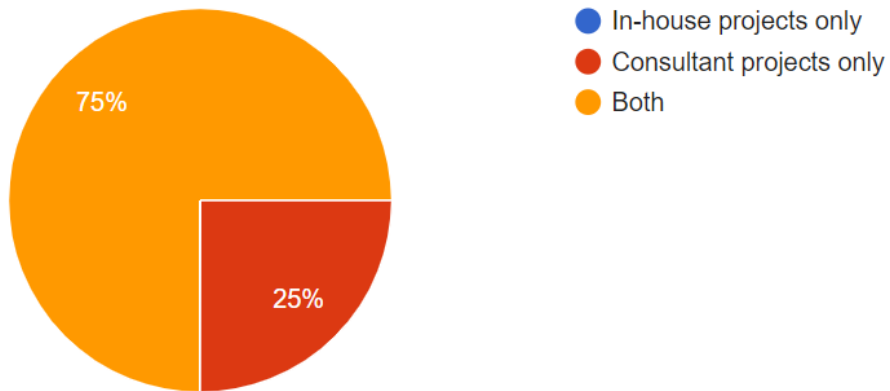
**7.) What percentage of your time is performed on QA/QC functions?**

Answers:

- 50
- 20%
- 25%
- 25
- 10%
- 50

- 20%
- 50

**8.) Do you perform your QC/QA responsibilities on:**

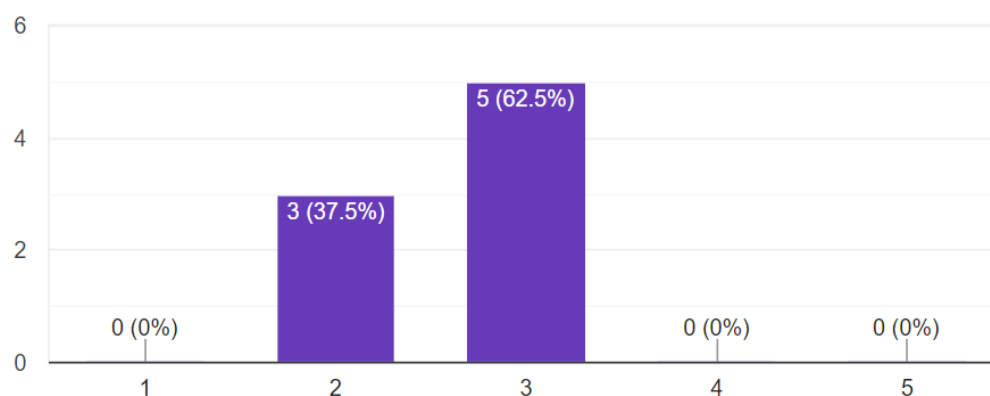


**9.) For your discipline, what percentage of work is performed by consultants?**

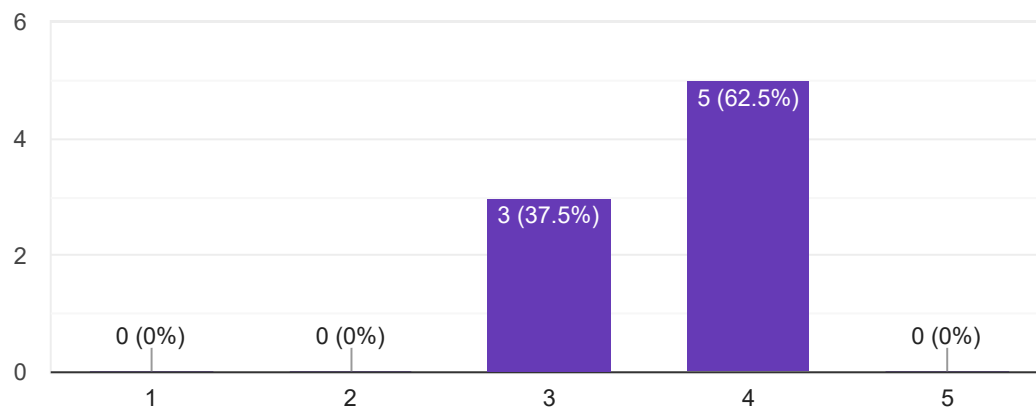
Answers:

- 50
- 25
- 100
- 50
- 85
- 60
- 50
- 40

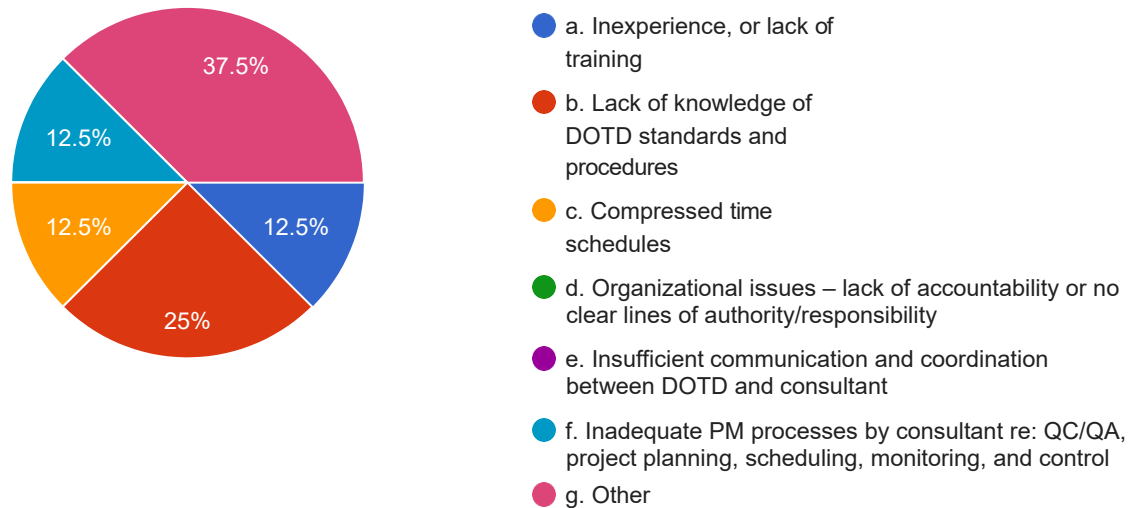
**10.) On a five-point scale, how would you rate consultant plan quality?**



**11.) On a five-point scale, how would you rate in-house plan quality?**



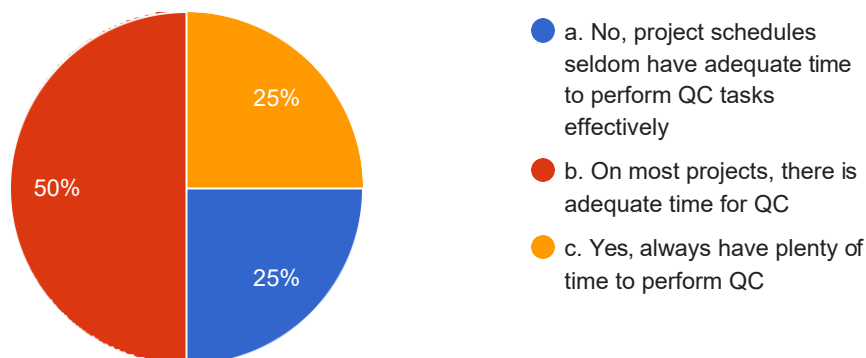
**12.) Where you experience consultant plan quality problems, what would you say is the root cause?**



**13.) If you selected "Other", please elaborate.**

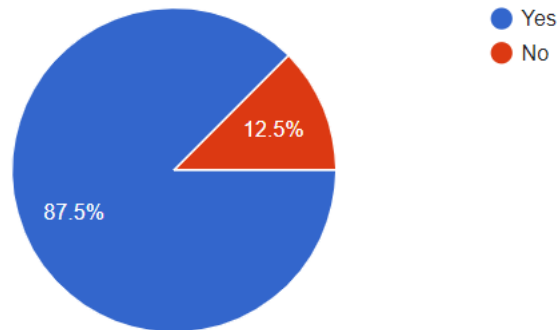
- “Disordered priorities; plan quality isn't the most important aspect of their work. Their internal evaluation of a successful project doesn't place a high enough significance on plan quality.”
- “This varies from Consultant to Consultant but more than one (1) of the above options may apply to the same set of plans.”
- “Plans are often submitted with significant errors. This gives me the impression that the consultant isn't diligently reviewing the design prior to submitting the plans, but expecting the department to QA/QC and comment on the plans. In some cases, it is evident that the consultant is just designing based on comments.”

**14.) Is adequate time for plan checking, review and other QC tasks provided for in the project schedule?**

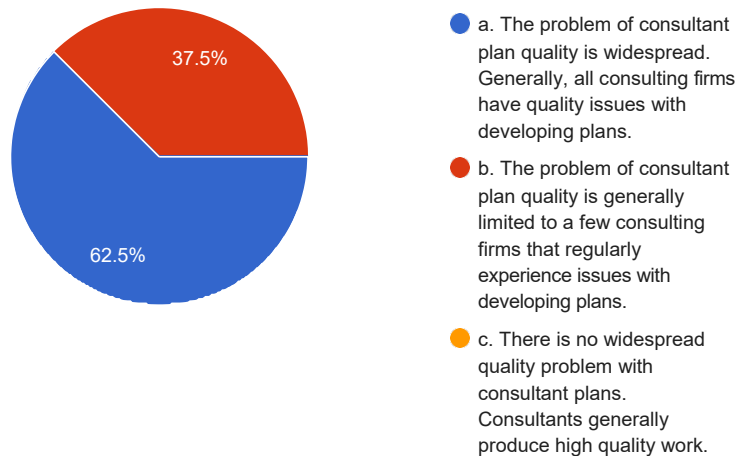




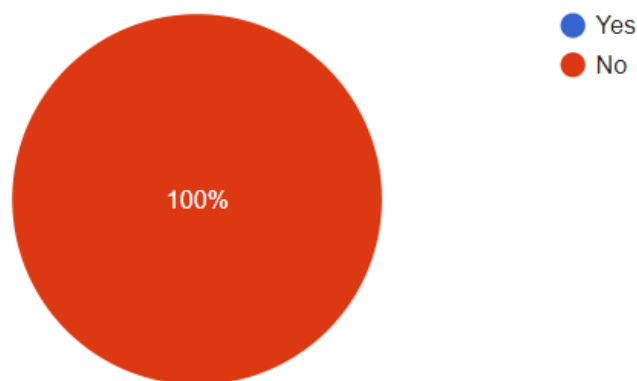
**15.) Is there a need for (more) QC training?**



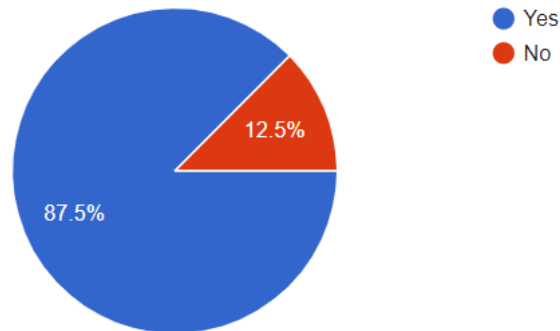
**16.) How widespread is the problem of poor plan quality by consultants? Please select the statement that best represents your opinion.**



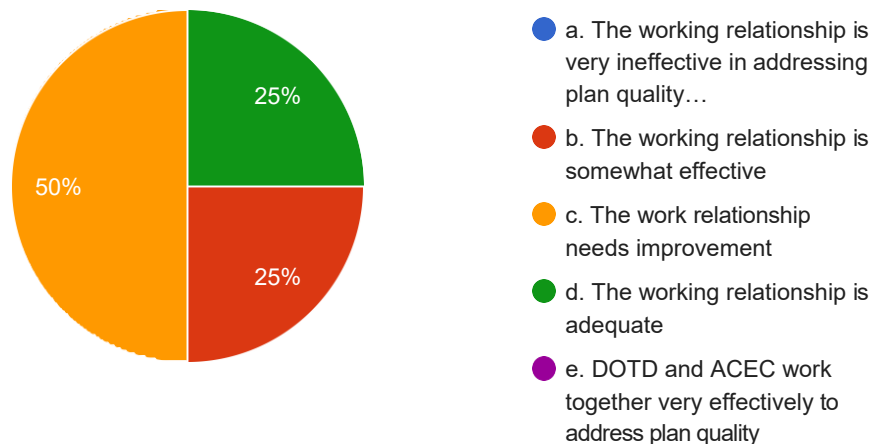
**17.) If project budgets and schedules are adhered to, should there be financial incentives for consultants who excel in plan quality?**



**18.) Other than the DOTD's E&O policy, should there be penalties for poor quality?**



**19.) Please select the statement that best describes the DOTD and ACEC working relationship for addressing plan quality issues.**



**20.) Thinking of plan quality in general, what are the “bright spots” of DOTD’s QC/QA processes? Put another way, what are the good things that DOTD is doing to address plan quality? List up to three bright spots.**

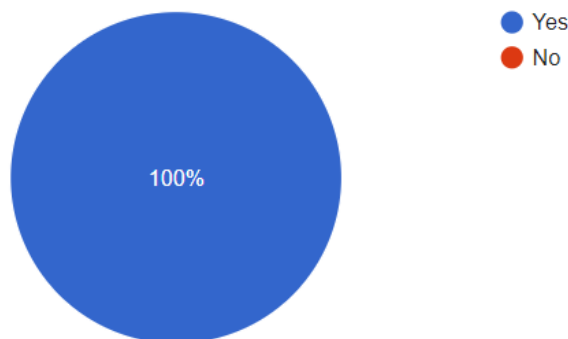
- “We have multiple checklists and the plans go through multiple reviews to ensure that the project is constructible and biddable.”
- “Monthly reviews of change orders to determine if they are due to design error and if there is any consistently repeating; random selection of projects for review by our in-house QA/QC unit.”
- “We have instituted several plan checklists and constructability forms to help with plan quality.
- “Preliminary and Final Plan QC/QA checklist. Chain of Command review of plans before sending to Chief Engineer's desk. Cross Squad Checking of plans.”

- “QC/QA forms, creating a new plan checking unit, number of plan reviews.”
- “Established CadConform, developed QC/QA checklists for Road Design and Bridge Design to guide consultants, independent task manager checks for consultant projects.”
- “Standard forms like the constructability and QA/QC forms that provide guidance as to things that should be considered/checked when reviewing the plans.”
- “Multiple reviews within plan development; QC/QA checklist; consultant rating.”

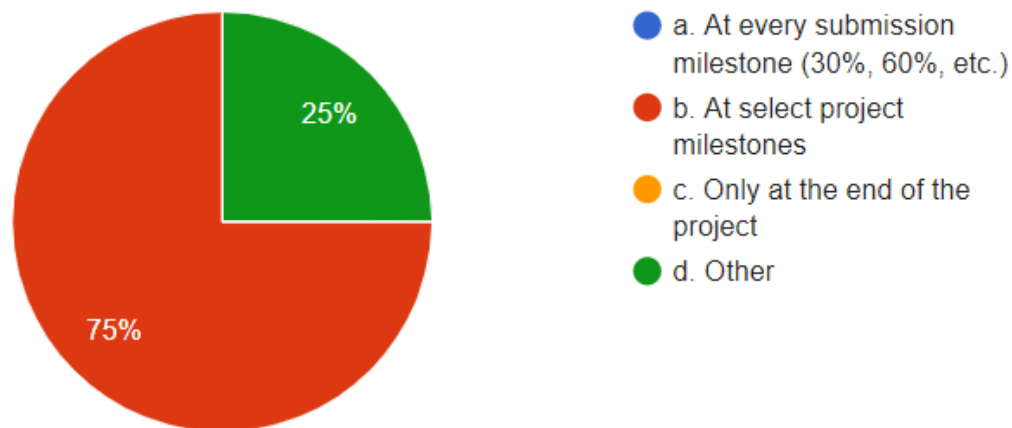
**21.) There is always room for business process improvement in any public or private organization. List up to three areas where you believe improvements in QC/QA can be made. (Examples: more training, updated policies and procedures, improved schedules/timelines)**

- “Training, accountability.”
- “More/stronger consequences for poor performance; better understanding of construction practices by designers.”
- “Maybe we need more time in the schedule, but the consultants need to take the initiative to check their plans for errors and to take responsibility for what they submit.”
- “Streamline the forms for QC/QA process. More training on what some of the questions are asking on the forms. Having Road Administrator review plans once in Preliminary Plan Phase.”
- “More training, consultant accountability, the new checking unit.”
- Possibly training to show frequent problems that occur in plan sets. When schedules are compressed, typically the review times are the first to be cut.
- “More training.”
- “Some internal training on plan review; have dotd sections perform qc/qa reviews in a timely manner; incorporate district construction more in plan development.”

