PRECONSTRUCTION CONFERENCE

A preconstruction conference shall be conducted by the local agency, prior to the start of work, to ensure that all parties involved are aware of their responsibilities. Those invited to attend shall include but not be limited to representatives from the consultant (if applicable), contractor, subcontractors, utilities (if involved), local police, fire, postal, and school agencies (if traffic is to be severely restricted or road closed) and MoDOT. Arrangements for and notice given of the meeting shall be completed at least one week prior to the meeting date. Figure XI-1 outlines some general guidelines for the preconstruction conference.

For projects that have specified contractor furnished borrow, the contractor should be reminded of the requirement that the borrow area must be reviewed by MoDNR for cultural resource issues, a Farmland Conversion Impact Rating statement should be filed, and the US. Fish and Wildlife and the Missouri Department of Conservation should be contacted for review of endangered species. A copy of the correspondence from these agencies should be filed with the MoDOT district representative.

CONSULTANT CONSTRUCTION ENGINEERING SERVICES

Under FHWA directive R7-4580.2, neither a consulting engineering firm, nor any of its employees, that is providing engineering and inspection services for the contracting agency shall be allowed to perform work that is the construction contractor's responsibility.

A consultant who provides both project engineering services for the contracting agency and engineering services for the project construction contractor is operating under an arrangement that gives the appearance of a possible conflict of interest and is unacceptable for federal-aid work.

BRIDGE DECK FINISHING

The bridge deck shall be poured and finished in compliance with Section 703.3.5 of the Missouri Standard Specifications for Highway Construction, 2004 Edition. The use of vibratory screeds will not be permitted. Exception to this specification can be approved only for box culvert bridges with adequate justification. MoDOT recommends the Local Agency schedules pre-pour meetings with the contractor and the Local Agency's inspection staff. Suggested topics for this pre-pour meeting can be referenced as commonly used forms on the MoDOT website at http://www.modot.mo.gov/business/manuals/documents/PourChecklist.pdf.

Proper inspection of the bridge deck is crucial to the successful pour of the bridge slab. These forms are provided for Local Agency use as a checklist to ensure the proper inspection of the bridge deck is performed.

CHANGE ORDERS

Any change from the original contract must be documented by a change order. Change orders must include a clear, concise reason for the change and adequate justification for negotiated prices. Change orders that involve changes to structures shall state whether the change is a design change or a construction change and shall be submitted to the MoDOT district representative for review. Change orders are classed as either major or minor. Change orders shall be numbered consecutively, whether major or minor.

A major change order is defined as follows:

1. any increase in a contract bid item exceeding $20,000,

2. any addition of a new item exceeding $20,000,

3. any change in the design of a bridge or retaining wall regardless of cost,

4. changes beyond the scope or limits of the original project,

5. changes in the basic design geometry or safety features (i.e. typical section, vertical or horizontal alignment, guard rail),

6. changes in specifications that would permit the implementation of alternative material into the final product, or

7. changes involving an extension in contract time.

Major change orders must be approved by the contractor, consulting engineer, local agency, and MoDOT, prior to the work being performed. When it is necessary to proceed with the work, a major change order may be approved by telephone. However, written documentation should be follow after telephone approval has been given. Telephone approval should only be requested when time is of the utmost importance. A major change order in writing should be submitted immediately for written approval. MoDOT will retain two (2) copies and the remaining will be returned to the local agency.

In addition to the required signatures of the contractor, consulting engineer and local agency, sufficient space on major change order forms shall be provided for the signatures of the District Engineer and State Construction and Materials Engineer. A "sample copy" of a change order can be seen in Figure XI-2.

Any change not meeting the criteria of a major change order is considered a minor change order. MoDOT approval is required if the item exceeds $20,000. If the new contract item or change to a bid item exceeds this amount, contact MoDOT prior to the work being performed for verbal

approval. Minor change orders must be approved by the contractor, consulting engineer and the local agency prior to the work being performed. Further, minor change orders that include new items, negotiated prices, force account or construction changes for a bridge or retaining wall must be approved by MoDOT prior to the work being performed. When approval by MoDOT is required, the minor change order shall be submitted. Upon approval by MoDOT, two (2) copies will be retained by MoDOT and the remaining will be returned to the local agency and consulting engineer for distribution.

