

Missouri Department of Transportation
David B. Nichols, Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

April 23, 2014

Dear Consultant:

The Missouri Highways and Transportation Commission is requesting the services of a consulting engineering firm to perform the described professional services for the project included on the attached list.


If your firm would like to be considered for these consulting services, you may express your interest by responding to the appropriate office, which is indicated on the attachments. Limit your letter of interest to no more than three pages. This letter should include a statement to indicate your firm's understanding of the project. It should also include any other information which might help us in the selection process, including key personnel you would assign to the project and the backgrounds of those individuals, and any sub-consultants you would propose to use, and an indication of your firm's approach to promoting and developing a diverse workforce. MoDOT is committed to reflecting the diversity of the communities we serve and we expect our partners to do the same. We will utilize the consultant information already on file so we will not need a lengthy submittal of other general company information. In addition, please attach one page with detailed information on similar projects that your key personnel have worked on. Indicate the role your key personnel played in the projects and include reference contact information.

DBE firms must be certified by the Missouri Department of Transportation in order to be counted as participation towards an established DBE Goal. We encourage DBE firms to submit letters of interest as prime consultants for any projects they feel can be managed by their firm. We also encourage both DBE firms and non-DBE firms to consider joining MoDOT's Mentor/Protégé program whenever possible as part of a MoDOT project.

MoDOT will evaluate firms based on: Past Performance, Qualifications of Personnel Assigned, Familiarity/Capability, General Experience of Firm, and Accessibility of Firm and Staff. Firm's not providing a response on approach to workforce diversity will be considered non-responsive to this solicitation. Firm's that are not current on all of the required prequalification categories found in MoDOT's Approved Consultant Prequalification List at the date of the solicitation expiration will be considered non-responsive.

We request all letters be received by 3:00 pm, May 7, 2014 at the appropriate office.

Sincerely,


Eric Schroeter, P.E.
State Design Engineer

Attachment



Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.

www.modot.org

Rating Criteria w/Weighted Values

General Experience of Firm	15 Points Max
Past Performance	35 Points Max
Qualifications of Personnel Assigned	25 Points Max
Familiarity/Capability	15 Points Max
Accessibility of Firm & Staff	<u>10 Points Max</u>
	100 Points Max Total

Construction & Materials Division

Dave Ahlvers – State Construction & Materials Engineer
Missouri Department of Transportation
1617 Missouri Blvd.
Jefferson City, MO 65109

Contact:
Sarah Kleinschmit
573-751-2926
Sarah.Kleinschmit@modot.mo.gov
Email responses are encouraged

Project Description:

Event development of one (1) *“Every Day Counts Initiative 1 ½ Day Demonstration Workshop on 3D Engineered Models for Stringless Concrete Paving”* funded by the Federal Highway Administration (FHWA) and hosted and administered by the Missouri Department of Transportation (MoDOT).

Objectives:

Provide a demonstration workshop training event focused on the proven technology of 3D engineered models for concrete stringless pavements including design deliverables to the contractor, constructability, contract administration, and final payment of quantities. The 1st day will focus on presentations of workflows, implementation, and project examples using the technology. The field demonstration will take place in the morning of the second day (½ day). The desire of the field demonstration is to focus on a real construction project using the technology as conditions permit.

Goals:

Provide an informational sharing process and training concerning the usage of 3D engineered models for construction of concrete pavements. Provide the foundation for the Missouri Department of Transportation to start the development of guidelines to implement 3D workflows contract administration and inspection processes. The targeted audience is transportation agencies, consultants, and contractors involved in highway project delivery.



Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.

www.modot.org

The overall outcome of this event is training about current proven tools and methods that are available to accelerate the delivery of highway projects.

The following is a general outline of the event. A sample agenda can be found in Appendix A.

- Day 1 - A.M. Overview of 3D engineered models for concrete paving (stringless), and creating implementation plan and metrics to achieve it.
- Day 1 - P.M. Capturing existing conditions and working with 3D models in design and construction with emphasis in stringless paving.
- Day 2 - A.M. Field Demonstration

General Requirements:

The Consultant shall be an engineering firm with experience in 3D workflows for design and construction.