**22.) Are you involved with rating consultant performance?**



**23.) At what point(s) in plan development are consultant's rated?**



**24.) If you selected B or D above, please elaborate below.**

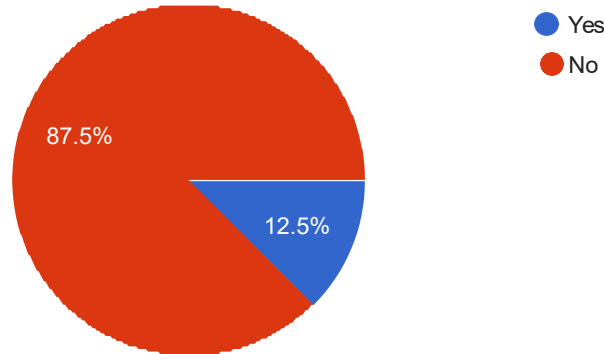
- “At the 100% preliminary plans and at 100% final plans.”
- “Our internal goal is rate consultants at least once per preliminary and final plans, each; with the exception of preservation projects. We may rate them more frequently, i.e., each milestone or deliverable, but rarely have/take the time.”
- “95% preliminary and 100% final plans.”
- “Once for Preliminary Plans and Once for Final Plans. May rate again after Letting of the project.”
- “Minimum 100% preliminary plans and 100% final plans.”
- “100% preliminary plans, 100% final plans.”
- “100% preliminary and 100% final plans.”
- “100% preliminary, 100% Final, after letting date.”

**25.) How many days after a check point or project completion are performance ratings done?**

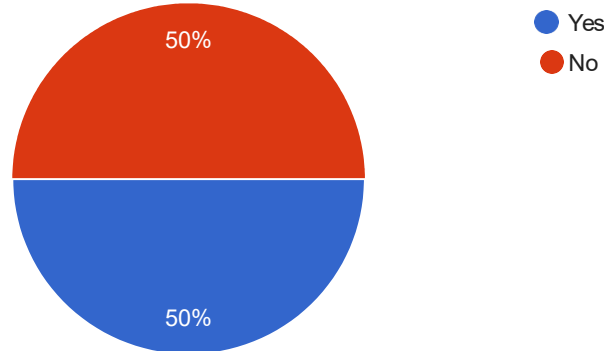
- “60 for preliminary and 90 for final.”
- “Our goal is 30 days after preliminary plan date and 90 days after final plan date.”
- “Ideally within 30 days.”
- “30 days.”
- “As soon as possible. Within 30 days of preliminary and 90 days for final plans.”
- “Nothing typical. Should be immediate.”
- “As soon as possible, ideally at the same time we review the 100% plan submittal.”

- “30-90.”

**26.) Do you perform post-construction quality reviews to measure the quality of the design plans?**



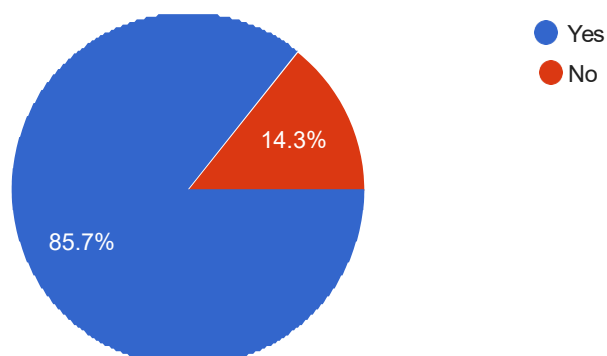
**27.) Are subconsultants rated as part of the prime consultant score?**



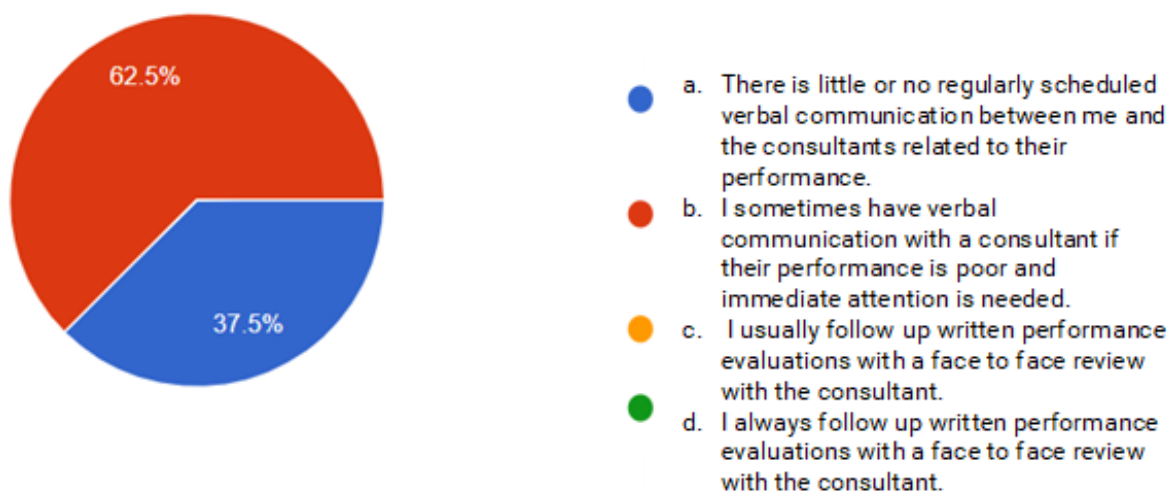
**28.) How many hours does it take you to complete a consultant performance rating?**

- “Less than 1.”
- “Three to four; with most of it compiling supporting documentation.”
- “4-5”
- “1 or 2 hours depending on the issues/comments received during the plan development process Depends on the documentation required and project complexity. Maybe 4 hours.”
- “4 hrs 0.50”

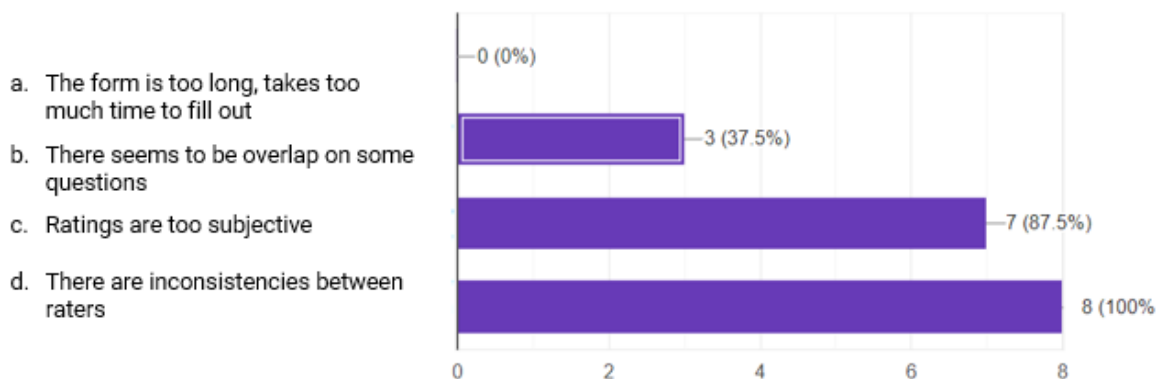
29.) The consultant rating forms cover both project management and quality. Do you feel they are given equal weight in the scoring?



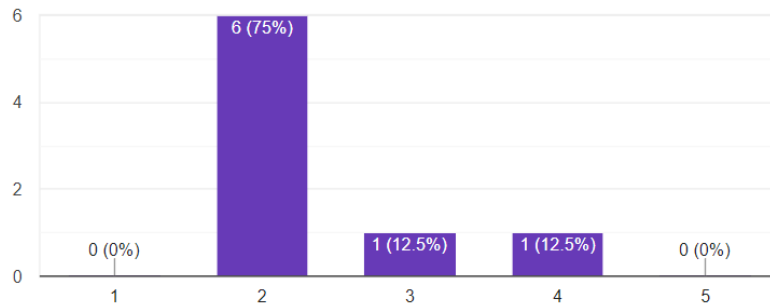
30.) Which statement best describes your verbal communication or feedback to consultants?



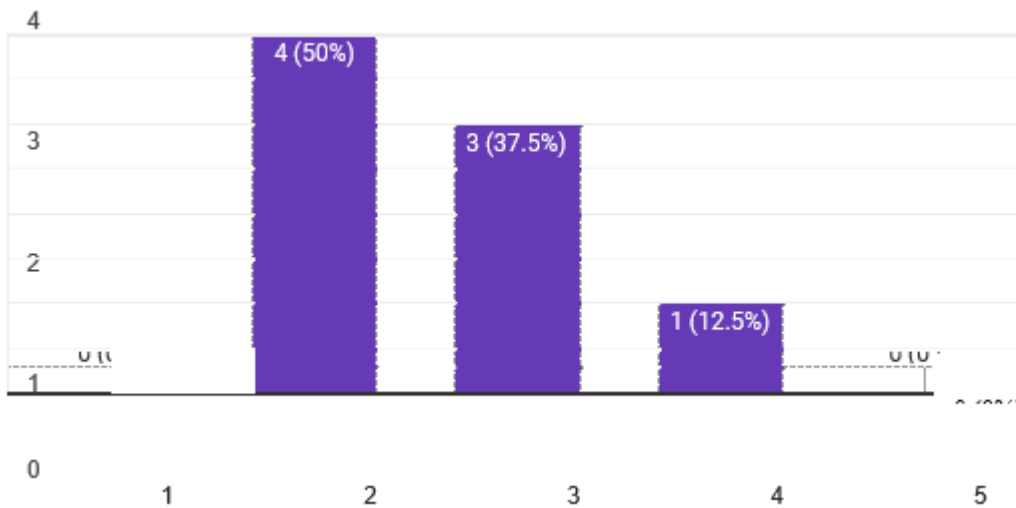
31.) Would you say any of the following problems or shortcomings exist in the use of the rating forms or rating process in general? Mark all that apply.



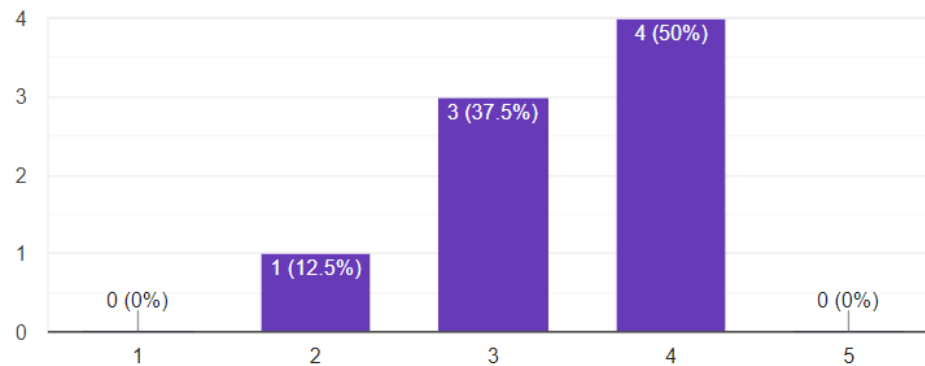
**32.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve plan quality.**



**33.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve project management.**



**34.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve consultant selection.**



**35.) List up to three major bright spots in the consultant rating process.**

- “Reward good consultants,”
- “When used correctly, the rating process and form works well to capture and document the consultants performance; good and bad. A bad rating affects their ability to get new jobs, and a good rating helps to ensure we are perpetuating good work and selecting good consultants. The problem is consultant's interpretation of "average" and staffs willingness to be firm and document poor performance.”
- “I guess it helps to ensure the better consultants have a better chance of being selected for a project.”
- “DOTD has pushed to rate all consultant performance within a certain timeframe of completing Preliminary and Final Plans.”
- “DOTD uses the ratings as part of consultant selection for future projects The consultant gets specific feedback from the consultant rating.”
- “Used for consultant selection, it's a way to provide feedback, required at major milestones.”
- “1. It is a formal document. So, all are being rated on the same questions. 2. It is reviewed by a supervisor before it is submitted to the consultant. 3. It is electronic. So, the submittal is efficient.”
- “Provides feedback and incentive to consultants.”
- “Accountability; highlights areas where improvement is needed; reviewers must elaborate on weak/high areas.”

**36.) List up to three ways you feel that consultant performance ratings processes could be improved.**

- “More training, categories that are less subjective (more measurable categories) and examples of what is required for excellent rating.”
- “Staff must understand how the ratings are used by the Department for future

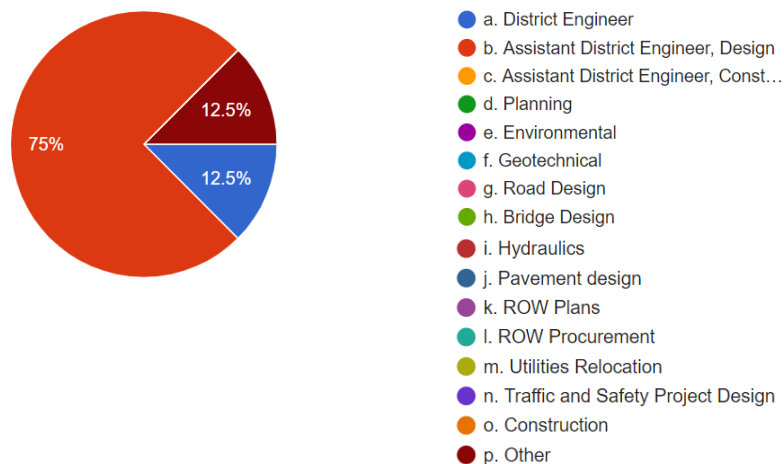


selections and how to accurately rate performance and not be afraid to tell a consultant when work was adequate or poor.”

- “More consistency in scores amongst DOTD personnel. Widespread understanding and acceptance that a "3" is a good score and meets expectations.”
- “Be more specific and consistent when consultants should be rated. I think currently we are told we can rate consultants as often as we want to.”
- “Make it mandatory to meet with the consultant to discuss the rating Somehow limit the subjective grading from one person to the next.”
- “Improvement to the form is needed, ratings need to be completed in a timely manner and at necessary milestones.”
- “The ratings vary based on the rater. Maybe have training to cover the expectations of the department to try to give more unified ratings and not solely training on the software.”
- “Some consideration should be given to the items being rated.”
- “Have specific review forms at plan development stages (rate consultant on tasks that should be completed at stage); an internal checklist for consultant to know what forms need to be completed at plan development stages.”

## C. LTRC District Focus Group

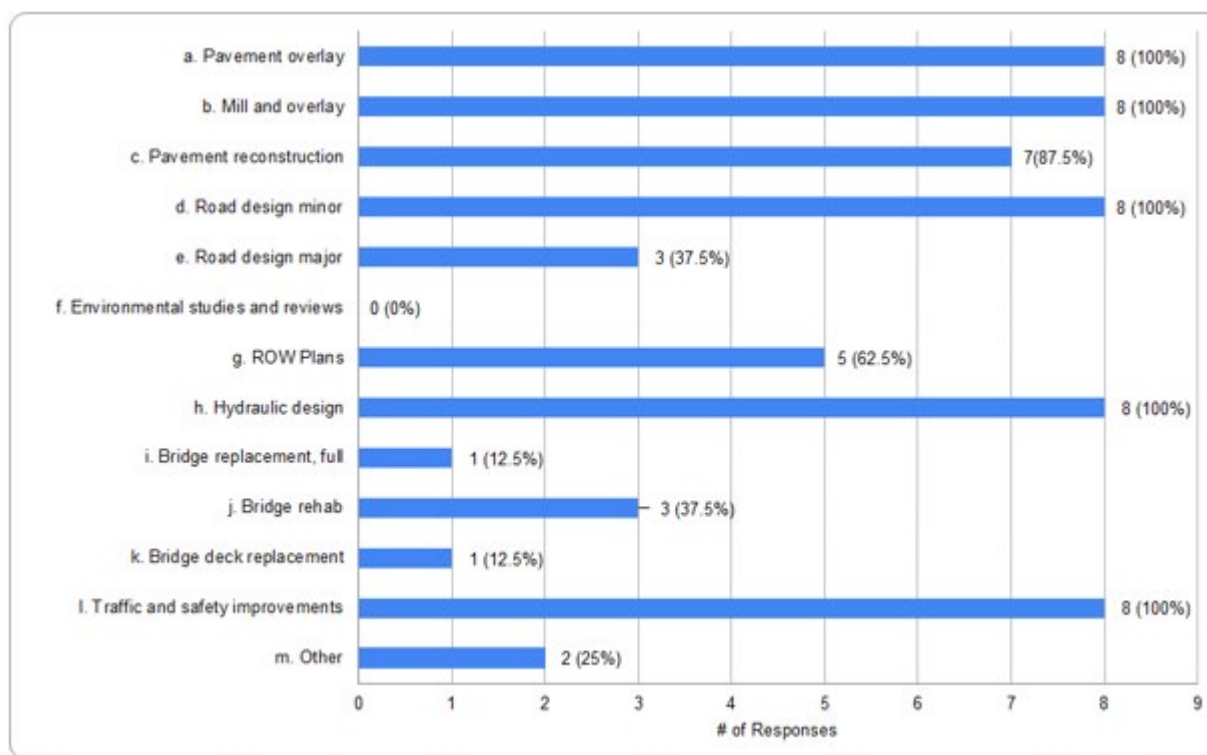
### 1.) What is your primary function?



### 2.) If you marked "Other" in the previous question, please elaborate.

- Assistant District Administrator of Engineering

**3.) List all the types of projects for which your District prepares plans or oversees consultant plan development. Mark all that apply.**



**4.) If you marked "Other" in the previous question, please indicate the other general types of projects.**

- “Dam safety, Levee Inspection.”
- “Maintenance repair projects such as cross drain replacement, facility repairs, new facility buildings, etc.”

