

Consultant Construction Engineering & Inspection Frequently Asked Questions

Question 1

What types of projects will be considered/selected for these services?

Project type has not been determined, and will likely be a product of letting schedules, funding availability, and staffing needs. MDT's intent at this time is to consider preservation projects, rehabilitations, and large earthwork reconstructions. Due to the infancy of CEI services at MDT, complex urban or bridge projects will likely not be considered.

Question 2

How many projects is MDT anticipating next year?

It is anticipated that 2-3 projects will be selected for CEI Services in 2020; however, depending on letting schedules, funding availability, and staffing needs, there could be a project selected in each of MDT's five Districts.

Question 3

How will travel be considered?

Like any professional services contract, direct travel expenses in accordance with GSA rates and rules are compensable. Additionally, the home office location of staff will not be a significant consideration in scoring and will only be a nominal scoring factor, primarily as it relates to the personnel's familiarity with the region (i.e. specific regional materials, public opinion, etc.).

Question 4

In reference to 5.12.ii and iii, Claim Support – this is difficult to define and quantify. From our experience, this is typically not included in CEI services and treated as additional services.

This item is only stating what the consultant will be responsible for. Specific level of effort will be discussed/negotiated/determined during the scoping stage with the successful firm.

Question 5

In reference to 5.13.v - who are the shop drawings transmitted to, and who reviews the shop drawings?

Shop drawings will be submitted to the Resident Engineer for MDT review.

Question 6

Please consider modifying the title of task 6. "Survey Control" to "Survey Verification". Also, checking and verifying can be difficult to quantify unless assumptions are made on number of visits by survey firm in the man-hour estimate.

Agreed. The title of 6. will be revised to "Survey Verification". Additionally, this item is only stating what the consultant will be responsible for. Specific level of effort will be discussed/negotiated/determined during the scoping stage with the successful firm.

Question 7

What qualifications/certifications are required for Inspectors who are not performing material sampling and testing?

No specific certifications are required for individuals not performing sampling and testing. While there are no specific requirements for education or years of experience, all personnel must be sufficiently qualified to perform the tasks required. AASHTOWare and/or SiteManager user training is needed, and will be provided, before access is granted to these software suites.

Question 8

In reference to task 7, recommend adding a task for Inspectors to observe the work for general conformance with the contract documents.

This item is covered in the Scope of Work section, as well as Section 8.

Question 9

Please define "conditional final acceptance".

Conditional Final Acceptance is defined in Section 105.17 of the MDT Standard and Supplemental Specifications. Additionally, please refer to the following supporting information on the finalization process:

Memo:

https://www.mdt.mt.gov/other/webdata/external/const/const_memo/2014/105_17_FINALIZATION_PROCESS.PDF

Process Outline:

https://www.mdt.mt.gov/other/webdata/external/const/manuals_guidelines/MDT-CON-105_17_OUTLINE.pdf

Flowchart:

https://www.mdt.mt.gov/other/webdata/external/const/manuals_guidelines/final_flowchart.pdf

Question 10

Contract Agreement Payment Terms – recommend making payment based on time and material using fully burdened labor rates (raw labor, overhead, profit) as opposed to cost-plus fixed fee. Agreements based on cost-plus fixed fee are used design contracts as an incentive for Consultant to be efficient on defined tasks. For CE&I agreements, estimated costs are typically dependent on construction contract time and assumed number of staff required to fulfill the scope of services.

Fully burdened rates that include profit is a prohibited payment method for professional services contracts per 23CFR172.9 (cost plus a percentage of cost). The contract agreement will be administered on a cost-plus fixed fee basis with a ceiling to maintain cost control and compliance with 23CFR172. During contract development, a cost ceiling will be negotiated for the anticipated services to be provided for the specific project. The consultant will be bill only for the costs actually incurred. Amendments to the cost ceiling will be negotiated as necessary. The fixed fee will be established based on the anticipated services to be provided.

Question 11: *No question #11 - Inadvertently skipped numbering sequence.*

Question 12

Will MDT continue to provide inspection at the precast yard like they traditionally do now? Or will the Consultant be responsible?

Standard Specification 551.03.8 Testing and Acceptance of Concrete states:

“Construct any products that are not cast-in-place, and not produced at a PCI, ACPA or NPCA certified precast plant, in accordance with Subsection 605.03. These products will be evaluated in accordance with Subsection 551.03.8(C) for the class of concrete specified.”

Project level inspection at precast yards has been mostly eliminated (pipes, inlets, boxes, and manholes are all required to come from certified plants) so this should be a non-issue; however if any precast beams are specified, the Department will inspect them as we would for any other project using District and HQ personnel as is current practice.

Question 13

Will MDT provide production testing of the asphalt? This is given that the Consultant will be witnessing the Contractor taking the samples.

Yes. District Laboratories will provide volumetric, density, and ride testing just like they would for any other MDT project. The MDT Headquarters and Billings labs will perform any Hamburg testing, and the Headquarters lab will perform liquid binder and emulsion testing as before.

Question 14

It is understood that the consultant will be taking the concrete cylinder samples, but need to verify if the Consultant or MDT will break the cylinders in the lab?