When it is necessary to proceed with the work, a minor change order may be approved by telephone. A minor change order should be prepared and signed immediately.

Minor change orders that have been approved by the contractor, consulting engineer, the local agency, and if necessary, MoDOT may be submitted for reimbursement of eligible costs. A copy of approved minor change orders shall be submitted to MoDOT with the next progress invoice to facilitate checking of the invoice.

Minor change orders require the eventual approval of MoDOT. Minor change orders may be attached to the next major change order or the final change order as directed by the MoDOT representative. The major change order may include a statement specifically referencing by change order number the attached minor change orders. (Change orders shall be numbered consecutively, whether minor or major.) Approval by MoDOT of the major or final change order will constitute approval of the attached and referenced minor change orders.

Changes should involve adjustments in quantities based on unit prices wherever possible. If the work is not a change in a bid item, it should be done by an agreed price substantiated by documentation to establish that the price is reasonable or it may be done on a force account basis. Any work to be done by force account must be documented by an approved minor change order showing the estimated cost, with said minor change order having been approved by MoDOT before work starts.

Contract time extensions granted by the local agency which affect project costs or liquidated damages shall be subject to the concurrence of MoDOT and will be considered in determining the amount of federal participation. To be approved by MoDOT, extensions of contract time must be fully justified and adequately documented. The local agency will be liable for any liquidated damages for time extensions granted by them and not approved by MoDOT. Under these conditions, the money value of the damages will be deducted from money due the local agency.

VALUE ENGINEERING

See the Missouri Standard Specifications for Highway Construction, 2004 Edition and Supplemental Specification Revisions, Section 104.6 for a guideline on Contractor Proposals for Value Engineering. After the Consultant Engineer and Project Sponsor approval of a Value

Engineering Change Proposal (VECP), MoDOT approval must be attained prior to the change order being approved.

INITIAL DATA FROM LOCAL AGENCY

Within two working days after the start of work, the local agency shall furnish a letter in duplicate to MoDOT containing the following information:

1. project identification,
2. contractor's name and address,
3. resident engineer's name, address and phone number,
4. name of local agency's representative in charge,
5. name, address and telephone number of local agency's consultant, if applicable,
6. date of construction engineering contract approval,
7. date of notice to proceed,
8. completion date, or working days,
9. amount of contract,
10. location and description of work,
11. date of letting,
12. date of award,
13. date of preconstruction conference,
14. date on which work actually started, and
15. summary of Disadvantaged Business Enterprise (DBE) intent.

GENERAL DOCUMENTATION REQUIREMENTS

All costs incurred by the local agency for which federal reimbursement is sought must be supported by original source documents or documentation that provides adequate assurance that the quantities of completed work were determined accurately and on a uniform basis. Sample documentation as presented in the *Examples for Field Book Documentation* book can be obtained from the MoDOT district representative. This would include, but is not limited to, the following:

1. Securely bound high grade field books and diaries must be used.

2. Daily entries must be dated and signed **in ink** by the author.

3. Entries should describe the day's operations, quantities placed, and traffic control use or changes. When computations or diagrams are necessary, they should be shown in the field book.

4. Material receipts must be retained and shall show proper reference to the job and indicate proper weight and measurements and moisture deductions when applicable. Each material ticket must be validated by both the scale inspector and the inspector at the job site. Certain

small quantities are exempted from weight requirements (See item 1., page XI-13). It is suggested that tickets be bound according to type of material and date. Each bundle would then support the entries in the field book.

5. Testing and certification reports must be retained. It is also necessary that they be received by the local agency prior to their payment to the contractor for the material represented. Certain small quantities are exempted from testing requirements (See item 2., page XI-13). Certification and test reports shall be labeled with the number of the bid item represented and shall be kept in numerical order.

6. Engineer's payment estimate must never exceed the in-place quantities on which a testing report or a certification has been received. Any quantities in excess of plan quantity must be covered by an approved change order prior to being placed on the payment estimate.

7. If material allowances are used they must not exceed the estimated quantities required by the job nor the test reports or certifications. Care must also be taken to reduce the material allowance as the material is paid-in-place. The invoice must be marked paid by the supplier. Being marked paid by the contractor is not allowed.