**5.) As succinctly as possible, please provide your definition of plan quality.**

- “Plans that reflect the scope of the project with little or no error.”
- “Plans which provide accurate, detailed, and thorough information which can be used by a prudent contractor to construct the project with minimal ambiguity and justifiable change orders caused by omission and/or error of information which is reasonably available.”
- “Plans that are biddable and constructable with as few errors as possible.”
- “Easily readable plans that convey the designer's ideas on paper without requiring discussion. Are the plans clear and can you build it.”
- “Clear, correct, concise with minimal handholding and instruction.”
- “Plans that are consistent, realistic, buildable, with reasonably accurate quantities

that meet all design and CADD policy and standards within reason.”

- “A concise, accurate and complete design from which a contractor can submit an accurate bid and construct the project without plan changes and cost overruns.”

**6.) List the three quantifiable measures of quality that are most important to you?**

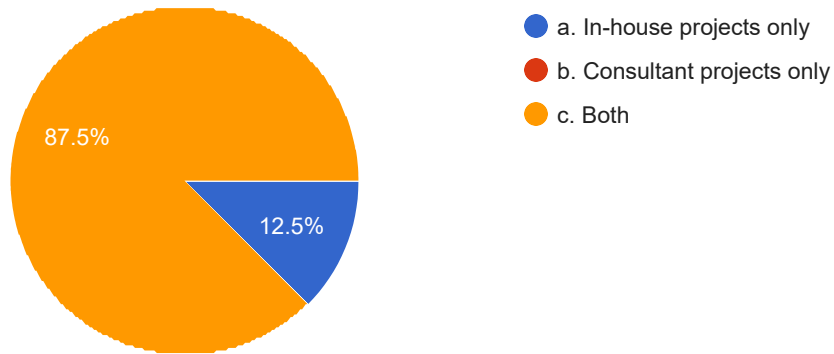
- “Scope specific, match specifications, quantities are accurate.”
- “Number of Change Orders as a direct result of errors. Cost of Change Orders. Number of errors related to horizontal and vertical alignment errors.”
- “Change Order \$, Item quantity errors, # of Change Orders clear drawings, adequate quantities, free of errors.”
- “Clear, accurate.”
- “Clear, correct, concise.”
- “Meet Design Element Requirements Accurate Quantities.”
- “Meets Plan Preparation Standards making plans easy to follow and interpret.”
- “Complete-contains all necessary information to construct the project in accordance with given scope, accurate-all information provided in the plans is representative of what is on the ground, concise- plans have no information other than what is needed to construct the project.”

**7.) What percentage of your time is performed on plan development QC/QA functions?**

Answers:

- 20%
- 25
- 30%
- 10%
- 15
- 15%

**8.) Do you perform your QC/QA responsibilities on**

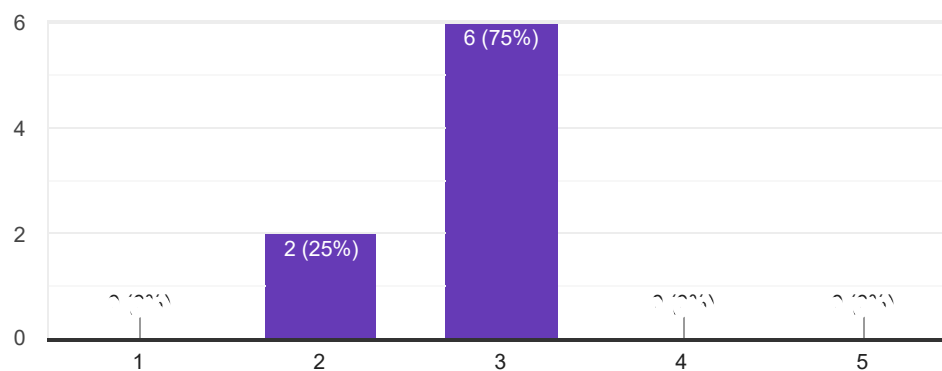


**9.) For your discipline, what percentage of work is performed by consultants?**

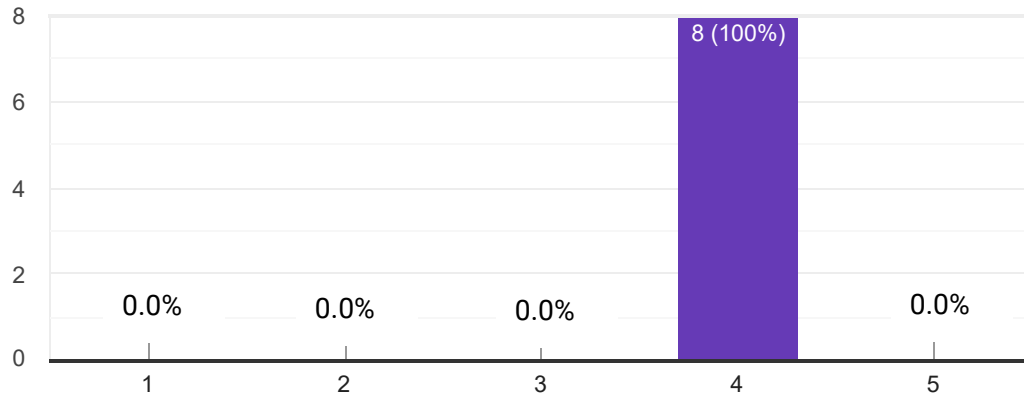
Answers:

- 90%
- 25%
- 20%
- 15 to 20
- 10
- I don't know
- Last figure for DOTD as a whole that I know of was 80%. Only 10% of District assigned plan development is contracted out.
- 5%

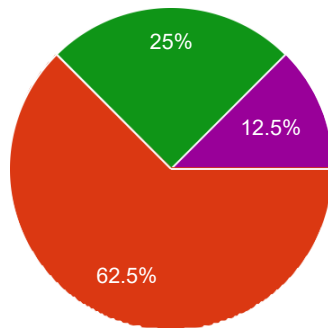
**10.) On a five-point scale, how would you rate consultant plan quality.**



**11.) On the same scale, how would you rate in-house plan quality?**

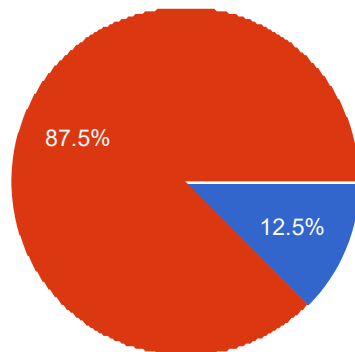


**12.) Where you experience consultant plan quality problems, what would you say is the root cause?**



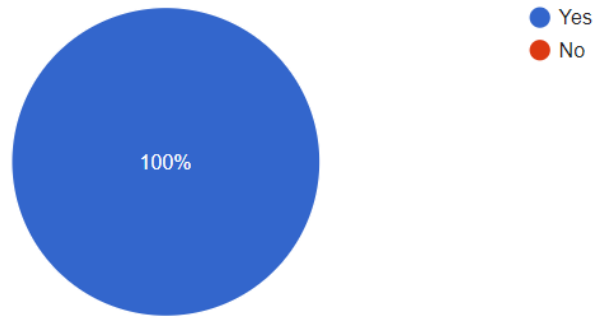
- a. Inexperience, or lack of training
- b. Lack of knowledge of DOTD standards and procedures
- c. Compressed time schedules
- d. Organizational issues – lack of accountability or no clear lines of authority/responsibility
- e. Insufficient communication, cooperation and coordination between DOTD and consultant
- f. Inadequate PM processes by consultant re: QC/QA, project planning, scheduling, monitoring, and control
- g. Other

**13.) Is adequate time for plan checking, review and other QC tasks provided for in the project development schedule?**

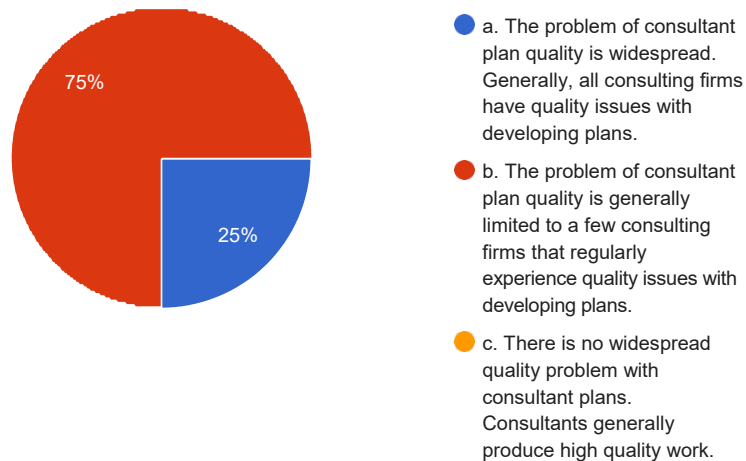


- a. No, project schedules seldom have adequate time to perform QC tasks effectively
- b. On most projects, there is adequate time for QC
- c. Yes, always have plenty of time to perform QC

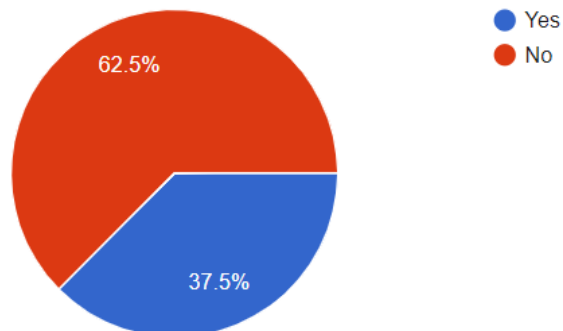
**14.) Is there a need for (more) QC training?**



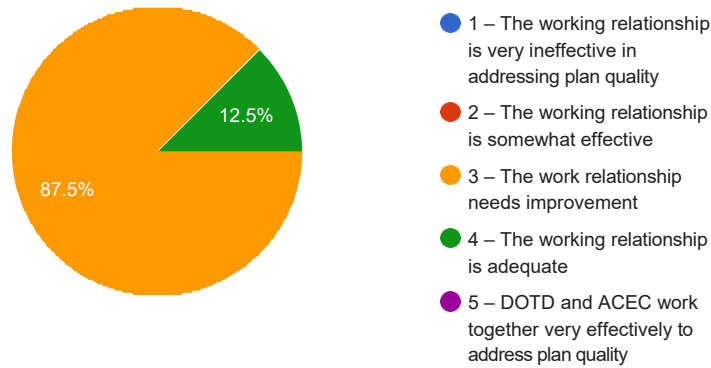
**15.) How widespread is the problem of poor plan quality by consultants? Please select the statement that best represents your opinion.**



**16.) If project budgets and schedules are adhered to, should there be financial incentives for consultants who excel in plan quality?**



**17.) Please select the statement that best describes the DOTD and ACEC working relationship for addressing plan quality issues.**



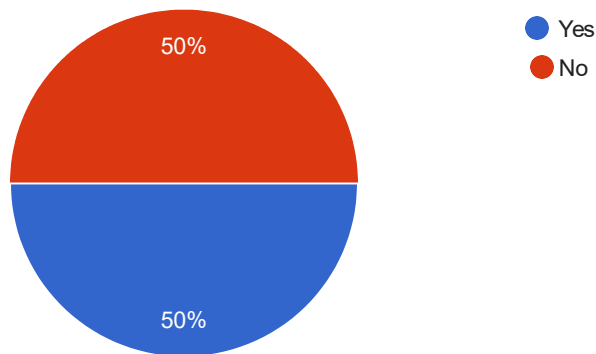
**18.) Thinking of plan quality in general, what are the “bright spots” of DOTD’s QC/QA processes? Put another way, what are the good things that DOTD is doing to address plan quality? List up to three bright spots.**

- “Constructability, adequate reviewers, backup checks Constructability Form. Various Stages of Review.”
- “Pre Design meetings, Interim Reviews, Published Review Lists Internally there was a push to improve plan quality in the last few years.”
- “Not really involved - only one project where I was PM and used consultant recently.”
- “CAD Conform for assuring plan sheets meet format standards, Require a matrix of how comments are addressed, CAD template drawings for sheet preparation, All manuals and policy available on internet.”
- “We seem to have an structured approach.”

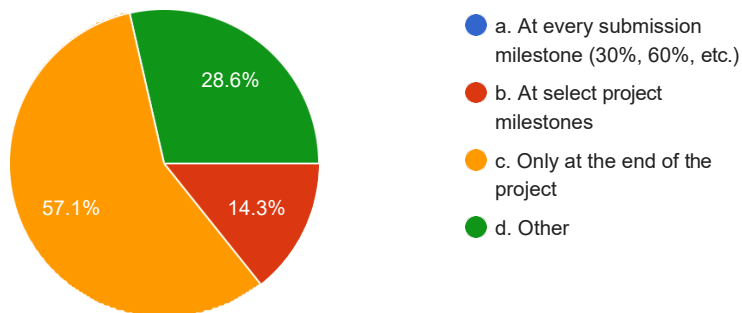
**19.) There is always room for business process improvement in any public or private organization. List up to three areas where you believe improvements in QC/QA can be made? (Examples: more training, updated policies and procedures, improved schedules/timelines)**

- “Stay abreast of policy changes, be familiar with policy, be consistent.”
- “Accountability; Experience of reviewers/understanding of what is important Improve coordination with construction/maintenance.”
- “Accountability for more than meeting timelines, Adherence to structured s, Communication, schedules and timelines, Training.”
- “Training, review of existing policies, review of existing manuals, Not familiar with the current process. More training?”
- “Better project scoping and process tracking. more training, structured timeline and delivery.”

**20.) Are you involved with rating consultant performance?**



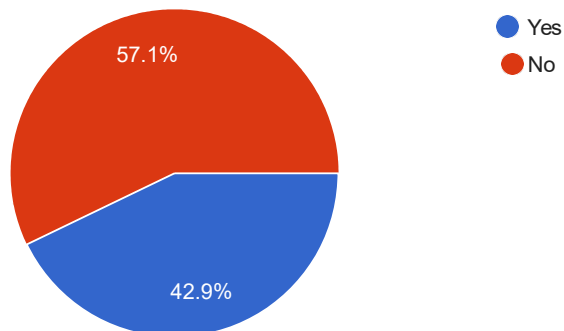
**21.) At what point(s) in plan development are consultant's rated?**



**22.) If you selected "at select project milestones" in response to the previous question, please elaborate below.**

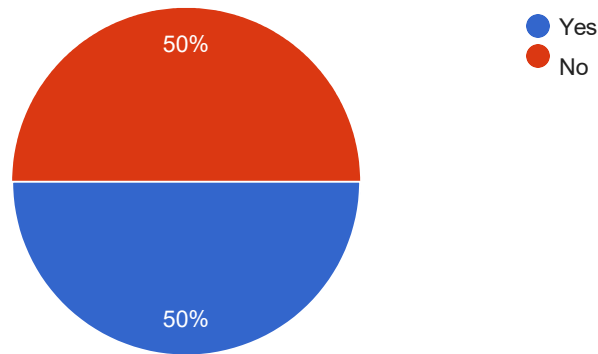
- “Determined by complexity of project.”
- “Its my understanding that you can rate at any point. But I typically rate at the conclusion of preliminaries and once the project lets or the contract is closed out.”

**23.) Do you perform post-construction quality reviews?**

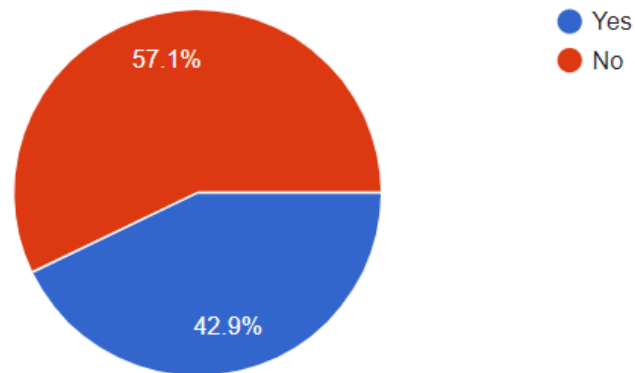




**24.) Do you rate consultants who perform construction inspection services?**



**25.) Are subconsultants rated as part of the prime consultant score?**

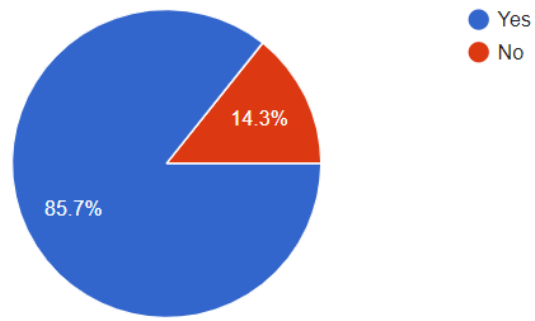


**26.) How many hours does it take you to complete a consultant performance rating?**

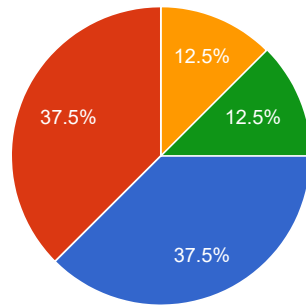
Answers:

- 1 hour
- 2 hours
- Depends on size and number of packages to review
- 1-2 depending on interruptions and if HQ questions my score 2

**27.) The consultant rating forms cover both project management and quality. Do you feel they are given equal weight in the scoring?**

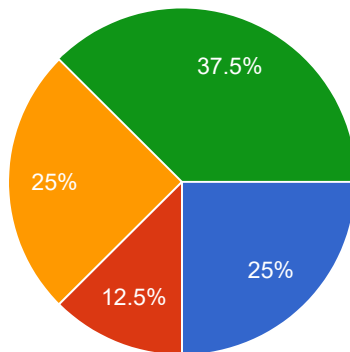


**28.) Which statement best describes your verbal communication or feedback to consultants?**



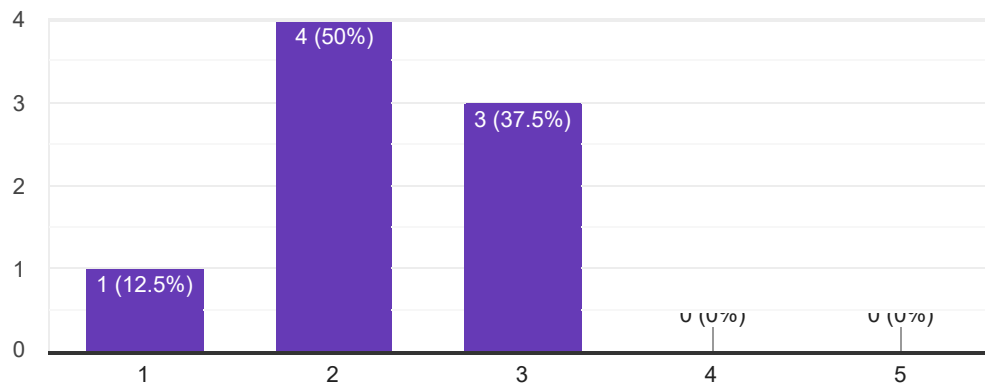
- a. There is little or no regularly scheduled verbal communication between me and the consultants related to their performance.
- b. I sometimes have verbal communication with a consultant if their performance is poor and immediate attention is needed.
- c. I usually follow up written performance evaluations with a face to face review with the consultant.
- d. I always follow up written performance evaluations with a face to face review with the consultant.

