# STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

## **CONSTRUCTION PROPOSAL**



### STATE PROJECT NO. 451-06-0148 LA 3249 (WELL ROAD) BRIDGE OVER I-20 ROUTES LA 3249 and I-20 OUACHITA PARISH



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#### NOTICE TO CONTRACTORS (07/09)

Electronic bids and electronic bid bonds for the following project will be downloaded by the Department of Transportation and Development (DOTD) on Wednesday, October 28, 2009. Paper bids and paper bid bonds will not be accepted. Electronic bids and electronic bid bonds must be submitted through <a href="www.bidx.com">www.bidx.com</a> prior to the electronic bidding deadline. Beginning at 10:00 a.m., all bids will be downloaded and posted online at <a href="http://www.dotd.la.gov/cgi-bin/construction.asp">http://www.dotd.la.gov/cgi-bin/construction.asp</a>. No bids are accepted after 10:00 a.m.

#### **STATE PROJECT NO. 451-06-0148**

DESCRIPTION: LA 3249 (WELL ROAD) BRIDGE OVER I-20

ROUTES: LA 3249 and I-20

PARISH: OUACHITA LENGTH: 0.050 mile.

TYPE: REMOVAL AND REPLACEMENT OF SUPERSTRUCTURE, STEEL GIRDER SPANS AND DECK OF OVERPASS, SUBSTRUCTURE REPAIRS, AND RELATED

WORK.

LIMITS: <u>State Project No. 451-06-0148:</u> LOCATED ON ROUTE LA 3249 OVERPASS OVER ROUTE I-20.

ESTIMATED COST RANGE: \$2,500,000 to \$5,000,000

PROJECT ENGINEER: JONES, MATT; 8010 Desiard Street, Monroe, LA 71203, (318) 342-

0215.

PROJECT MANAGER: BUCCI, MARK.

Bids must be prepared and submitted in accordance with Section 102 of the 2006 Louisiana Standard Specifications for Roads and Bridges as amended by the project specifications, and must include all information required by the proposal.

#### NOTICE TO CONTRACTORS (CONTINUED)

Plans and proposals are available in electronic format ONLY. All Plans, Proposals, Addenda, Amendments, Letters of Clarification, and Withdrawal Notices will be posted online. Paper notices will not be distributed. Construction proposal information may be accessed via the Internet at <a href="www.dotd.la.gov">www.dotd.la.gov</a>. From the LA DOTD home page, select the following options: Doing Business with DOTD, then Construction Letting Information. Once the Construction Letting Information page appears, find the Notice to Contractors box. From the drop down menu, select the appropriate letting date and press the "Go To" button to open the page, which provides a listing of all projects to be let and a Construction Proposal Documents link for each project. All project specific notices are found here. It will be the responsibility of the bidder to check for updates. Additionally, plans and specifications may be seen at the Project Engineer's office. Upon request, the Project Engineer will show the project site.

All questions concerning the plans shall be submitted via the Electronic Plans Distribution Center known as Falcon. Questions submitted within 96 hours of the bid deadline may not be answered prior to bidding. Falcon may be accessed via the Internet at <a href="www.dotd.la.gov">www.dotd.la.gov</a>. From the home page, select Doing Business with DOTD from the left-hand menu, then select Construction Letting Information on the pop-up menu. On the Construction Letting Information page, select the link, DOTD's Plan Room. Login to Falcon (or request an ID if a first-time user). Once logged in, you will have access to view Project Information, submit a question concerning the project, and view the plans. All submitted questions will be forwarded by email to the Project Manager and the Project Engineer for a response.

The U. S. Department of Transportation (DOT) operates a toll free "Hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should call 1-800-424-9071. All information will be treated confidentially and caller anonymity will be respected.

**GENERAL BIDDING REQUIREMENTS (08/06):** The specifications, contract and bonds governing the construction of the work are the 2006 Edition of the Louisiana Standard Specifications for Roads and Bridges, together with any supplementary specifications and special provisions attached to this proposal.

Bids shall be prepared and submitted in accordance with Section 102 of the Standard Specifications.