8. Care should be taken that the necessary change order is properly filled out and approved prior to performance of the work it covers. Changes to the Traffic Control Plan need to be documented by change order. It is suggested that the answer to any change order question be obtained from MoDOT's district office to prevent any loss of reimbursement.

9. Field measurements, when necessary, should be taken and specifically documented in the field book. Contact the MoDOT district representative for examples of acceptable documentation.

10. A summary showing the portion of each bid item installed by date shall be included in the project diary and signed by the inspector.

11. For lump sum items and excavations an estimated percentage of completed work shall be placed in the summary. Documentation for payment shall be shown in the project diary entries as the work is being accomplished.

12. The MoDOT district representative shall review project diaries and summary of quantities during their inspection of the project and upon final acceptance of the project from the local agency.

The local agency shall maintain all books, documents, papers, accounting records and other evidence pertaining to the costs incurred. Such materials shall be available at its office at all reasonable times during the contract period and for three years **after the date on which the local**

agency receives reimbursement of their final invoice from MoDOT, for inspection by MoDOT, FHWA or their authorized representatives, and copies thereby shall be furnished if requested.

PROGRESS REPORTS

The local agency shall submit a copy of a monthly report to the MoDOT district representative stating the progress of the work. A sample reporting form is included at the end of this section and labeled Figure XI-3. The local agency may elect to summarize construction activities for the project on a weekly basis. However, these summaries shall be submitted to MoDOT on a monthly frequency.

MATERIALS TESTING

Three different types of samples and tests are required for each project as follows:

1. Job control samples and tests should be run by the local agency as work progresses to assure the local agency that the project is constructed in compliance with the applicable specifications. All project sampling and testing of materials shall be performed by the local agency or by a consultant employed by the local agency.

   The local agency or consultant shall have adequate equipment to perform all required tests and personnel capable of properly operating the equipment as outlined by MoDOT's Materials Manual. See (http://www.modot.mo.gov/business/materials/materialsmanual.htm) for more information.

   Test reports or certifications are necessary for all material incorporated into the work. The test report or certification must show the quantity of material being reported and if it meets the specifications.

   Actual test results of materials tested are preferred, although certifications from the supplier are acceptable on certain items. A guide schedule for federal-aid acceptance sampling (Figure XI-10) is included at the end of this section.

   Submission of job control test results to MoDOT are not required unless requested by MoDOT or FHWA. These test results must be retained as outlined in section XI of the LPA Manual.

2. Independent assurance samples and tests will be performed by MoDOT personnel in accordance with the procedures and at the frequency set forth in Field Section 10 of the MoDOT Materials Manual. Independent assurance samples and tests will not be required of the local agency or the local agency's consultant.

3. In order to facilitate the acceptance of small quantities of materials with a minimum of inspection and testing, MoDOT has approved a schedule of materials quantities which may be accepted without complying with the sampling and testing requirements mentioned above. This schedule of material items is listed on pages XI-12 through XI-15. Any major deviation from this schedule should be approved by MoDOT at the PS&E submission.

INVOICES

Invoices may be submitted by the local agency to MoDOT for reimbursement of all costs contained in the agreements and contracts as they are incurred. For detailed information on the procedures to be followed see Section XII.

SUBCONTRACTS AND APPROVAL

All contracts shall stipulate that no less than 30% of the contract work shall be performed by the prime contractor's own forces and equipment. All contracts shall further hold to the right of approval of any subcontract prior to performance of subcontract work. The form of approval shall be such as to assure the local agency that the proposed subcontractor is qualified to perform the proposed items of work and shall further assure the local agency that the subcontractor is legally bound to comply with all the requirements of the contract as they would apply to the prime contractor, for example, wage rates, equal employment opportunity regulations, submittal of payrolls, etc. No subcontractor may further subcontract any of his work.

At the time of approval, the local agency shall furnish the MoDOT representative the name and address of each subcontractor, the percentage of work sublet to that particular subcontractor, the percentages awarded to DBE's, and the total percentage of work sublet to date. DBE's must be on the MoDOT approved listing at the time of letting. In figuring the percentage of the contract work performed, all prices for sublet work shall be at contract unit bid prices. A sample form that may be used for submitting subcontractor information and instructions for completing the form are included at the end of this section (Figure XI-4-1 through XI-4-3).