**29.) Would you say any of the following problems or shortcomings exist in the use of the rating forms or rating process in general? Mark all that apply.**

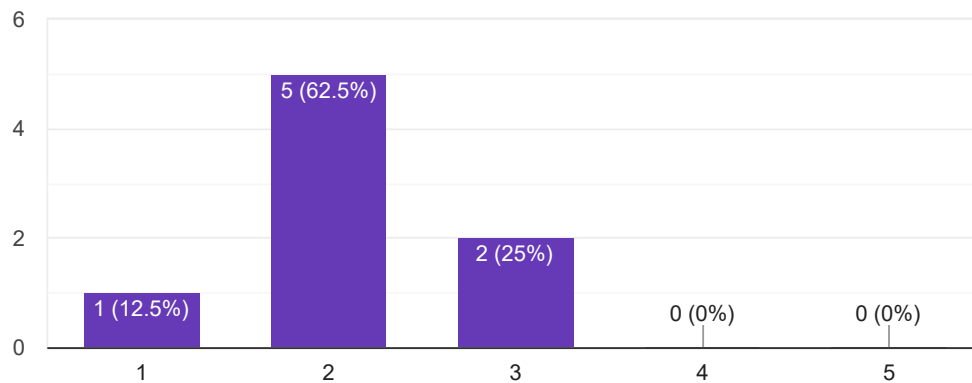


- a. The form is too long, takes too much time to fill out
- b. There seems to be overlap on some questions
- c. Ratings are too subjective
- d. There are inconsistencies between raters

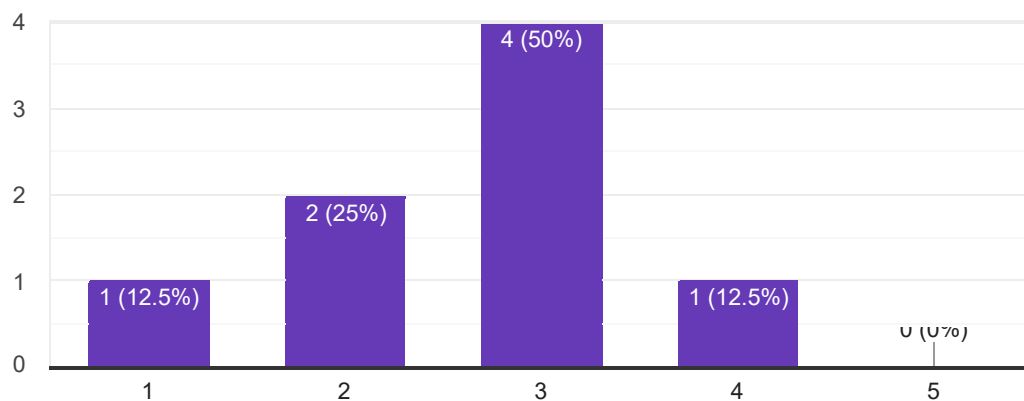
**30.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve plan quality.**



**31.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve project management.**



**32.) On a scale of 1 to 5, please rate how effectively the performance ratings are used to improve consultant selection.**



**33.) List up to three major "bright spots" in the consultant rating process.**

- “Timely submittals, completeness, accuracy provides opportunity for feedback.”
- “Learn consultant experience with related projects The scores are used later for DOTD projects.”
- “We have a process, it does attempt to address quality, it is available to all who are affected by the end product of the plans, etc.”
- ‘Helps to filter bad from good consultants.’

**34.) List up to three ways that you feel the consultant rating process can be improved.**

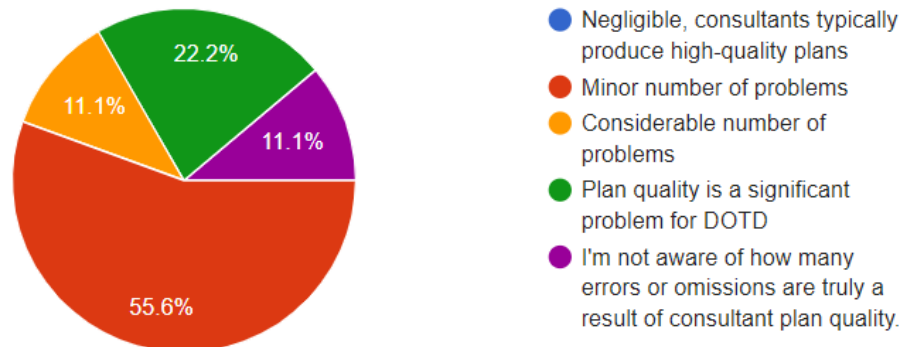
- “Communication with consultant, let them know what is expected, let them know why they got the rating they received.”

- “Actually used to disqualify consultants.”
  - “Similar project development experience.”
  - “Use a quantitative model, Score on the number of revisions/corrections required at each milestone, the number and magnitude of change orders.”
- “Additional training.”

# Appendix F: LTRC Consultant Questionnaire For ACEC

## A. Consultant Plan Quality

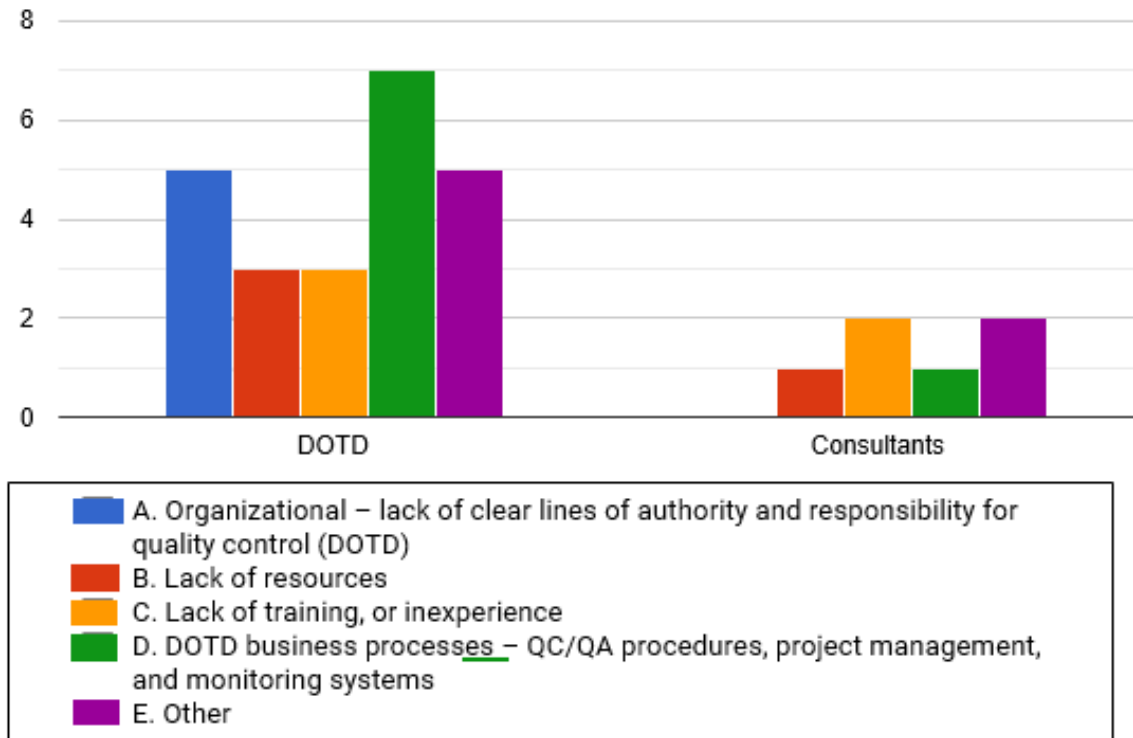
1.) How would you quantify the problem of consultant plan quality for DOTD? Please select one.



2.) If you selected "Other" for the previous question and want to add more detail, please elaborate here.

- “No perfect set of plans.”
- “Plan quality does have an effect on bid prices and change orders. But it seems that consultants are held to a higher standard than DOTD in-house designs/plans.”

3.) Where plan quality problems do exist, what would you say is the root cause(s) of the problem? Select all problems that apply (from columns A-E) and indicate the responsible party from the rows labeled DOTD or consultants.

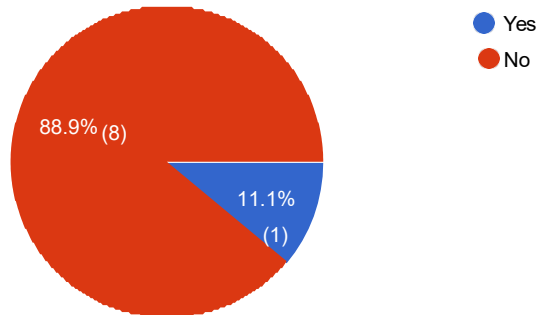


4.) If you selected "Other" for the previous question and want to add more detail, please elaborate here.

- “Consistency of review.”
- “DOTD often does not allow enough manhours (fee) for consultants to adequately QA/QC their plans. Lack of EOR direct involvement in the construction process.”
- “As a consultant, I am not privy to the global view of plan quality or lack thereof. I can only speak from my experience and from the experience of my firm. We have always viewed plan and design quality as part of the engineer's professional obligation but have met resistance from DOTD to acknowledge the effort that requires. See response in No. 12 below.”
- “Inconsistency and preference vs. policy is typically the main cause of most "errors". Even when policy is strictly followed, comments are received due to individual preference. The other major source of "errors" is a lack of communication between disciplines during reviews with interdisciplinary projects.”
- “Most of the known issues are a matter of preferences. If preferences aren't communicated clearly, the communication breakdown is the responsibility of both parties. Staff inexperience leads to comment retractions after wasted efforts to address. Project managers lack of

coordinating between task managers on comments results in consultants receiving conflicting comments which wastes time and money.”

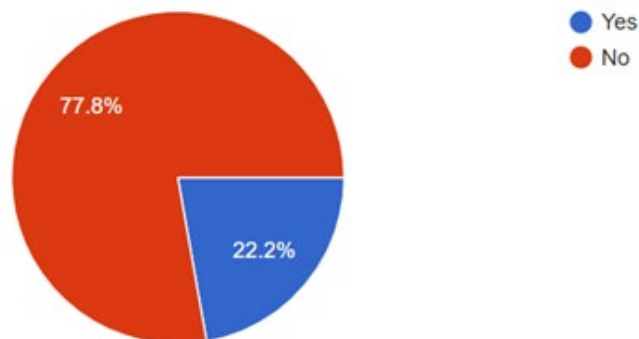
**5.) Are there geographic pockets where the quality problems seem to be higher? If yes, please explain.**



**6.) Please add any comments on the previous question here.**

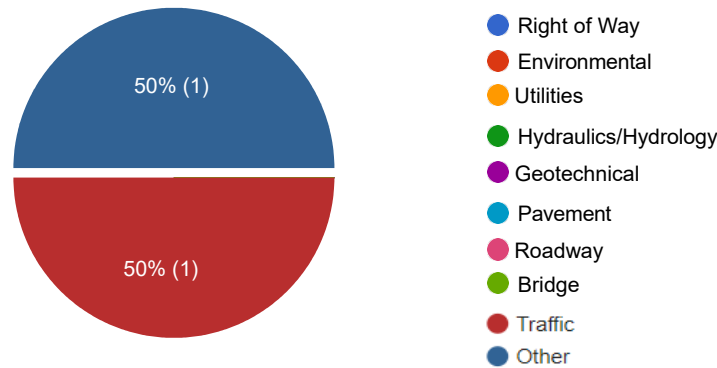
- “Answered yes because unknown.”

**7.) Are there specific engineering disciplines that experience more quality problems than others?**





**8.) If you answered yes to the previous question, please indicate which disciplines.**



**9.) Please elaborate on the previous question.**

- “Too much interpretation of manuals.”
- “Every discipline has the potential for quality issues if the designer does not have a QA/QC method that works. In the realm of electronic deliverables there are copy/paste error potential throughout our designs.”
- “Some DOTD departments demand a level of detail on the design over and above industry standards. This detail is typically unnecessary. This leads to lengthy design and reviews, which lengthen the duration of the design. Departments whose requirements are more detailed than they should be include traffic, electrical, facilities, and landscaping.”
- “Unknown.”

**10.) Does DOTD work effectively with the private sector to address consultant plan quality? Or would you like to see more collaboration between the two? Please explain.**

- “Yes more team work.”
- “No. Current rating system is not used to effectively weed out the good from the bad, but instead ratings are given as "acceptable" scores in most categories. More timely ratings at each milestone submittal, and detailed explanations of ratings are needed to in order for consultants to timely understand where shortcomings may be. There's also no communication during and post construction regarding how the plans (quality) met the needs of the construction personnel - this would be beneficial. Also, there are no "lessons learned" regarding DOTD's experience in the construction process is available.”
- “DOTD might benefit from a modern QA/QC application for tracking comments and making certain they are addressed (i.e. like Dr. Checks, which is used by the US Army Corps of Engineers).”
- “No real interaction with DOTD where data and experiences are shared.”
- “More collaboration to develop reasonable QC / QA goals, expectations and responsibility.”
- “The people I have worked with at DOTD have communicated their quality comments well. Preference comments are often communicated and these preferences change when the

reviewer changes. DOTD has had some changes in personnel and with new people there is new feedback and potential for inconsistencies.”

- “No, CADConform is the only initiative, there is no clear guidance about what a "good" set of plans looks like across the board, it always varies from person to person.”
- “Too much collaboration.”
- “More collaboration needed to clearly communicate preferences and comments. Comments are often vague and open to interpretation.”

**11.) Specifically relating to DOTD’s plan development quality control/quality assurance practices, what business process improvements would you like to see?**

- “Not very specific on the requirements at each milestone.”
- “More timely feedback, and feedback during construction.”
- “Recognition by DOTD of the true effort of effective QA/QC processes in manhour allocations and comment tracking system (see question 10 response).”
- “Other than bridge, there are no specific QC/QA requirements by DOTD.”
- “1.) Just as consultants are held to a schedule, DOTD should conduct reviews at the appropriate time and within agreed upon review times. Our experience is comments come late in the design/plan development process that should have been made much earlier. That dramatically slows down the design/plan development process and makes the entire process very inefficient. This affects the consultant's view of MHs required to complete design/plan development and is factored in to the next project and associated fee negotiations.

2.) The Project Management section's Project Managers need to be given veto authority over DOTD Design Section comments and authority to hold DOTD Design Sections to agreed upon review times. Currently, PMs are more like coordinators than true PMs with responsibility and authority to get projects done in a timely and efficient manner. As a check and balance, bottom line, PMs should be able to say "no" to Design Sections comments if required, particularly if there is not a safety issue and it's more a difference of opinion.”

"3.) DOTD is right to expect quality design and plan development from consultants. Basic framework can be provided by DOTD, however, the burden to develop a process and follow it and produce quality design/plans should reside with consultants. Consultants who perform poorly should pay the price and be scored accordingly. The catch, or fairness rub, will be that consultants should be scored consistently and by the same measure, which could be difficult given the large number of reviewers responsible for scoring within DOTD.”

- “No comment.”
- “I would prefer that the design manuals and plan production guides be the primary basis of plan quality. Usually, design quality is not the issue.”