Proposed Field Demonstration Project:

Name of Project:

Route 364 Page Ave. Phase 3

Project Director and Contact Information:

Dave Simmons

Phone: (314) 275-1500

Email: Route.364@modot.mo.gov

Project Website: http://www.modot.org/stlouis/major_projects/Route364upgrade.htm

Project Schedule:

http://www.modot.org/stlouis/major_projects/documents/CompletionSchedule.pdf

Delineation of Tasks:

Task #1: Event Development and Administration

The Consultant shall be responsible for the development and administration of the “*Every Day Counts Initiative 1 ½ Day Demonstration Workshop on 3D Engineered Models for Stringless Concrete Paving*”. The Consultant shall coordinate all activities with the MoDOT staff planning the event. MoDOT staff shall have final approval on the selection of speakers, venues and meal/snack choices, transportation options, agenda, and any published workshop material.

The Consultant shall assist with the draft list of participants. The list of participants should represent a cross-section of construction engineers, managers and practitioners. It is anticipated that the workshop will be a 1 ½ day event with approximately 85 participants.

The Consultant shall be responsible for:

- Providing for all logistical arrangements for booking the event venue including conducting all negotiations regarding the cost of conference rooms, meals/breaks, guest room rates, parking fees, and any additional fees and services provided by the venue. At a minimum, the event shall provide a lunch meal on the first day of the workshop as well as morning and afternoon breaks with a choice of beverages. If budget allows, small snacks can be added to the breaks and a continental breakfast can be provided on the second day of the workshop.
- Making reimbursements for venue invoices.
- Assist MoDOT with the development of the agenda. A sample agenda can be found in Appendix A.
- Providing a list of the subject matter experts (SME's) to speak as part of the agenda and assisting MoDOT with the selection of speakers.
- Secure and organize transportation to and from field demonstration.
- Create a back-up plan for the field demonstration just in case the proposed real project demonstration is cancelled due to an unforeseen event (weather, project delay, etc.).
- Schedule and complete bi-weekly progress meetings.

Task #2: Invitational Travel

The Consultant shall be responsible for:

- Making arrangements and reimbursement for invitational travel for all SME's to speak as part of the agenda. Invitational travel includes air and ground transportation, meals, and hotel accommodations. Invitational travel expenses shall not exceed the federal per diem rates for the St. Louis area.
- Making arrangements and reimbursement for invitational travel for approximately 12 DOT persons. Invitational travel includes air and ground transportation, meals, and hotel accommodations. Invitational travel expenses shall not exceed the federal per diem rates for the St. Louis area.
- Making arrangements and reimbursement for approximately 10 MoDOT participants. Invitational travel includes air and ground transportation, meals, and hotel accommodations. Invitational travel expenses shall not exceed the federal per diem rates for the St. Louis area.

Task #3: Event Organization and Hosting

The Consultant shall be responsible for:

- Facilitating the workshop.
- Providing on-the-spot support for the duration of the workshop.
- Preparing and distributing registration forms, name tags, materials and handouts, and personal protection equipment (PPE).
- Preparing and distributing workshop invitations and evaluations.
- Managing and organizing registration.

Task #4: Event Documentation

The Consultant shall be responsible for:

- Compiling meeting minutes.
- Compiling (or maintaining) the list of attendees, with contact information, in a Microsoft Word or Excel document (.docx or .xlsx format).
- Documenting workshop highlights/summary report for distribution.
 - The Consultant shall complete and submit a summary report highlighting workshop results of the workshop. All submitted workshop summary reports must be 508 compliant.
- Preparing a summary report of the workshop evaluations.
- Making an outline with topics to be considered for implementation guidelines for 3D construction inspection, quality assurance, and payment of quantities.

Detailed Deliverables and Timelines:

The delivery schedule below outlines the estimated time to complete each task. All draft deliverables shall assume a 2-business day MoDOT review and comment period. The schedule is dependent on the field demonstration project schedule; consequently certain tasks may be modified to accommodate the timeline of the project.