LABOR RECORDS

The local agency shall obtain payrolls and forms related to Equal Employment Opportunity. They shall also ascertain that necessary posters are in place on the project (See Page XI-8).

The prime contractor and each subcontractor on all projects are required to submit one certified copy of labor payrolls for each week that work is in progress. In the event that work is temporarily suspended, the last payroll shall be marked appropriately to note that it will be the last payroll until work is resumed.

Payrolls to be submitted shall be checked for compliance with the contract requirements. All payrolls shall be retained by the local agency for a period of three years after the date on which the

local agency receives reimbursement of their final invoice from MoDOT, during which time they shall be open to inspection by MoDOT.

A certified copy of each weekly payroll must be submitted by the prime contractor within 7 days of the payment date of the payroll. The certification may be attached to the payroll or may be on the payroll itself. The prime contractor will be responsible for the submittal of payrolls and certifications for all subcontractors on the project.

The local agency shall check payrolls, with the following checks being made to insure proper labor compliance:

1. the employee's full name as shown on his social security card, his address and social security number shall be entered on each payroll;

2. check the payroll for correct employee classification;

3. check the payroll for correct hourly wage and, where applicable, the correct overtime hourly rate;

4. check the daily and weekly hours worked in each classification including actual overtime hours worked (not adjusted hours);

5. all deductions are listed and the net wage shown. The Form WH-347 (explained in a subsequent paragraph) is to be used where fringe benefits are paid into established programs. However, if fringe benefits are paid in cash to the employee, the amount shall be indicated on the payroll.

6. To assure that the payrolls are arithmetically correct, approximately 10% of the extensions on the first three payrolls shall be checked. The contractor is to be advised of any violations noted on the labor payroll. All the errors are to be corrected by means of a supplementary payroll.

7. All checking by the local agency shall be made in red pencil and initialed by the checker.

8. Final payrolls shall be marked "Final" or "Last Payroll".

9. A record of all payrolls is to be maintained by the local agency.

The prime contractor and each subcontractor are required to submit a weekly statement of compliance within seven days of the payment date of each payroll period. This statement, Form WH-347, is to be submitted in the prescribed form as set out in the "Required Contract Provisions" included in the contract. A record of all statements is to be maintained by the local agency. This

Form WH-347 is available to contractors from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

INFORMATION POSTERS

The contracts for construction projects require that certain information be displayed in a conspicuous place within the project limits for the duration of the contract. The following is a list of required information to be posted both on the project and in the resident engineer's office:

1. In the resident engineer's office:

    a. "Discrimination in Employment is Prohibited by Law in Missouri"
    b. PR-1022, title 18, Section 1020, Notice on False Statements;

2. On the Project:

    a. State and Federal Wage Rates Notice (as required),

    b. Federal Equal Employment Opportunity Notice (English and Spanish version),

    c. PR-1022, Title 18, Section 1020, Notice on False Statements,

    d. Form FHWA-1495, and FHWA-1495A, Wage Rate Information (Post with Federal Wage Rates),

    e. EEO policy statements and name, address and telephone number of designated EEO Officers for all contractors and subcontractors performing more than $10,000 of work,

    f. notice to labor unions of contractors commitment to EEO (if requested), and

    g. notice requesting referral of minorities/women by present employees.

All posters shall be completed, as required, showing names and telephone numbers where indicated.

LABOR INTERVIEWS

Local agency personnel are to conduct one wage rate interview on each project every two weeks. Labor interviews are not required on railroad and other utility adjustments. The interviewer shall determine the employee's name, the classification of the employee, the actual wage paid, and the posted wage. Interviews shall be documented as shown on the attached form (Figure XI-5).

The Local agency shall submit two (2) copies of a semi-annual report to the MoDOT district representative containing the following information:

1. number of contractors or subcontractors against whom complaints were received,

2. number of investigations completed (if complaints were received),

3. number of contractors or subcontractors found in violation,

4. amount of restitution due under:

    a. Davis-Bacon and Related Acts,

    b. Work Hours Act of 1962,
    (The Davis-Bacon Act encompasses prevailing wage rate violations, whereas the Contract Work Hours Act encompasses daily and weekly overtime violations.)