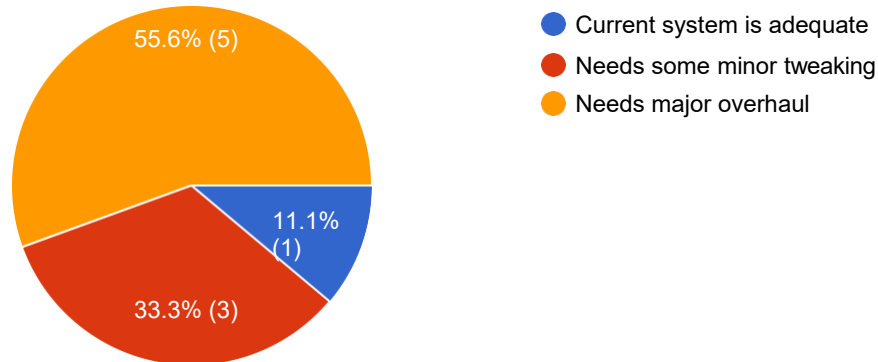
**12.) Overall, what are some ways you think the Department could improve consultant plan quality?**

- “Work together and consistent.”

- “See #10 and #11 responses above.”
- “1) Select the most qualified consultants with a solid track record of performance (selection process factors in extraneous factors like geographic location and backlog) 2) recognition of true effort to perform adequate QA/QC, 3) setting of clear quality expectation from consultants, and 4) a modern comment tracking system with adequate training for DOTD and consultants in its use.”
- “Re: Q10”
- “1.) DOTD should expect QC / QA to be part of the plan development and design process that requires a significant effort to complete. DOTD should correspondingly be willing to include that effort as MHs in task items and fee negotiations. My experience in the past is at the grass roots level and at management levels, there has been resistance to acknowledge the effort required to provide a robust QC / QA process, the benefit of that effort and pay for it.  
  
2.) DOTD should ask AGC, or an independent entity, to perform a survey of DOTD contractors and get their input on plan quality and what needs to improve. Part of the feedback should include the quality of design/plans produced by DOTD and/or consultants. It may be enlightening.”
- “Define design criteria early on in the project so that the designer is on the same page as DOTD. Make sure milestone submittal comments are returned in a timely manner so that all comments can be considered at the same time. Will help decrease the amount of rework.”
- “By focusing less on individual preference and more on cost and constructability.”
- “Relax their requirements. Be more consistent between reviewers.”

## B. Consultant Rating System

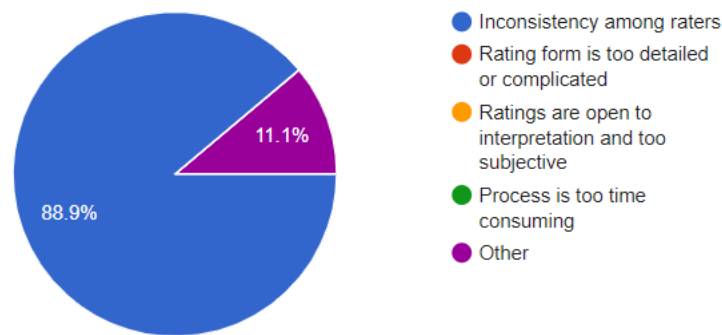
13.) What is your opinion of the DOTD's current consultant rating system?



14.) Please add any comments on the previous question here.

- “Consistency between group.”
- “In most cases, the current system does not differentiate between projects that are simple or on a normal delivery schedule as compared to complex projects or those that are on a critical delivery schedule. This is left up to the individual rating a consultant project to apply as they see fit, and often times not consistently applied between those preparing ratings.”
- “Major overhaul may overstate the situation, but minor tweaking is inadequate. System is very inconsistent based on whether DOTD rater is a tough grader (or not) or "likes" the consultant he or she is rating.”
- “We have gotten project ratings where the DOTD manager verbally tells us we have done a great job but the rating they give is below the statewide average. We typically ask at the outset of a project, what the DOTD manager's expectations are and what it will take to get a top rating. So, there are disconnects between the verbal comments from DOTD managers and the actual ratings.”
- “There should be a way to factor in the complexity of the project without lowering the rating. We have sometimes received lower ratings b/c the project wasn't complex, but have been told we have done an excellent job. These lower ratings sometimes result in a rating that is lower than the statewide average, but yet we are doing an excellent job.”
- “Not enough categories, statewide averages are skewed, and maximum ratings are unachievable.”

**15.) If there is a problem with the rating system, it is because:**



**16.) Please add any comments on the previous question here.**

- “Too subjective.”
- “There are inconsistencies, but the form is also subjective and open to interpretation. Also, ratings are not timely - there should be a mechanism in place to require them at milestones (email alerts to supervisors, division managers, etc.).”
- “Inconsistency is the biggest issue, but the ratings may also be open to interpretation or too subjective. Training of raters by DOTD (if not already done) and more effective oversight by upper-level DOTD managers could help make the ratings more consistent.”
- “The ratings are subjective. They should factor in job complexity. The raters should also be asked to consider or be aware of the statewide average when they are performing a rating. Sanity check - was this really a below average performance?”
- “To prevent the perception of Consultant favoritism, it appears that ratings automatically start with one rating level below the maximum and then go down from there. Many debriefs have revealed that instruction has been provided to raters to not provide a maximum score even though the quality of the plans may warrant it. Also, the types of projects awarded have been done so many times that above average work appears to be the ‘status quo’.”

**17.) Please provide your ideas for how the consultant monitoring and rating system could be improved. Stress key areas that need to be updated or revised.**

- “Same as above.”
- “In my discussions with DOTD folks about ratings, they do not consider the statewide averages when developing project-specific ratings. I believe in addition to the suggestions noted in other responses above, the statewide average in each rating line item should be available to those preparing the ratings. This could be a “check” that the numbers assigned are actually in line with the rater’s view of the consultant’s performance.

DOTD could develop a manual/guide for raters to use during the process to help them assign values to each, and this guide could be shared with the consultant community so that they can also know what will go into the ratings. Also, a small 3-5 person committee made up of DOTD

leaders could review the ratings and discuss the preliminary results with the rater before the rating is submitted and made permanent in the system.

Lastly, this survey focuses on consultant errors/omissions and DOTD's consultant rating process. There does not seem to be the same level of accountability to develop quality products for internal DOTD plans as there is with consultants. Some plan of action should be in place whereby DOTD teams that produce plans with errors/omissions should be held accountable as do consultants - if consultants don't perform, our chances to continue working with DOTD are drastically reduced."

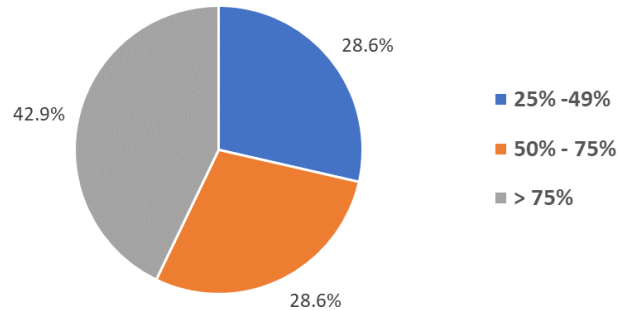
- "System needs a more effective method of oversight that reduces bias in the system and reflects more accurately which consultants are producing quality plans on a consistent basis. No system is perfect, but the current system clearly needs improvement."
- "Our investigation and discussions with DOTD personnel that have rated our projects reveal several things: 1. Most are unwilling to give a "5" because it seems to denote perfection which almost no one could ever achieve. So, if the typical top score is "4", that equates to an 80% "grade", which means the top 20% of the scale will hardly ever be used / achieved. My suggestion is to broaden the scale and use a 10 point scale which would also produce more delineation between consultant performance.  
  
2. There is significant inconsistency between DOTD personnel when scoring a rating. There should be better agreement within DOTD sections on what the performance outcome is for each scoring level. A common reviewer or checker of each rating by DOTD personnel should be performed within each section as a check and balance to help achieve consistency.....I believe this may already be done in some fashion, but needs greater consistency.  
  
3. Recognition from DOTD personnel that ratings directly affect the consultants ability to "win" the next project. We have been told by most DOTD personnel in charge of our projects they love to work with us and we do quality work. However, there is a disconnect with their scoring because it may result in a score below the statewide average which cripples our ability to win the next project.  
  
4. DOTD personnel should be willing to discuss their results with consultants after providing the scores. Much can be learned in a dialogue on what consultants can do to improve. We actually take pride in producing quality design and plans and want to know what we can do to improve to better meet expectations and our professional obligations! Thank you for the opportunity to provide input."
- "See above."
- "I believe more categories need to be developed for the types of projects, and an definition and appreciation for project complexity needs to better understood by the rater."
- "Have one person at DOTD compare ratings between gang leaders or other personnel to see who is giving ratings that are out of line with others who give ratings."

# Appendix G: Summary of Peer State Survey

## A. Consultant Plan Quality

**Question:** In your agency, what percentage of plans are developed by consultants, for all engineering disciplines and pre-construction activities – measured by the number of plans developed?

**Percentage of Plans Produced by Consultants**



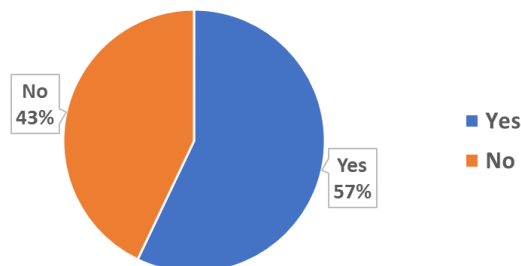
Additional comments on this question were:

“Probably somewhere around 80%.”

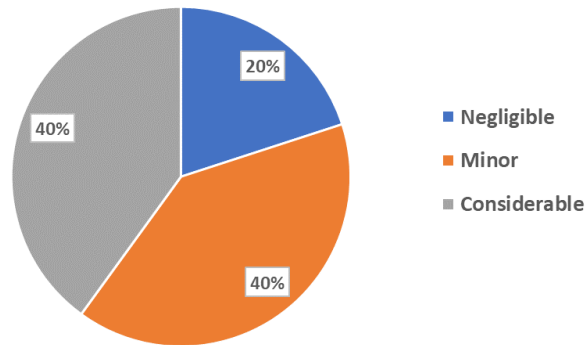
“Currently our program contracts out 85% of projects to design consultants.”

“My role is the director of just one division (Roadway Design). In my division, we typically are around 50% or so, with the desire to keep as many projects in-house as possible. However, due to great difficulty in retention of young engineers and the losses of other engineers due to retirement, transfer, or resignation, I have lost many designers. Other divisions within the agency that I work for are in a similar situation. Therefore, I think the range I selected above is appropriate.”

**Question:** Would you say that there is a problem with consultant plan quality in your agency?



**Question: If there is a problem, how significant is it? – Negligible, Minor, Considerable, Significant**  
(Five responses received)



Additional comments on this question were:

“Consultant plan preparation quality varies greatly based on the firm and the group within the agency providing oversight. We have found that with good oversight even a poor consultant can provide good plans, but the oversight is spread throughout our agency and is not under one control. Therefore, I really can't answer the question as the problems are not universal across the agency.”

“There are some instances of plan quality problems but they are probably a small %.”

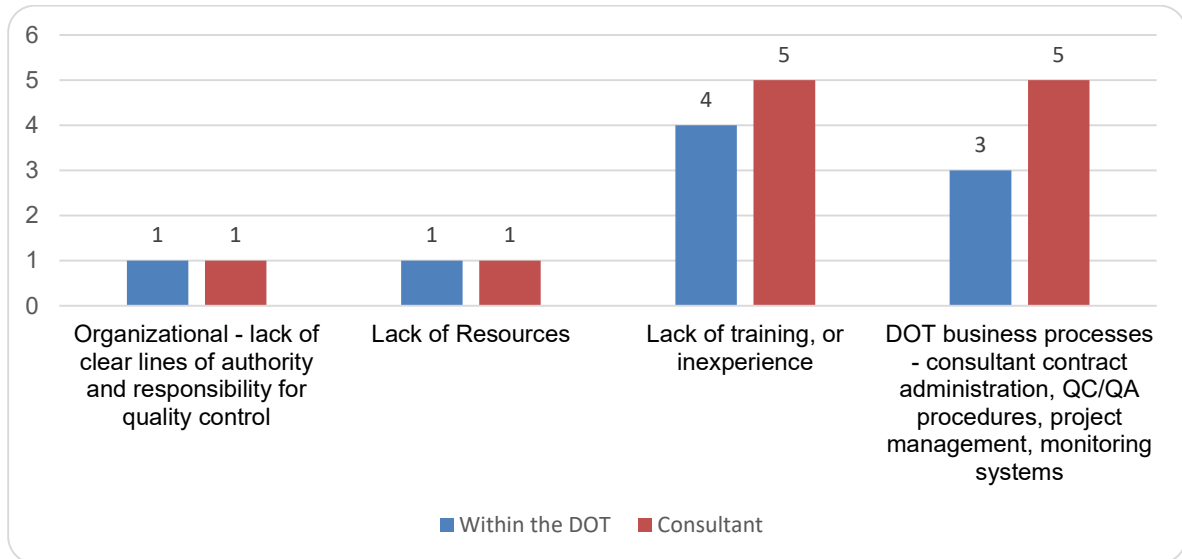
“Construction Plan development within GDOT follows our Plan Development Process (PDP) and occurs within two major phases which are Preliminary Plan Development and Final Plan Development (which includes Right-of-Way Plan Development). We experience plan quality problems in all these areas. Often the problems, even when identified early on, are not corrected (if corrected) until the period of time when the individual project has entered our Letting Schedule for Processing Projects. This often results in numerous questions from Contractors developing bids and amendments during the Letting Advertisement period and/or Use on Construction Revisions after the contract is awarded.”

“Arkansas DOT has a thorough QA/QC program for consultant projects.”

“Many problems are related to consultants simply not checking their work. Some common examples are: quantities not matching throughout the plans, 3D model/cross sections not being checked for constructability and maintenance of traffic. Some consultants don't follow instructions well.”



**Question: Where plan quality problems do exist, what would you say is the root cause(s) of the problem? Select all that apply.**



Additional comments related to this question included:

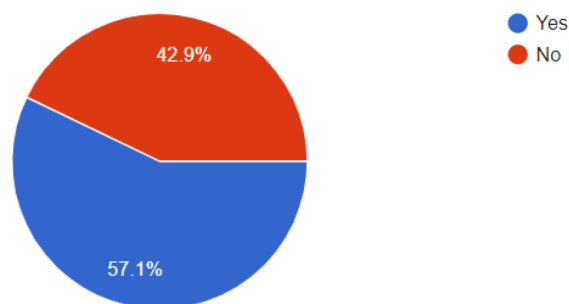
“There are some areas where a lack of clarity of requirements or inconsistency of preferences between regions leads to plan quality issues.”

“Resources: At times individual consultant firms seem to not have the necessary resources for the amount of work they have under contract but this is not the main cause for the problem.”

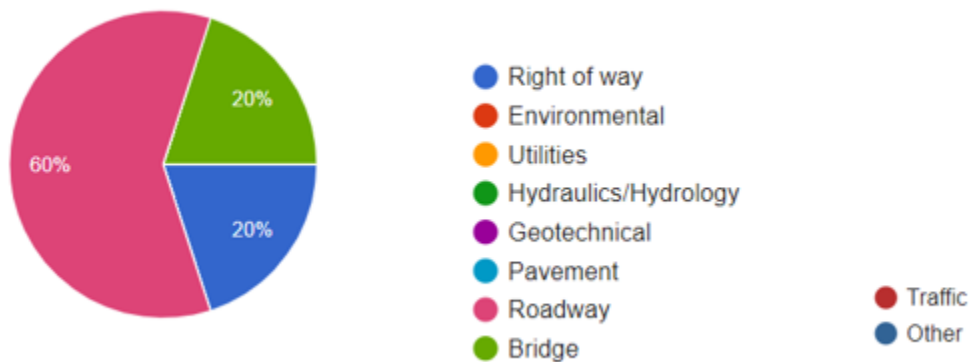
“Training or Experience: There appears to be experience level gaps consultant industry wide.”

“QC/QA: QC/QA is lacking based on plan deliverables received. It’s not clear if this is caused by lack of ability or effort. Other than the potential of our fairly new consultant rating system there has previously been little consequences for poor plan quality deliverables.”

**Question: Are there certain engineering disciplines that experience more quality problems than others?**



**Question: Please indicate which disciplines where errors seem to be higher.**



Additional comments related to this question included:

“This may be a perception as there is not a current mechanism to measure quantity of problems.”

“Regarding Construction Plan Development quality, the Roadway discipline is selected for two reasons. Much of our plan development is produced or compiled by the Roadway discipline engineers. A higher percentage of plan discrepancies are typically in Roadway discipline produced portions of the plans.”

“I was not able to select multiple disciplines above, so I selected Roadway. Following are comments from a Roadway Design Project Manager, and then below that are responses from a couple of other divisions.”

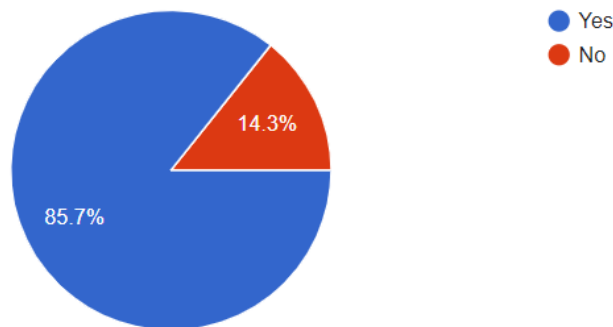
“I don’t think all of our consultants do a very good job of keeping up with or familiarizing themselves with some of our memos and also some of our basic requirements (i.e. naming conventions, submittals process and requirements). I frequently find myself needing to rename files or ask for various items. We require certain certifications to be included with our various milestone submittals, and many times it is not worded correctly or included at all. I have some trouble with changes not being made after a plan review. There have been multiple occasions where we ask a consultant to make a change or revision and they do, but then some other error results. This is hard to catch because you think they are only changing one thing but they inadvertently make a change to something else that you aren’t looking for.”