The Billings, Glendive, and Headquarters labs will break cylinders as is the current practice.

Question 15

When a project is complete, the current practice is that the District Land Surveyor sets the project monumentation for R/W. Will this continue to be the case or is the Consultant expected to perform this function?

- *Not applicable for the Missoula and Great Falls District projects.*
- *Butte and Glendive District Land Surveyors will complete this activity for their projects.*
- *For the Billings District project, it is expected that the Consultant will set the pins, and the Billings District Land Surveyor will verify and set caps as applicable.*

Question 16

Mix design: Transfer mix design, particularly on the bridge jobs, is likely. Does the Consultant work with MDT to verify that is acceptable? We assume that's the case but need to verify/confirm.

Yes. Mix design approvals or requests for transfer will be handled as is current practice with the contractor submitting said requests to the Consultant Project manager. The Consultant will then run them up the chain through the Resident Engineer according to our current process.

Question 17

Source approval for borrow sources. Currently, MDT lab certifies borrow source. Will the Consultant need to wholly perform this function, or is this something the Consultant will work with MDT on to accept/approve?

MDT will continue to perform any soils class or R-value testing for Borrow Source approval as is the current practice, again, working in conjunction with the Consultant as if they were just another MDT crew.

Question 18

Does MDT expect all of these projects to be Contractor Staking?

It is expected that the Consultant will perform the staking, if applicable, for all projects.

Question 19

We understand that MDT will obtain the asphalt mix samples in the field, bring to their field lab, and compact specimens, and perform all associated testing; bulk gravities, rice, asphalt content, gradation. Will MDT also perform the liquid asphalt sampling at the plant during production, and perform observation of the mix operations at the plant?

MDT has identified witnessing liquid asphalt binder sampling and all other liquid asphalt sampling as the responsibility of the "Field" in Section MT-601 of the Materials Manual. MT-601 defines three areas of responsibility: Field, District, and HQ. In the case of a CEI contract, the consultant will be playing the role of "Field" for these purposes. As far as observing mix observations at the plant, that is usually the field's responsibility as well, given there are no "samples" to witness, only observations of temperature, tonnage, yield, stations, etc. (the information captured on the 'Daily Plant Mix Report'). Any sample containers for liquid asphalt should be supplied by the District Lab.

Question 20

If the consultant is responsible for liquid asphalt sampling at the plant, firms may not be able to perform the required asphalt binder performed and required by MDT (i.e. dynamic shear, bending beam rheometer). Will the consultant send liquid samples to MDT for testing?

Yes, the consultant, after witnessing any liquid asphalt samples, will turn said samples over to the District Lab who will transport them to Helena for testing. There shouldn't be any need for shipping. The consultant should work with the District Materials Supervisor for sample containers and sample shipping boxes; however, the District Lab will take care of any shipping.

Question 21

We understand the contractor will be responsible for nuclear density testing of the asphalt mat during placement, who will be responsible for coring of the asphalt and associated bulk density testing following asphalt placement?

The Consultant will be responsible for identifying and marking out the location of core holes for density testing. The Contractor is responsible for doing the actual coring. The District Lab is responsible for bulk specific gravity testing and percent compaction calculations. This is discussed in Standard and Supplemental specification 401.03.21 COMPACTION, COMPACTION CONTROL TESTING, AND DENSITY ACCEPTANCE TESTING.

Question 22

In general, if MDT is performing the bulk or all of the asphalt testing on the overlay projects (primarily because consultants do not perform a good portion of the tests required by MDT), there does not appear to be a significant component of materials testing on these project for the consultant, please confirm.

Since standard overlay and mill/fill projects usually don't require many other materials than the pavement and its component materials, this may be true. However, any aggregate testing for cover material or possible borrow for dig-outs or sub ex would be the responsibility of the consultant – or at the very least, an arrangement will need to be made in conjunction with the District Construction Engineer and the District Materials Supervisor.

Question 23

Will the District Labs provide proctors and gradation testing for the materials incorporated into the project?

The District Labs should provide any proctors, as that is their function currently. As far as gradation testing, that is primarily the field's (CEI Consultant) responsibility but will have to be discussed locally. For example: If there is a situation with Special Borrow that requires a certain soil class, a gradation is required to determine soil class so that would be performed by the District Lab. The District Lab would also provide a proctor result for compaction testing. But since this is a "source" test, once the source is approved, no further gradation testing is required, only compaction testing. However, in the case of standard Crushed Aggregate Course where there are compaction, plasticity, liquidity, AND gradation/fracture requirements, the District provides the proctors used to determine compaction as well as the plastic and liquid limit testing on the stockpiles. BUT, the field (CEI) performs the acceptance gradation and fracture testing. If it's a large enough job, there should be an aggregate trailer on the project with the necessary equipment for the "field" to use. If it's a smaller job, the samples may be transported back to the District or Area lab for testing by field (CEI) personnel using equipment in the lab. And in still other cases, like a really small job, the District Lab may offer or agree to perform the testing themselves. Specifics per project will be discussed during scoping.