	Schedule of Events	Estimated Due Times
	Letter of Interest	by 5/7/2014
	Selection of Consultant	by 5/14/2014
	Cost estimate and negotiation finalized	by 5/28/2014
	Award of Contract	by 6/6/2014

Task	Deliverables Post Award	Estimated Due Times
Task 1	Draft work plan	by 6/13/2014
	Kick-off meeting	by 6/20/2014
	Meeting summary and final work plan	by 6/25/2014
	Bi-weekly conference call	week of 6/30/2014
	Venue proposal and cost estimate	by 7/2/2014
	Contract with hosting venue	by 7/9/2014
	List of SME speakers for agenda	by 7/9/2014
	Ground transportation proposal and estimate for field demonstration	by 7/16/2014
Task 3	Finalized workshop invitations and distribution	by 7/14/2014
Task 2	Bi-weekly conference call	week of 7/14/2014
	Invitational arrangements finalized (both SME's and DOT's)	by 7/23/2014
Task 3	Registration finalized	by 7/23/2014
Task 2	Provide invitational itinerary	by 7/28/2014
Task 3	Provide registration list	by 7/30/2014
	Registration forms, name tags, materials/handouts, and PPE ready	by 7/30/2014
	Pre-event on-site meeting/Bi-weekly conference call	week of 7/28/2014
	Event registration/facilitation	week of 8/4/2014
Task 4	Final list of attendees with contact information	within 10 working days after workshop
	Workshop summary report	within 10 working days after workshop
	Evaluation summary report	within 10 working days after workshop
	Post event meeting	within 2 weeks after workshop
	Outline for implementation guidelines	by 10/1/2014
Task 2	All travel reimbursements paid	within 1 month after workshop

Rating Criteria w/Weighted Values

General Experience of Firm	15 Points Max
Past Performance	35 Points Max
Qualifications of Personnel Assigned	25 Points Max
Familiarity/Capability	15 Points Max
Accessibility of Firm & Staff	<u>10 Points Max</u>
	100 Points Max Total

APPENDIX A

Design to Construction of Concrete Stringless Pavements

Day 1: Presentation Session

8:00-8:15am Welcome & Housekeeping Items (15 min)

- MC - Consultant
- Welcome & Desired Goals (Dave Ahlvers)
- Housekeeping Items (Consultant)

8:15-9:15am Overview of 3D Engineered Models for Highway Construction (1 hour) – SME/Consultant

- State of Practice and Benefits (15 min)
- Level of Details in 3D Models (15 min)
- Challenges to Implementation (15 min)
- Q&A (15 min)

9:15-10:15am **Contractor Project Example:** 3D Modeling for Constructability (1 hour) – Page Constructors

10:15-10:30am BREAK – NETWORKING (15 min)

10:30-11:30am Creating a Plan to Implement 3D Engineered Models for Construction (DOT Agencies)

- Identifying and establishing vision, goals, roles, responsibilities and accountability measures (WisDOT?)
- Identifying baseline and challenges (Agency Panel – ODOT, WisDOT, MoDOT, Iowa, Kentucky?)
- Share success stories and learned lessons (WisDOT, Kentucky?)

11:30am-1:00pm LUNCH PRESENTATION - ELECTRONIC DATA AND THE LAW (DOT Attorney?)

1:00-2:00pm Capturing Existing Conditions in 3D Engineered Models – SME/Consultant

- Overview of survey methods & technology to meet desired level of accuracy
- Deliverables from 3D Surveys (LIDAR)
- Managing large data sets

2:00-3:30pm Working with 3D Models in Design and Construction – Part 1

- Creating 3D Design Model – Level of detail, calculating quantities & visualization (Bentley Systems Inc.)

3:30-3:45pm BREAK - NETWORKING

3:45-4:45pm Working with 3D Models in Design and Construction – Part 2 – SME & Contractor

- 3D Model Level of Detail Matrix (Example: Caltrans Matrix)
- Deliverables for Bidding – Alignments, profiles, surfaces, components, and formats & method of delivery to contractor.
- Using 3D Models in the Field – Examples of use/What is useful to the contractor?
- Construction Inspection & Administration – Performance based specifications, QC (Contractor) and QA (Agency) plans for using AMG technology
- Agency/Contractor Panel Discussion

Day 2: Project Example & Demonstration of Technology

Contractor Project Overview and Equipment Being Used

- *Scope of project, what was delivered and when, who did the models for machine control?*
- *Set up equipment in the field for “show and tell”*
- *Paving equipment, rovers, lasers, etc.*

Sample