5. number of employees due wage restitution under Davis-Bacon and related Acts and/or Work Hours Act of 1962, and

6. amount of liquidated damages assessed under Work Hours Act of 1962.

The above report is due not later than April 4 for the period from October 1 to March 31 and not later than October 5 for the period from April 1 to September 30. This report shall include all information gathered on all projects.

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

The equal employment opportunity requirements are contained in the contract. The local agency should be familiar with those requirements as they must be enforced.

Federal-Aid Highway Construction Contractors Annual EEO Report, Form FHWA-1391 (Figure XI-6), must be submitted by all contractors or subcontractors whose contract or subcontract is $10,000.00 or more. Employment data should total correctly on this report.

If a contractor or subcontractor has been active on a project but no work was performed during the above payroll report period, a "No Work Was Performed" report is to be submitted. If a project has not started, no report is required.

FINAL ACCEPTANCE

The local agency shall notify MoDOT when the project is complete. A **semi-final inspection** is then arranged by the local agency. Representatives from the agency, MoDOT, general contractor,

and in some cases the subcontractor(s) do a walk-through inspection and compile a list of corrections. The sponsor then issues a letter to MoDOT and the contractor listing the corrections and those present at the Semi-Final Inspection.

A **final inspection** is held after the corrections have been satisfactorily completed. The local agency then accepts the job, assumes maintenance of it, and issues a letter to the contractor and MoDOT stating this. This letter would also include a final working/calendar day count.

"Final Acceptance" by the local agency occurs when the corrections are completed and they take over maintenance of the job. Their final acceptance letter with the final working/calendar day count becomes part of the final documents.

"Final Acceptance" by MoDOT occurs after the local agency has submitted all the applicable Final Documents listed on pages XI-11 and XI-12. A MoDOT final acceptance report, form C-239, is then issued by MoDOT. A copy of this report is sent to the local agency.

"Substantial Completion" can sometimes be used by sponsors on off-systems jobs to indicate partial acceptance and a halt to the working day count. Completion of the construction activities that constitute substantial completion should be outlined in the original contract agreement. Final inspection and acceptance then follows the process listed above.

FINAL CERTIFICATIONS

Full payment of the final invoice will not be considered until the local agency has furnished two (2) copies of the following documents:

1. The local agency's semi-final inspection letter stating the date of semi-final inspection and listing those who were present. Required for both contractor and local agency work, where applicable;

2. The local agency's final acceptance letter showing the number of working days or calendar days charged and the amount of liquidated damages, if any.

3. A certification stating

    a. "The results of the tests or acceptance samples indicate that material incorporated in the construction work and the construction operations controlled by sampling and testing were in reasonably close conformity with the approved plans and specifications, and such results compare favorably with the results of independent assurance sampling and testing." Any deviations from the specifications must be explained along with the reason for acceptance.

b. "All field tests were performed in conformity with the governing specifications and the results were in reasonably close conformity with the specifications." Explain any deviations and why the work was accepted.

c. "The project was constructed substantially in conformity with the plans and specifications for the project."

4. Contractor certification and local agency recommendation

a. The contractor's certification showing the final DBE participation on the project including the DBE's used, the type of work performed, and the dollar amount paid to each DBE (Figure XI-7).

b. The local agency's recommendation regarding the contractor's fulfillment of the DBE requirements. If DBE goals were not met, include documentation as to why.

5. Final Invoice

6. Final Detailed Estimate of Quantities

7. Contractor's Certification Regarding Settlement of Claims (Figure XI-8).

8. Final Change Order (if needed)

10. Prevailing Wage Affidavit (Figure XI-9)

MoDOT will certify the dates on which any on-site inspections were made.

WORK BY LOCAL AGENCY FORCES

If the local agency elects to perform work with its own forces (See Section IX for more information), with MoDOT approval, it will not be necessary to comply with the aforementioned labor records, postings, payroll checking, interviews, and Davis-Bacon minimum prevailing wages. However, it will be necessary for the local agency to comply with the provisions of Form PR-1273, Required Federal-Aid Provisions - All Federal-Aid Construction Contracts, Section II - Equal Opportunity, and Section III - Nonsegregated Facilities. These two sections essentially require that the local agency be an "Equal Opportunity Employer". See Section XII for required records to support reimbursement for work performed by local agency forces.