Response from Hydraulics: “It seems like there is a lack of knowledge which is compounded by consultants relying on software without a good understanding of how it works or is being applied. They also seem to not be putting in the time necessary to check all the details, including checking how the project’s drainage will affect the surrounding area during and after construction, and just using good engineering judgment. In other words, they seem to be just running a model and using the results without considering the validity of the output or whether the design can actually be constructed. This is often the case too in other computer applications, such as roadway design.”

Response from Bridge Division: “Several of our consultants don't document the assumptions or design decisions they made along the way that affects the results. Also, some of our consultants don't seem to understand the output they are submitting. They will turn submittals in that the output shows doesn't design. They then have to go re-evaluate what they are doing or they provide documentation that shows they actually did it correctly but the output doesn't quite reflect what all they did. We have recently made several changes to the type of structures we are predominantly building. After giving some of these newer structures to some of our consultants, it has become clear that several of them have oversold their abilities and knowledge of these structure types.”

“One of the biggest problems we have with our consultants right now is them misrepresenting their current workload. We'll get into a project and the consultant will ask to modify the schedule because they have too much work with other entities. This is after the consultant was begging for work from us.”

**Question: Does your DOT have an effective working relationship with the consultant community to address consultant plan quality?**



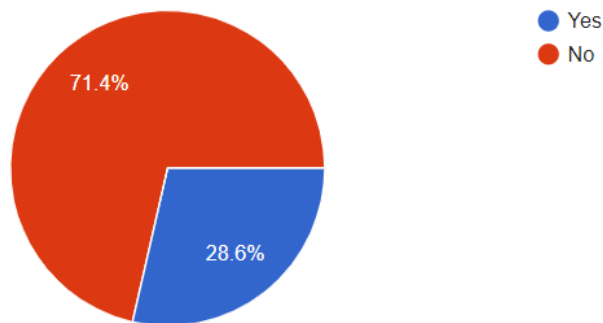
Additional comments related to this question are:

“UDOT - ACEC Liaison committee and consultant evaluation process.”

“We utilize the Georgia Partnership for Transportation Quality (GPTQ) which is a partnership between American Council of Engineering Companies (ACEC) Georgia, the Georgia Department of Transportation (GDOT) and the Georgia Highway Contractors Association (GHCA). Through the ACEC Georgia Transportation Forum there is a GPTQ Steering Committee and Consultant Relations Committee (CRC) which forms and manage CRC Subcommittees that are discipline and/or process related. Link: <https://www.acecga.org/pages/TransportationForum>.”

“While we make efforts to reach out to our consultants to address plan quality, it is not as effective as we would like with all consultants.”

**Question: Has your agency completed a review or study of consultant plan quality in recent years?**



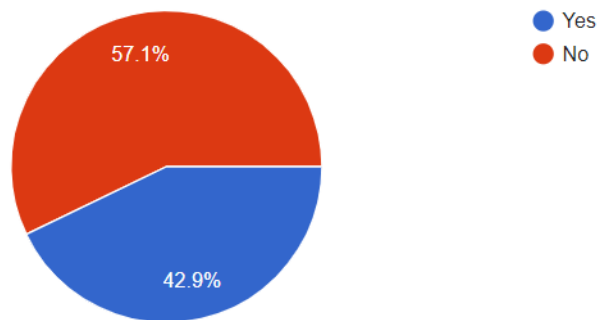
Additional comments related to this question include:

“N/A”

“We don't do an individual study or review. All work developed by consultants are reviewed.”

“It has been studied in the past. We can provide reports.”

**Question: Has your agency undertaken any business process improvement initiatives or have you implemented any innovative practices for plan quality control in recent years?**



Additional comments related to this question include:

“Currently undergoing an effort to make guidance more clear and consistent.”

“A Baseline Schedule Process Improvement Work Group has been working for approximately one year with Plan Quality a major focus point. This is a multi GDOT Office collaboration facilitated by our Office of Performance-Based Management and Research.”

“Their contact person is Michael Hopkins [mhopkins@dot.ga.gov](mailto:mhopkins@dot.ga.gov) (404) 631-1743. Michael is the Office Administrator.”

“Any innovations are implemented at the time of their recommendation.”

“For Roadway Design, we maintain checklists for consultants to submit at milestone dates throughout the life of each project. We have also made it very clear contracts that consultants are responsible for their work during design and construction, and after construction is complete. Also as mentioned in above, we require the consultants to submit a certification with each submittal confirming that their work is correct.”

**Question: Please describe how you document and track plan review comments.**

“We are still a paper agency. We provide written comments at all stages of plan development and require written responses. Each step of the plan development process looks at previous step's comments and how they are addressed.”

“Comment resolution forms.”

“The GDOT Plan Development Process (PDP) includes a formalized Field Plan Review (FPR) process. These reviews are multi discipline reviews, typically include a face to face meeting and site visit, and are recorded in a formal report that includes responses to comments from the project's Project Manager/Design Phase Leader. These reviews are typically held at the end of Preliminary Plan Development, which is a Preliminary Field Plan Review (PFPR), and Final Plan Development, which is a Final Field Plan Review (FFPR). Supplemental PFPRs and FFPRs may be required based on the results of the initial review, major scope or design changes, or if more than 2-years will elapse between the FFPR and the project being advertised for Letting. Interim Field Plan Review (IFPR) are used to assess plan development progress. Common FPR comments are collected and distributed to the consultant world through the Georgia Partnership for Transportation Quality (GPTQ) presented in Question 12.”

“Comments to plans are stored in project files. We have what we term ‘redlines’”.

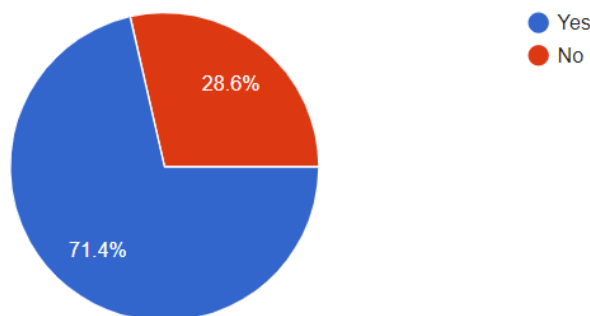
“FDOT has an electronic review comment system when all comments are collected electronically per project.”

“All comments from plan reviews are marked in red on a set of plans that is scanned and saved in our file storage system (ProjectWise). The discussions in the plan reviews are also documented in a set of minutes that are submitted following the review.”

“Each DOT Region has a Plan [Review] Office and Project Engineering staff.”

## B. Consultant Performance Rating System

**Question: Do you have a manual or other document describing your consultant performance rating system?**



The following links and comments were provided by four of the peer agencies:

“#18 is hard to answer because I don't know what aspect of consultant work you are asking about. We do try to evaluate consultant performance at the end of every plan assembly produced, but we do not provide a numerical rating or ranking. During our selection procedure to procure engineering consultants, or Consultant Selection Committee performs a ranking and rating scenario, but that information is not available outside the CSC.”

“<https://www.udot.utah.gov/main/uconowner.gf?n=28820723258612083>”

“[https://interchange.udot.utah.gov/teams/ConsultantEvaluation/Lists/Eval\\_Form2/NewForm.aspx](https://interchange.udot.utah.gov/teams/ConsultantEvaluation/Lists/Eval_Form2/NewForm.aspx)”

“GDOT uses Consultant Management Information System (CMIS).”

“External link (16 Page Manual):

[http://www.dot.ga.gov/PartnerSmart/Business/Documents/ConsultantResources/CMIS\\_External\\_Manual.pdf](http://www.dot.ga.gov/PartnerSmart/Business/Documents/ConsultantResources/CMIS_External_Manual.pdf)”

“GDOT Internal link (51 Page Manual):

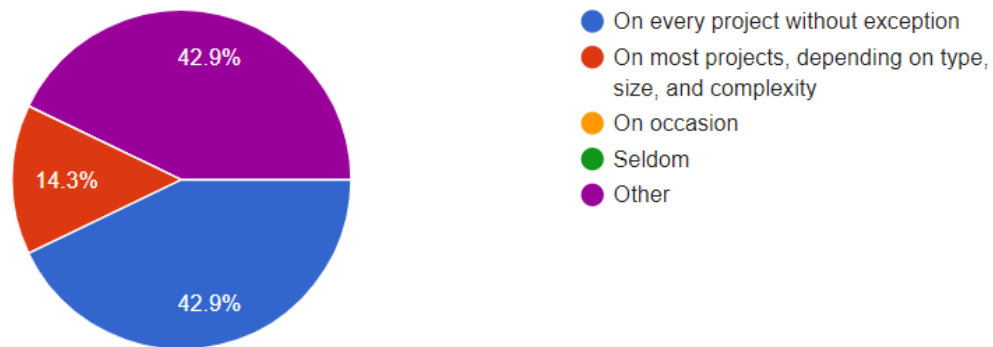
<http://teams.dot.ga.gov/apps/cmisis/CMISInvoiceDocs/CMISUserGuide/CMIS%20User%20Guide%20for%20GDOT%20Internal%20Users.pdf>”

“I will also attach the procedure to my email, procedure # 375-030-007  
<https://fdotewp2.dot.state.fl.us/ProceduresInformationManagementSystemIntranet/Procedures/Index?viewBy=0&procType=pr#>”

“Check with contact below:

<http://www.wsdot.wa.gov/publications/manuals/fulltext/M27-50/Part9.pdf> see Appendix F”

**Question: How often are consultants rated on their performance?**



The following additional comments were included:

“We try to solicit consultant evaluations from the pertinent entities after a project is let to construction, but the response is not required and therefore is somewhat limited to whether or not the entity feels like filling them out.”

“There may be some projects that aren't tied to our requirement of having a completed consultant evaluation to close out the final invoice.”

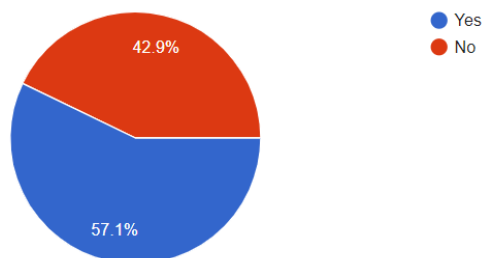
“Consultants per their contract are evaluated once a fiscal year. Evaluations can be done throughout the year based on quality issues, scope, schedule and budget as needed. Task order specific reviews must be done when a deliverable is approved by the SME (Subject Matter Expert). Evaluations are archived by firm, project number and area class code in CMIS.”

“When Requests for Letters of Interest are posted. Past performance is a criteria that is used in the consultant's selection for the newly advertised projects. A formal rating system is not used for past performance.”

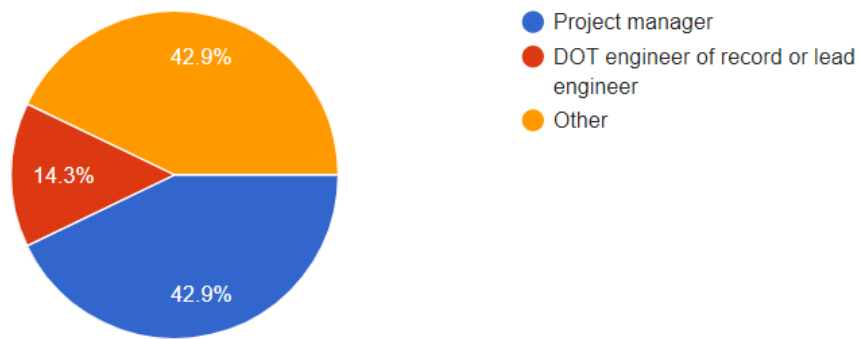
“See procedure.”

“Consultants are evaluated at the end of their contract.”

**Question: Does your agency perform any post-construction assessments to determine if and how the quality of design plans resulted in change orders, or impacted construction cost, schedule, or other outcomes?**



**Question: Who is responsible for rating consultant performance?**



Additional comments on this question included:

“If you are referring to #24, then again, it really depends on which aspect of consultant work you are referring to.”

“I assume you mean either Question 23 or 24 which is what the following comments relate to.”

“Question 23: In GDOT’s Consultant Management Information System (CMIS) the GDOT Project Manager evaluates Prime Vendors (Consultants). When a consultant receives a poor rating it is reviewed and approved by the GDOT Office Head before it is issued to the consultant.”

“This system also allows for the evaluation of Area Class deliverables from consultants with these evaluations being done by GDOT Project Managers, GDOT Area Class Subject Matter Experts, and GDOT Office of Procurement.”

“Question 24: There is currently not a process in place to account for post-construction assessment for all projects.”

“The Office of Program Delivery has three regional design contracts that are broken out by geographical districts. A pilot program was done to select one project per contract to do post-construction assessment to determine if there were lessons learned.”

“The Office of Design Policy and Support has done field audits for MS4 design and construction. The findings were provided to PMs for corrections through UOC (Use on Construction) revisions.”

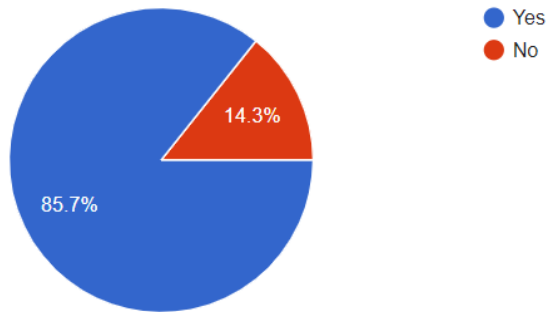
“GDOT’s Plan Development Process includes the option of having Post Construction Evaluations (PCE) on any project. PCE requests/recommendations are allowed be submitted by more than one source. PCE meetings typically occur when a construction project is near substantial completion and include invitation to the Prime Contractor to participate.”

“23: This assessment has been submitted for comments before implementing.”



“24. I actually serve as the official Project Manager, but my area engineers serve as the Assistant Project Managers, and they are the ones that provide the evaluation to me. I review the evaluations closely and then submit them, and have discussions with them about the evaluations as necessary.”

**Question: Are consultant performance ratings maintained and used in the selection process?**



Additional comments related to this question are:

“If you are referring to #26 then we do maintain the post letting evaluations that we receive, but they are never requested during selection procedures as the consultants are evaluated separately at that time based on their responses to a Notice of Need for Services.”

“They are currently made available for consideration but UDOT is working towards having a more formal linkage to scoring of future selections.”

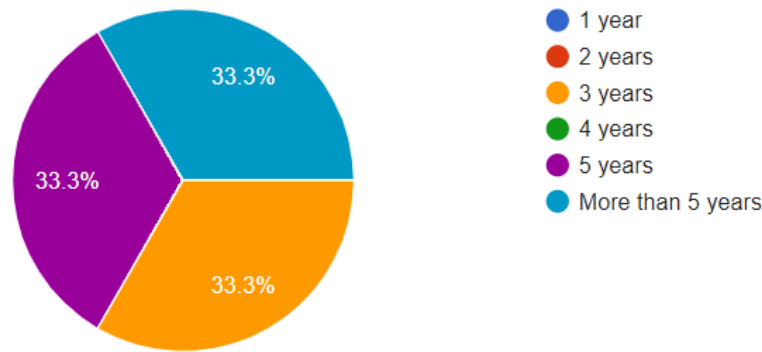
“I assume you meant Question 26 which is what the following comments relate to.”

“Currently the Department uses an application named CMIS (Consultant Management Information System). Last year was the first time it was done via this system. Previous years an access database was used to achieve the information and could not be viewed outside of certain offices. The goal is to have three years of information and scores that will be used as part of the consultant selection process.”

“The committee overseeing the selection process is aware of the performance of the consultants due to the involvement in oversight of previous plan development.”

“Previous evaluations are provided at the beginning of any selection process.”

**Question: How long are consultant ratings maintained and used in the selection process?**



Additional comments related to this question included:

“If you are referring to #28, then the question is irrelevant. See response to #27.”

“Not sure if how long they are available but the pool contracting period is a 3 year cycle which the ratings for the previous period are available for consideration.”

“I assume you meant Question 28 which is what the following comments relate to.

“The system is designed to keep all inputted data. For the procurement process, the last three years of scores will be used for rating selections for a prime team.”

“QA/QC information is maintained but not a rating system on past performance.”