The plans herein referred to are the plans approved and marked with the project number, route and Parish, together with all standard or special designs that may be included in such plans. The bidder declares that the only parties interested in this proposal as principals are those named herein; that this proposal is made without collusion or combination of any kind with any other person, firm, association, or corporation, or any member or officer thereof; that careful examination has been made of the site of the proposed work, the plans, Standard Specifications, supplementary specifications and special provisions above mentioned, and the form of contract and payment, performance, and retainage bond; that the bidder agrees, if this proposal is accepted, to provide all necessary machinery, tools, apparatus and other means of construction and will do all work and furnish all material specified in the contract, in the manner and time therein prescribed and in accordance with the requirements therein set forth; and agrees to accept as full compensation therefore, the amount of the summation of the products of the quantities of work and material incorporated in the completed project, as determined by the engineer, multiplied by the respective unit prices herein bid.

It is understood by the bidder that the quantities given in this proposal are a fair approximation of the amount of work to be done and that the sum of the products of the approximate quantities multiplied by the respective unit prices bid shall constitute gross sum bid, which sum shall be used in comparison of bids and awarding of the contract.

The bidder further agrees to perform all extra and force account work that may be required on the basis provided in the specifications.

The bidder further agrees that within 15 calendar days after the contract has been transmitted to him, he will execute the contract and furnish the Department satisfactory surety bonds.

If this proposal is accepted and the bidder fails to execute the contract and furnish bonds as above provided, the proposal guaranty shall become the property of the Department; otherwise, said proposal guaranty will be returned to the bidder; all in accordance with Subsection 103.04.

MANDATORY ELECTRONIC BIDS AND ELECTRONIC BID BONDS SUBMISSION (10/08): This project requires mandatory electronic bidding. All Specifications, whether Standard, Supplemental or Special Provisions, are hereby amended to delete any references regarding paper bids and the ability to submit paper bid forms.

The contractor shall register online to be placed on the Louisiana Department of Transportation and Development (LA DOTD) prospective bidders list or for information only list.

Modifications to proposal documents will be posted on the Department's website at the following URL address: <a href="www.dotd.la.gov/cgi-bin/construction.asp">www.dotd.la.gov/cgi-bin/construction.asp</a>.

LA DOTD shall not be responsible if the bidder cannot complete and submit a bid due to failure or incomplete delivery of the files submitted via the internet.

COST-PLUS-TIME BIDDING PROCEDURE (A + B METHOD)(08/06): The 2006 Standard Specifications and Supplemental Specifications, as amended elsewhere herein, are further amended as follows:

**General.** The process for bidding and the award of this project will take into account not only the contract amount bid but also the bidder's stated contract time in which the project will be completed to final acceptance. This method will only be used to determine the successful bidder. It will not be used to determine the award amount nor final payment to the contractor.

**Definition of Terms.** For this project the following definitions apply:

- (a) Calendar Day Refer to Subsection 101.03.
- (b) Contract Amount The summation of the products of the quantities shown in the Schedule of Items multiplied by the unit bid prices.
- (c) Contract Time The number of calendar days stated in the successful bidders proposal to complete the project to final acceptance as adjusted by authorized extensions.
- (d) Daily Road User Cost The amount which represents the average daily cost of interference and inconvenience to the road user. The Department has assigned a daily road user cost of \$5,000 per calendar day for this project.
- (e) Final Acceptance Refer to Subsection 105.17(b).

**Preparation of Proposal.** In addition to all other bidding requirements of the project specifications, the bidder shall state his required completion time in the space provided on the "CONTRACT TIME" form contained elsewhere herein. The proposed completion time shall be based on the construction phases shown in the plans in their respective order and will be a factor used in considering bids for award. The stated number of calendar days required for completion will be the contract time for this project should the bidder be successful. The total number of days stated by the bidder to complete the project shall not exceed the maximum allowable contract time stated on the "CONTRACT TIME" form contained elsewhere herein. Bids not including a contract time, or showing time to completion in excess of the maximum amount will be considered irregular and will be rejected.

Consideration of Bids. After bids are opened and read, they will be compared based on the Total Bid Amount as determined by the following formula. In case of equal total bid amounts between qualified bidders, award will be made to the bidder proposing the lowest contract time.

Total Bid Amount = A + B

Where:

A =the contract amount as defined herein.