FINAL PLANS

If any project involves work on state right-of-way, or if MoDOT will be maintaining any portion of the completed improvement, the local agency shall furnish to the MoDOT district representative

two complete sets of final "as built" plans. Final plans shall be submitted within 60 days of final acceptance of the project.

For bridge plans, if there are any design changes, final "as built" bridge plans shall be submitted to the MoDOT district representative.

ACCEPTANCE OF SMALL QUANTITIES OF MATERIAL ON FEDERAL-AID PROJECTS

The following guidelines may be used to reduce the amount of engineering control and sampling and testing for relatively small quantities of materials. These guidelines are intended for use on materials that will not adversely effect the traffic carrying capacity of the completed facility, and are not to be used for concrete in major structures, permanent mainline or ramp pavements or other structurally critical items.

1. *Weighing of Materials*

   Small quantities of material may be accepted by the project engineer on the basis of weights determined and placed on the delivery ticket by the contractor or supplier. The city representative who observes receipt of the material and obtains the delivery ticket should inspect the load and indicate that the quantity of material delivered appears reasonably in accord with the weight shown on the ticket before accepting the material for incorporation in the work.

   The following quantities of material may be accepted on the basis of weights supplied by the contractor or supplier.

   a. Aggregate - Not to exceed approximately 100 tons per day of (a) aggregate for bases, (b) aggregate for surfacing and (c) sand for primer, nor more than approximately 500 tons per project.

   b. Bituminous Mixtures - Not to exceed approximately 50 tons per day nor more than approximately 250 tons per project. These quantities may be in addition to any materials of this type required for temporary construction to be maintained by the contractor and removed before final project acceptance.

2. *Sampling and Testing of Small Quantities of Miscellaneous Materials*

   Sampling and testing of small quantities of miscellaneous materials may be waived by the project engineer and the material accepted on the basis of one of the two following methods.

a. Acceptance on the basis of visual examination, provided the source has recently furnished similar material found to be satisfactory under the city's normal sampling and testing procedures.

c. Acceptance on the basis of certification by the producer or supplier stating that the material complies with the specification requirements.

The primary documentation of acceptance of material under either of these two methods should be provided by the project engineer or person approving the material. The documentation may consist of a daily inspector's report with a statement as to the basis of acceptance of the material and the approximate quantity of material covered by the acceptance.

The following quantities of material may be accepted under the methods indicated above.

a. Aggregates - Not to exceed approximately 100 tons per day nor more than approximately 500 tons per project.
b. Bituminous Mixtures - Not to exceed approximately 50 tons per day nor more than approximately 250 tons per project.

c. Bituminous Material - Not to exceed approximately 100 gallons per project.

d. Paint - Not to exceed approximately 20 gallons per project - acceptance to be based on weights and analysis on the container label.

e. Lumber - Recognized commercial grades only may be used.

f. Masonry Items - Subject to checking for nominal size and visual inspection - not to exceed approximately 100 pieces.

g. Plain concrete or clay pipe - 100 feet.

3. *Portland Cement Concrete*

Concrete for the following items may be accepted on the basis of occasional conventional field sampling and testing for characteristics such as slump and air, where specified, and test cylinders, with only intermittent or random plant inspection as deemed necessary for control by the project engineer. Under this system, arrangements should be made for the producer to state on the delivery ticket accompanying each load of concrete the class of concrete being furnished, the weights of cement, aggregates and water used in the batch, and the time of batching. Only tested aggregates and cement, or supplier-certified cement, may be used.

a. Sidewalks - Not to exceed approximately 500 square yards per day.

b. Curb and gutter - Not to exceed approximately 500 lineal feet per day.

c. Concrete base course and concrete base course widening - Not to exceed approximately 500 square yards per day.

d. Pavement patching and temporary pavements.

e. Building floors and foundations.

f. Slope paving and headers.

g. Paved ditch.

h. Guardrail anchorage.

i. Metal pile shells.

j. Small culvert headwalls.

k. Fence posts.

l. Catch basins, manhole bases and inlets.

m. Sign, signal and light bases.