**Question: Do you experience any of the following problems or receive complaints from consultants about the rating system? Select all that apply.**

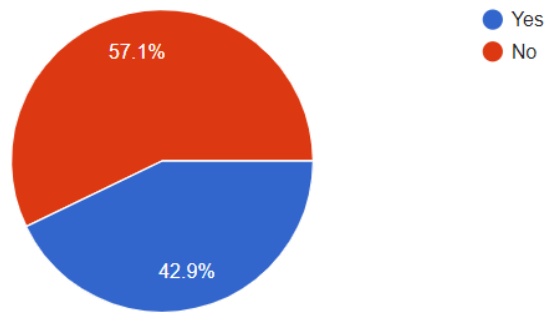
Issue	Number of Responses
Inconsistency among raters	3
Rating form is too detailed or complicated	--
Ratings are open to interpretation and too subjective	3
Process is too time consuming	--
Other	1

Responders who selected “Other” added the following comments:

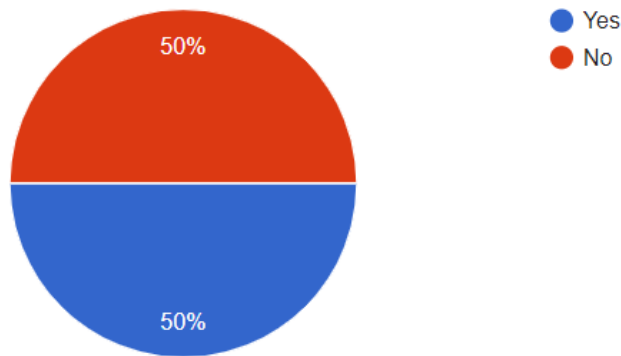
“Questions on how subconsultants affect a prime consultant rating.”

“Previously consultants did have concerns about inconsistency since each SMEs and offices developed their own ratings. CMIS ratings are now a department standard and where converted from a numbers system.”

**Question: Do you have an automated system for measuring and monitoring consultant performance?**



**Question: Are there any formal policies/procedures in place when a consultant receives a poor rating?**



Additional comments related to this question included:

“Certain low ratings require the rater to write additional information related to the rating.”

“When a consultant receives a poor rating it is reviewed and approved by the GDOT Office Head before it is issued to the consultant. Consultants have the option of requesting a meeting with management to discuss the score and supporting documentation.”

“Contact Scot Ehrgott.”

# Appendix H: Federal Highway Administration Best Practices Survey

## A. Introduction

To assist with the best practice review, FHWA's Consultant Services Program Manager (Manager) solicited information from each FHWA division office. The Manager sent the following request:

*In an effort to improve the quality of consultant deliverables, the DOT has initiated a research effort to review and assess their current consultant plan delivery process and identify possible best practices among other State DOT's. They have asked for FHWA's help.*

*As part of this review, I would like to ask if you know if your state partners have initiated any business process improvements or innovative practices related to consultant plan quality management or consultant performance rating systems. Any information you could provide is greatly appreciated.*

*Thank you for your consideration of this request.*

## B. Survey Responses

Unedited responses to the Manager's requests are presented below.

### 1. Arkansas

ARDOT does not score consultants based on their performance. They do keep track of number of revisions and number of submittals by consultants in ARDOT's Roadway and Bridge divisions, but I'm not sure to what extent this data is used during solicitation and procurement process for on-call design. Overall ARDOT is satisfied with their consultant's performance.

### 2. Delaware

DelDOT has an annual form that they fill out related to performance of their design consultants. It is not a numerical system, rather it is three levels of ratings (below average, satisfactory, above average).

DelDOT has not completely clarified what would put a consultant into each category; for example, multiple small design errors or two big errors making a grading "below average", much would be considered subjective. No project can be expected to be designed perfectly, with that said, there is/should be some level of expectation related number/value of errors, turnaround time, consistency, etc.

Additionally, a smaller DOT might have a better sense of what is going on versus a DOT that has 50 consultants. In a small state or rural state, the group of consultants to select from is also typically smaller.

### **3. Florida**

I am attaching two procedures: FDOT's Performance Evaluation (375-030-007), and Error and Omissions (375-020-010). I am also including the Management and Schedule evaluation form.

FDOT also publishes grades online.

Reports Related to Grades

Consultant | Consultant Grades History Report

- Report on Grades History for a specific consultant

Consultant | Design Consultant Grades, (for Letters of Interest, Design/Build)

- Report on Past Performance Evaluations for Design-Consultant Firms (used when evaluating Design-Build Phase I submittals)

Consultant | Detailed Listing of Consultant Evaluations (Gradetl)

- Report on Grades by consultant and detailed breakout by type of work"

### **4. Georgia (1)**

Georgia DOT evoked practices related to consultant plan quality management or consultant performance rating systems. They would use a form to assist with rating each consultant that did work for the agency. The GDOT further extended considerations for rating consultant based on actual implementation of consultant designs. Consultant performance evaluations for actual implementation of consultant designs was also facilitated by GDOT providing "errors and omissions" as a selection on the standard form for contract change orders, which also serves as a mechanism for tracking such contract changes. Seems that they also kept summaries for errors and omissions.

I also recall that they had an Errors and Omissions Policy, which included recovering costs from consultants. You may follow-up with the GA-Division contact to verify the GDOT quality management /consultant performance rating systems and the GDOT Errors and Omissions Policy and process.

### **5. Georgia (2)**

The Georgia Department of Transportation (GDOT) encountered similar issues several years back and they created the Plan Presentation Guide (PPG) and made it available to the public.

In addition to the guidance, GDOT also includes a design plan quality checklist when they submit their Plans, Specification, and Estimates (PS&E) package to

our office. With the implementation of the checklist, our GA Division sees the quality of design plans improved significantly. The checklist is a summary of the major components in the PPG that the consultants are required to review and acknowledge before they can submit their design plans to GDOT.

In addition, GDOT also has other guidance/manual in the following website:  
<http://www.dot.ga.gov/PS/DesignManuals/DesignGuides>

## **6. Idaho**

The Idaho Transportation Department (ITD) has a good process for evaluating consultants every time a monthly invoice is received.

In addition, an overall Performance Evaluation is completed at the end of the project/agreement.

In Idaho, past performance is one of our key qualification-based factors used for evaluation, ranking, and selection of consultants.

I have attached a copy of ITD's Professional Service Agreement Procedures (PSAP) Manual.

The information you requested can be found highlighted in Sections 340, 540.1, and 540.8 of the attached PSAP Manual and can also be found online at: [https://apps.itd.idaho.gov/apps/manuals/PSAP/PSAP\\_Manual\\_2016.pdf](https://apps.itd.idaho.gov/apps/manuals/PSAP/PSAP_Manual_2016.pdf)

I have also attached copies of the forms ITD uses and these are also found online at: <https://apps.itd.idaho.gov/apps/formfinder2dmz/>

ITD 0771 Professional Agreement Invoice and Progress Report

ITD 2759 Consultant Services Performance Evaluation

ITD also requires web-based training for all agreement administrators which must be completed before they can be assigned to a project.

## **7. Indiana**

Back in 2000-2010 timeframe the Indiana DOT was executing what I considered a strong practice for doing design QA. They also developed an annual report to capture bigger issues and then apply process improvements. It also influenced the rating of consultants for future work. It was a bit controversial because it was somewhat like design overhead for INDOT and involved hiring higher skilled design consultants to review other consultants and I'm not sure if they also reviewed INDOT's own designs.

## 8. Kansas

Kansas DOT moved to using BlueBeam software for plan review and commenting. It saves the comments there in the program, it is a .pdf-based review program, and has been very efficient for our DOT. LPA and State projects use it – so both for internal reviews and for external LPA reviews. That cuts down on conflicting comments.

<https://www.ksdot.org/Assets/wwwksdotorg/bureaus/burLocalProj/BLPDocuments/KDOTBLPEplans.pdf>

Kansas DOT also has a design manual, which clearly specifies design tables, and format (title block, etc), Basically gives the format of a plan set (plan profile, summary of quantities, etc). Here is a link to other design consultant info: <https://www.ksdot.org/descons.asp> and the design manual: <https://kart.ksdot.org/>

For issues like: Incomplete plans, errors in quantities, not following DOT design guidelines – We deal with these from time to time also. KDOT's estimating section does a review on the quantities. One thing that helps is that KDOT generally requires all LPA projects to use KDOT specs and bid items. So, everyone is familiar with measurement and payment for all bid items. Cuts down on discrepancy from project to project. KDOT also has a prequalification process that consultants are required to be on (be prequalified) to work on State projects. Locals not using Fed Funds can choose to not use QBS though, and so a more heavy-handed plan review can sometime be necessary to get a good set of plans.

KDOT also completes a consultant evaluation after the project, link here: <https://kart.ksdot.org/login.aspx?ReturnUrl=%2fwebforms%2f>

My advice to a DOT trying to change the quality of plans – it really is a culture change for the consultant community. Tell them about it at your ACEC meetings. Make sure that your administration is on board, because there will most likely be some hurt feelings from time to time as the DOT raises the expectation level. The consultants that cannot cut it may have to just not be given work if they can't deliver.

## 9. Michigan

Michigan has undertaken a process improvement for the old Dispute Resolution which hold consultants accountable/chargeable for design errors which result in Construction Premium Costs if they are found culpable through the Dispute Resolution Process– we are close to a final draft before it will be review by MDOT and FHWA Michigan Division management for implementation scheduled for December of 2019. (This is an update to the old process.) Separately, but part of the process review addresses the LPA consultant Third Party and Cost Sharing agreement where there will not be any state or federal

participation Construction Premium Costs as a result of a design error – we were not able to implement a Dispute Resolution process for the design because the locals rarely use federal funds. The only federal funds are usually in construction for LPAs – so this is where our authority lies. We felt this would be self-policing so the LPA use past performance is a consideration when they procure a design firm with their own funds or with federal funds (knowing they will be picking up the tab for any premium construction costs).

Recently we redid the Performance evaluations to simplify/streamline them and to make sure they are completed. One performance rating is done for design team (prime and subs) and the performance evaluation is required to be submitted at contract/authorization closeout. So, if there is a poorly performing subconsultant, the whole team suffers. Performance evaluations are now required of the locals before the final payment will be issued on Third Party Agreements too.

## **10. Mississippi**

The division office is not aware of recurring dissatisfaction with the design quality of plans provided by consultants on Mississippi DOT (MDOT) contracts or on 3rd party contracts. Some of the issues noted in your email come up occasionally but are typically minor and can be addressed during project construction. WE are also not aware of significant complaints from consultants about documenting, tracking or conflicting comments by MDOT.

All consultant design plans (MDOT or 3rd party) are assigned to a MDOT design project manager (PM) and then basically go through the same process: a pre-design meeting, a plan-in-hand meeting (typically on site), and an office review meeting (on some projects this meeting may be combined with the plan-in-hand). At all the meetings MDOT/3rd party expectations and comments are discussed and noted by the consultant. Appropriate MDOT/3rd party personnel (roadway design, bridge design, traffic engineering, ROW, construction (from MDOT district/project offices), LPA)) attend these meetings. MDOT personnel are available to help with issues that may arise during the design process. After all these review opportunities the plans are usually in good condition for construction.

For consultant design on MDOT projects, the consultant's request for final payment triggers the need for the MDOT to do a performance evaluation of the consultant's work. The performance evaluation, part of the closeout process, includes, but may not be limited to, a review of the timely completion of work, adherence to contract scope and budget, and quality of the work conducted. A performance evaluation template for the design contract is provided for the PM to complete. The PM may coordinate with the Assistant PM or others as deemed appropriate to complete the performance evaluation. The performance evaluation is provided to the consultant. MDOT allows the consultant an opportunity to submit a rebuttal or request a follow-up to discuss the performance evaluation. MDOT reserves the right to amend a completed



performance evaluation at any time to account for any additional information that may become available (e.g., errors and omissions found during the construction phase). If the performance evaluation has been completed and additional information becomes available that justifies an amendment, MDOT can amend the evaluation to account for the information and the manner in which it is resolved by the consultant. MDOT will notify the consultant of the amended performance evaluation.

For 3rd party project consultant design plans there is typically not a formal evaluation and written evaluations are rarely done. MDOT and 3rd parties are aware of this requirement and that they are not in compliance with the regulations. There are ongoing discussions at MDOT, but since MDOT is not directly involved in the consultant contracts, they are wrestling with addressing the requirement.

MDOT's long standing business process of being involved and available during consultant project design typically results in an acceptable set of construction plans.

## **11. Montana**

"In Montana, we can break this into two distinct sections:

### **Consultant plan quality management**

MDT might be different than other states on this topic. At MDT, all consultant projects are managed by a registered professional engineer in a centralized office. This provides two things; 1) the project manager is able to be a partner with the design firm in engineering decisions, and 2) uniformity and consistency across all consultant projects. Additionally, all specialty areas (i.e. hydraulics, bridge, geotechnical, etc.) are engaged in reviewing consultant work throughout the design life of a project. MDT's process is more of an Agile management process than the alternative of limited to no review prior to final submittal.

Due to MDT's standard consultant design process, very few errors & omissions cases are found, and consultant-designed projects look similar to internally-designed projects (for all practical intents and purposes). Quality is high and claims and change orders are few.

Due to the volume of consultant work and legislative mandates, this is a luxury that many states may not have. The process is not necessarily innovative or an improved business process but it's how we operate and how we end up producing quality consultant designs consistently.

### **Consultant performance rating systems**

Prior to 2014, consultant performance evaluations were completed by staff via a hand-written evaluation. While this method provided helpful feedback, it was time intensive, had some inconsistency issues, quality control methods

were arduous, and sharing the evaluations with the firms was logistically difficult.

In 2014, MDT created a home-grown internet application for staff to perform consultant evaluations. The system requires a user login, so all evaluations are secure and digitally signed. Once the user selects a consultant to evaluate, they are presented a series of auto-populated drop-down boxes to select a firm-specific contract number and project. After this information is entered, the user is presented 5 universally consistent categories on which the firm is evaluated. A standardized description of each category is included, as are specific descriptions of each letter grade option. I've attached a screen shot of one such category. This standardized language provides a very consistent scoring of firms. While evaluations will always be subjective, the standardized descriptions of each letter grade provide tangible measures of performance. All evaluations are then stored in a database. Upon request, evaluations are easily compiled electronically in a Microsoft Excel spreadsheet that is provided to the firm and can be manipulated and analyzed in every manner they can think of.

In the first year of implementation, the number of evaluations completed by MDT staff doubled from the hand-written process the previous year; specifically, over 400 consultant performance evaluations were completed. That number continues to hold true in the years since. Put into context, this amounts to an average of roughly 3 performance evaluations every year, for every single contract MDT has with Consultants. Obviously, some get more than others, but you get the point.

The response from the consultant community has been overwhelmingly positive. Not only is the scoring consistent, but the format in which they receive the feedback has proven very useful for many firms.

The Consultant Performance Evaluation System is something we are particularly proud of as a business process improvement and innovative practice. Not only does MDT staff appreciate the usability, the consultant community appreciates the efficient, effective, consistent, and useful manner in which their performance is evaluated and shared with them. This evaluation application might very well be something FHWA and other state DOTs may want to investigate further for their use. Except for the link to our contract management system (which wouldn't necessarily be a critical requirement), the programming is relatively simple and inexpensive."

## **12. New York**

NYSDOT and FHWA conducted process review and report 2017 that was conducted to explore how NYSDOT rates quality, particularly on the preliminary design/environmental stage. There's a lot of interesting process presented within this report that may be of interest to you/others. I don't believe we identified any compliance issues...just posed some recommendations.

### 13. Ohio

**Ohio DOT Consultant evaluation process – during selection:** ODOT posts their consultant selection process shortlist and rating for every project on the consultant selection website.

The ratings besides other criteria review past performance.

**Ohio DOT Consultant evaluation process – during design:** ODOT uses the consultant evaluation system (CES) for the evaluating their consultants during the life of the project the evaluation besides looking at quality of plans also look at consultant responsiveness to questions asked etc. ODOT consultant manager ensures that all substantially completed consultant agreements have been rated in CES and a conference held with the consultant in accordance with completion deadlines. For design agreements, it is ensured that timely feedback is provided from the right of way acquisition and construction processes, with prompt consideration of that information as to whether the rating should be revised

ODOT has one point of contact for the project review responses. The district project manager is responsible for compiling the review comments from different section roadway/bridge/R/W etc. and send one comprehensive response to the Consultant project manager vice versa. This avoids any conflicting comments/decisions on the project.

Also, Consultants and ODOT designers follow the ODOT design guidelines set forth in the ODOT location and Design Manual and the Bridge Design Manual.

Errors or omissions by a consultant is contractually defined in Section 2.35 (Errors and Omissions) of the Specifications for Consulting Services: The negligent acts, errors or omissions are in most cases identified during a subsequent phase of the work. Detection of errors, even major errors, during the review process would not normally fall within the errors and omissions standard. Such errors and other review comments must be corrected by the consultant at no cost and later considered in rating the consultant's performance.

More detail on these topics is in the Consultant Contract Administration Manual: [http://www.dot.state.oh.us/Divisions/Engineering/Consultant/ConsultDocs/Volume%201\\_Consultant%20Contract%20Administartion.pdf](http://www.dot.state.oh.us/Divisions/Engineering/Consultant/ConsultDocs/Volume%201_Consultant%20Contract%20Administartion.pdf)

### 14. Oregon

Oregon is in the planning stages of starting up a similar effort.

### 15. Wisconsin

See attachment

# **Appendix I. Research on DrChecks™ Software Functionality, Benefits, and Cost (Addendum No. 1)**

## **Introduction**

The Louisiana Department of Transportation and Development (DOTD) develops, constructs, maintains, and operates Louisiana's transportation system. High-quality engineering plans are essential to the Agency's mission of developing safe, efficient, and cost-effective projects to meet the State's transportation needs. A significant portion of the Agency's design plans are prepared by DOTD consultants. DOTD has determined that consultant plan quality is not at the level it should be to meet the Agency's project delivery mission.

To determine ways to improve plan quality, DOTD completed a study of its Quality Control/Quality Assurance and consultant performance rating processes. Dye Management Group, Inc. (DMG), assisted DOTD on the project. DMG presented the draft Final Report and study findings to DOTD's Executive Leadership on November 18, 2019. Based on feedback from that meeting, it was determined that additional research into the Design Review and Checking System (DrChecks™) plan review comment tracking software would be beneficial.

This addendum to the project Final Report presents DMG's findings from the DrChecks™ research. The report discusses DrChecks™ functionality, benefits, and cost to help DOTD determine how the software might lead to improved consultant plan quality.

## Summary

The objectives of the additional research were to learn from DrChecks™ clients how the system has worked for them, identify major benefits and challenges in using the system, and determine whether the system might help DOTD improve plan development processes and quality. Because of project time and budget constraints, DMG was not able to perform an independent in-depth study of DrChecks™ functions and features.

DrChecks™ is an internet-based application created by the United States Army Corps of Engineers that allows project stakeholders to track comments and changes to shared documents and facilitate the design review process. It is part of a larger suite of applications within the PROJect extraNET (ProjNet) web service to help manage project design and construction. The National Institute of Building Sciences (NIBS) administers DrChecks™ subscriptions and provides user support services.

ProjNet lists its current clients as the following:

- General Services Administration (GSA)
- National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory
- Naval Facility Engineering Command (NAVFAC)
- U.S. Army Corps of Engineers (USACE)
- U.S. Air Force
- U.S. Department of State, Overseas Building Operations (OBO)
- Department of Veteran Affairs (VA)
- South Florida Water Management District (SFWMD)
- University of North Carolina, Chapel Hill
- Montgomery County, MD

Based on discussions with four of the client agencies that use DrChecks™, DMG presents the following key findings, conclusions, and recommendations:

### Costs

- ProjNet lists the annual subscription fee for DrChecks™ as \$44,613 plus a one-time set up fee of \$5,000.
- The time and cost for training is minimal according to the client agencies. An accurate estimate of training cost can be determined after DOTD defines its technical and functional requirements for the software and identifies the number of users.

- There are ongoing costs associated with administering the system. DOTD would need to designate an in-house person(s) as system administrator which might not require full time commitment. Again, technical and functional requirements would need to be developed to determine system administrator workload.

### **System Benefits**

- **Simplicity of Use.** Clients reported that the system is simple to use and allows users to quickly find real-time status on plan reviews, comments, and responses in one location. A dashboard feature provides an overview of project information. Data can easily be exported to a .pdf or Excel-compatible file.
- **Security.** USACE maintains the ProjNet platform ensuring that the system is certified for use when dealing with sensitive information that requires a secure platform. This feature may be beneficial if the DOTD is concerned with using FTP sites to share files.
- **Accessibility.** Both in-house staff and DOTD consultants would be able to access the software using a web browser. This allows for easy collaboration among all parties involved in the design review process.
- **Flexibility.** Each client can organize project data according to its processes and preferences. For example, if an agency has four different review periods such as a concept review, 60% complete, 90% complete, and final plans, the client can set up the system according to that framework.

### **System Drawbacks**

- **Security Administration.** The system's strict security protocols and requirements result in additional work for the system administrator. The strict requirements often result in users needing help from the administrator to get back into the system. Resetting passwords is a large part of the administrator's workload.
- **User Interface.** Clients reported that the system looks and feels old and that the system lacks the user-friendly interfaces associated with most modern applications.
- **System Updates.** Clients reported that updates and changes to the system have been slow. While users mentioned that customer service is good in terms of responding to immediate requests, agencies reported long wait times for the developers to add specific features they had requested.
- **Plan Quality Improvement Not Identifiable.** DMG asked the clients whether using DrChecks™ had reduced errors and resulted in improved plan quality. While the

system has made comment tracking easier, agencies did not have data with which to confirm or refute that plan quality had improved.

## **Conclusions and Recommendations**

Based on feedback from the ProjNet clients, there is consensus that DrChecks™ is beneficial and has helped improve plan review comment tracking. Major benefits of the tool are its ready accessibility through browser applications, ease of use, and centralized up-to-date comment status available to all project team members. Major drawbacks of the system are the strict security administration requirements, the look and feel of old technology, and the slow response by the developer to client requests for upgrades and changes.

The potential benefits of specialized tracking software include:

- Consistent procedures for comment and response tracking among all managers in DOTD
- Real time comment and response data in one location available to all users
- Ability to track the status of individual responses
- Ability to export and analyze comments

Based on ProjNet's prices published on its website, the cost for an annual subscription and the setup fee seem reasonable if these benefits can be achieved. There would be additional costs associated with system administration, but those costs are unknown until DOTD defines its system requirements and identifies the number of users.

DMG believes that the potential benefits to be derived from specialized comment tracking software such as DrChecks™ warrant further investigation into possible options. DMG recommends that DOTD undertake the following next steps:

1. Define the system functional and technical requirements to support DOTD's plan review processes
2. Contact the DrChecks™ vendor and arrange a product demonstration to compare the system against the functional and technical requirements.
3. Based on the functional and technical requirements and the system demonstration, contact DrChecks™ clients for additional references and questions specific to DOTD's needs.
4. Assess options for other solutions to meet DOTD needs, such as:

- a. Use of commercial software such as Word, Excel, or Google
  - b. Piggybacking on other DOT solutions (Florida DOT is updating its comment tracking software)
5. Based on the outcomes from steps 1-4, proceed with updating business processes and implementing the software solution that best fits DOTD needs.

## **Research Approach**

### **Literature Review**

DMG conducted a literature search from the following sources:

- The ProjNet website, which provides DrChecks™ product information and brief client profiles.
- Transport Research International Documentation (TRID), which is a database that houses technical reports from the Transportation Research Board (TRB) and the International Transport Research Documentation (ITRD) database.

### **Interviews**

After conducting the literature search and identifying current DrChecks™ users, DMG conducted telephone interviews with four client agencies to acquire information about their experience with using the system. DMG contacted the following organizations:

- The Dormitory Authority of the State of New York (DASNY)
- General Services Administration (GSA)
- The United States Army Corps of Engineers (USACE)
- The University of North Carolina, Chapel Hill (UNC-CH)

The researchers attempted to contact the South Florida Water Management District and NASA but were unsuccessful in contacting someone within those agencies familiar with the system.



## Key Findings

### Functionality

The DrChecks™ software is an application within the PROJect extraNET (ProjNet) web service which includes a suite of applications for use in project design and construction. With DrChecks™, authorized users can access all project materials and communicate about design issues in real time. All users on a particular project can access the entire record of the design review process including comments, changes, and resolutions throughout the project. The ProjNet website cites the following general functions and benefits of the tool:

*DrChecks™ consistently achieves savings by:*

- *Reducing on-site meeting time and expenses*
- *Identifying stakeholders who are not participating in a review*
- *Eliminating paper collation, email and faxes*
- *Reducing document transmission time*
- *Eliminating issues in process*
- *Focusing communications among relevant stakeholders*
- *Providing single access point to all project materials*
- *Facilitating use of quality standards.<sup>1</sup>*

Another module available from ProjNet suite used in the design phase is called Filer, which allows users to exchange project documents in real time. This tool tracks when documents are created, deleted, and viewed and helps teams ensure that they are looking at the most recent version of a document. ProjNet also offers tools for the bid and build phases of a project as well.

A major reason for creating the ProjNet service was to securely exchange sensitive unclassified information through the internet. Several government agencies require sensitive information to be sent through means more secure than email attachments and FTP servers. DrChecks™ provides for the added security.

---

<sup>1</sup> ProjNet website. "ProjNet Products & Features." Accessed December 13, 2019 via <http://www.projnet.com/products.php>.

## Cost

NIBS provides licenses to customers using an annual subscription-based model. Customers can subscribe to one or more modules, depending upon their needs. Once they sign on with NIBS, all customers become members of the Government to Business Committee (G2B), which helps ProjNet developers set priorities for upgrades and improvements.

The figure below shows the pricing structure from the website. An exact pricing quote to meet DOTD's needs can be obtained from NIBS after DOTD has defined its functional and technical requirements.

### ProjNet Pricing Guidelines

#### Typical Annual Subscriptions: Δ

ProjNet Application*	1-20 Projects	21-40 Projects	41+ Projects
DrChecks	\$22,308	\$33,944	\$44,613
FILER	\$11,153	\$16,729	\$22,308
RFI	\$8,484	\$12,326	\$16,975
BID	\$8,484	\$12,326	\$16,975
Plan Room	\$11,153	\$16,729	\$22,308
Submittal Register	\$26,034	\$39,050	\$52,068

Plus one time set-up fee of \$5,000

Δ Prices valid through December 2019

\* Discounts for Federal Agencies may apply.

## Case Studies

DMG contacted six of ProjNet's clients who are using DrChecks™ to discuss each agency's experience with using the software. As discussed below, two of the agencies were very helpful and provided considerable information on how they use the system, its benefits, and drawbacks. USACE and the University of North Carolina could provide only high-level information on their use of the system.

**Dormitory Authority of the State of New York.** The Dormitory Authority of the State of New York (DASNY) is a public benefit corporation that finances and builds facilities across the state. More specifically, DASNY serves clients in public education such as the City University of New York, the state university system, hospitals, libraries, and performing arts centers, among others.

DASNY's Planning, Design and Quality Assurance, and the Code Compliance staff began using DrChecks™ in 2011. DASNY transitioned from an old system that involved many Word documents and selected the software because it was available to everyone online and allowed them to see which issues remain on a given project without searching through several documents. DASNY said that, when they were looking for a comments tracking program, there was little competition. DASNY uses DrChecks™ strictly for tracking comments; another system is used for project management and workload.

Approximately 100 people in DASNY's four main offices use the software regularly along with many consultants. Consultants are granted access to DrChecks™ on an as-needed basis.

DASNY noted the following major system benefits:

- The system is easy to use, and information is readily available to everyone in real-time.
- ProjNet customer service is very responsive to DASNY's immediate needs; although they have been slow to add functionality requested by DASNY.
- ProjNet offers user group meetings in Washington, D.C. to (a) provide a forum to update users on new functionality or updates, and (b) allow users to provide feedback and request changes to the program.
- From DASNY's view, the cost is very reasonable, and implementation of the software was smooth and not very time-consuming.
- DASNY did not have to change their work processes to implement the new tool.

Major challenges or drawbacks with using the system are:

- There are no analytical reports in the system to track performance such as number of comments per plan submittal or similar metrics.
- Comments may be classified as critical, but there is no functionality for more detailed classifications designating whether a comment is an error, general comment, question, or other categories.
- The system is an older program. Although it is relatively easy to use, it is not very intuitive, and the user interface is not in line with more modern systems.
- DASNY believes that functionality should be added to have the system automatically send an email when a review is complete. DASNY would like the

ability to click a button and have a notification email sent automatically to all stakeholders.

- Administration of system security is onerous. Administering and updating passwords is a large part of the administrator's workload. While DASNY does not need the level of data security that DrChecks™ provides, there is no option for a less-secure version.
- Data availability in the case of technical problems on the ProjNet side could be a problem. If the ProjNet server were to fail, some data will be available immediately, some within a week, and other data would not be available until much later.

DASNY was asked if the system has helped them reduce errors and improve plan quality. The agency could not confirm that the change order rate improved after they began using the program.

DASNY is considering moving away from DrChecks™ and using their new project management system to perform the functions that DrChecks™ is currently performing. The agency is evaluating whether their project management system can provide such functionality.

**General Services Administration, Region 1.** The GSA helps create and manage office space and provides other real estate-related services for Federal agencies. It oversees capital construction for projects ranging in size from \$3 to \$600 million. The agency hires architects and engineers to implement the projects, which are completed using different methods such as design-build or design-bid-build. GSA's Region 1 office uses DrChecks™ to assist with their design review processes.

Region 1 cited the following benefits of DrChecks™:

- It is certified for use when dealing with sensitive information. Due to the sensitive nature of some of the information that GSA works with, they are unable to use FTP sites.
- It is readily accessible. Consultants and others who work on projects can access the software using a web browser. This allows for easy collaboration among all parties involved in the design review process.
- It is easy to identify the resolution to an issue or question. The interviewee likes the simplicity and clarity of the tool. If someone is unsure how a question or comment was resolved, it is easy to find the answer. He believes it is easier than other tools that allow for shared comments such as Google Docs or Google Sheets.

- Although the system does not have a modern user interface, it is easy to search data. The tool allows the user to search by project, reviewer name, and other criteria, which helps recall details that might have been forgotten due to the long nature of some projects. The project dashboard was noted as a key positive feature of the system.
- It is flexible. The agency can organize the data according to its processes and preferences. For example, if an agency has four different review periods such as a concept review, 60% complete, 90% complete, and final plans, they are able to set up the system according to that framework.
- It is easy to download data from the system. Users can export data as a .pdf or Excel compatible file

Major drawbacks noted by GSA were:

- Some users do not like the interface.
- Due to the relatively strict security of the system, the administrator in Region 1 often fields requests from consultants and users to help reset a password and get into the system.

There is no data with which to provide a conclusive answer on whether performance has improved as a result of using the software. The interviewee mentioned that, in general, performance is good.

**The United States Army Corps of Engineers (USACE) and The University of North Carolina.** DMG spoke with representatives from both of these agencies, but was unable to contact individuals with hands-on knowledge of how the agencies use the DrChecks™ system. Both agencies cited many of the same benefits identified by the two previously discussed agencies. Both feel that the system provides considerable benefits in the plan review process. Like the previous two clients, neither was able to say whether plan quality has improved since they began using DrChecks™.

## Conclusions and Recommendations

The conclusions and recommendations presented here consider how DrChecks™, or other specialized software, might help DOTD improve its comment tracking processes and plan quality. As with any technology, software systems must align with business processes to achieve positive results. Whether DOTD can benefit from DrChecks™

depends on integrating the system's features with DOTD processes and then requiring adherence by the project design teams to the established processes.

ProjNet does not list any DOT clients as users of DrChecks™. When DMG performed the best practice review of other states, we found only one state that used comment tracking software. Most commonly, DOTs use readily available commercial software such as Word or Excel for comment tracking.

Use of specialized comment tracking software in project design should lead to improved efficiency for comment tracking which, in turn, should lead to improved plan quality. The potential benefits of specialized tracking software include:

- Consistent procedures for comment and response tracking among all managers in DOTD
- Real time comment and response data in one location available to all users
- Ability to track the status of individual responses
- Ability to export and analyze comments

The costs for implementing and administering DrChecks™ seem reasonable if these potential benefits can be achieved. Once again, it is important that the business processes align with the system and are applied consistently.

DMG believes that the potential benefits to be derived from specialized comment tracking software such as DrChecks™ warrant further investigation into possible options. DMG recommends that DOTD undertake the following next steps:

1. Define the system functional and technical requirements to support DOTD's plan review processes.
2. Contact the DrChecks™ vendor and arrange a product demonstration to compare the system against the functional and technical requirements.
3. Based on the functional and technical requirements and the system demonstration, contact additional DrChecks™ clients for additional reference with questions specific to DOTD's needs.
4. Assess options for other solutions to meet DOTD needs, such as:
  - a. Use of commercial software such as Word, Excel, Google, or other
  - b. Piggybacking on other DOT solutions (Florida DOT is updating its comment tracking software)

5. Based on the outcomes from steps 1-4, proceed with updating business processes and implementing the software solution that best fits DOTD needs.

## **References**

Daigler, Sandra. Dormitory Authority of the State of New York. Interview by Caroline Leary. Telephone call. December 10, 2019.

Dilks, Drew. General Services Administration, Region 1. Interview by Caroline Leary. Telephone call. December 30, 2019.

ProjNet. "ProjNet Industry Solutions." ProjNet.com.  
[http://www.projnet.com/case\\_histories.php](http://www.projnet.com/case_histories.php) (accessed January 6, 2020).

ProjNet. "ProjNet Pricing." ProjNet.com. <http://www.projnet.com/pricing.php> (accessed December 16, 2019).

ProjNet. "ProjNet Products & Features." Accessed December 13, 2019 via  
<http://www.projnet.com/products.php>.

The Dormitory Authority of the State of New York. "ProjNet - DrChecksSM | DASNY".  
DASNY.org. <https://www.dasny.org/tools-forms/client-portals/projnet-drcheckssm>  
(accessed December 19, 2019).

The University of North Carolina Facilities Services. "Design Review Checking System  
(DrChecks) - Facilities Services." UNC.edu. [https://facilities.unc.edu/planning/facilities-  
technology-group/design-review-checking-system/](https://facilities.unc.edu/planning/facilities-technology-group/design-review-checking-system/) (accessed December 18, 2019).

White, Drew. United States Army Corps of Engineers. Interview by Caroline Leary.  
Telephone Call. December 26, 2019.

This public document is published at a total cost of \$200. 29 copies of this public document were published in this first printing at a cost of \$200. The total cost of all printings of this document including reprints is \$200. This document was published by Louisiana Transportation Research Center to report and publish research findings as required in R.S. 48:105. This material was duplicated in accordance with standards for printing by state agencies established pursuant to R.S. 43:31. Printing of this material was purchased in accordance with the provisions of Title 43 of the Louisiana Revised Statutes.