B = the product of the number of calendar days of contract time stated by the bidder and the daily road user cost contained herein.

Conditional Notice to Proceed/Notice to Proceed. If this A + B project is awarded during the months of September, October or November, the Department will consider issuing a Conditional Notice to Proceed with an expiration date of March 1 of the following calendar year, whereupon a Notice to Proceed will become effective. Such request for delay from the contractor shall be in writing with justification for the delay. If a Conditional Notice to Proceed is issued then any assembly period, as provided in the special provision "Contract Time", is negated.

Late Completion. Should the contractor fail to complete the project to final acceptance prior to expiration of the contract time, stipulated damages will be charged an amount equal to the daily road user cost stated herein.

LANE RENTAL FEE: Lane closures and work hour restrictions are indicated in the notes on Sheet Nos. 101 and 104 of the plans. A lane rental fee will be charged to the contractor for any lane closure on any roadway or ramp which extends beyond the allowable closure times. For this project, a lane is a mainline through lane, roadway or ramp on Interstate 20 and Route LA 3249. The number of lanes considered closed will be based on the number of lanes available prior to construction verses the number of lanes maintained during any particular hour.

The lane rental fee will be assessed at a rate of \$5000 per lane per hour up to a maximum of four hours per lane per day. The fee will be assessed at a rate of \$20,000 per lane per day for any closure extending beyond four hours until the next required opening period. This fee will be computed in hour increments only. Fractions of an hour will be rounded up to the next hour. For purposes of computing the lane rental fee, the period will begin when the Contractor closes a lane to traffic and will continue until traffic is restored. The computation of the lane rental fee will include moving operations. Any monies assessed for lane rental fees will be deducted from partial payments due the contractor.

**MAINTENANCE OF TRAFFIC (11/13/08):** Subsection 104.03 of the 2006 Standard Specifications is amended to include the following requirements.

The contractor shall provide for and maintain through and local traffic at all times and shall conduct his operations in such manner as to cause the least possible interference with traffic at junctions with roads, streets and driveways.

In order to maintain traffic, the contractor shall construct temporary detours as required by the contract.

The contractor shall direct special attention to the maintenance of traffic at entrance and exit ramps particularly when construction operations are being conducted on the adjacent travel lanes of interstate highways. Additional signs, barricades, channelizing devices, etc. shall be provided and maintained by the contractor as directed by the engineer and their cost shall be included in the prices bid on the Temporary Signs and Barricades pay items.

The roadway and shoulders shall remain open to traffic as much as possible during nonwork periods as directed by the engineer. During the period that all lanes are open to traffic, the contractor shall neither store material nor park equipment on roadway shoulders.

**TEMPORARY MEDIAN CROSSOVERS (05/08):** The Standard Specifications is amended to include the following.

Temporary median crossovers must conform to the requirements of <u>EDSM Number IV.1.1.14</u>, <u>Median Crossovers on Interstate Highways</u>, and the following.

The contractor may construct a limited number of temporary median crossovers for use of construction equipment. The number, location and design of the crossovers shall be approved by the engineer.

The contractor shall provide and maintain the appropriate signing and flaggers during use of the crossovers. The use of the crossovers and proper signing shall be as approved by the engineer. Crossovers shall be barricaded as directed when not in use.

Maintenance and removal of the crossovers will be the responsibility of the contractor.

All materials, equipment and labor used in the construction, maintenance and removal of temporary construction crossovers shall be at no direct pay.

**PUBLIC CONVENIENCE AND SAFETY (09/05):** Subsection 107.07 of the Standard Specifications is amended to include the following.

The procurement of police officers for public safety during construction shall be in accordance with the Department's Policy for Use of Police Officers in Construction/Maintenance

Work Zones. The DOTD project engineer shall determine the need for police officers to assist in controlling traffic in a particular work zone. The number of officers needed, the tasks they will perform, and their location within the work zone will vary as a function of the zone type. Police officers shall be placed at strategic locations at times during construction as determined by the DOTD project engineer.

The three types of law enforcement services are Police Presence, Police Enforcement and Police Traffic Control. Police Presence is defined as the use of police officers at the beginning of the active work zone area utilizing their blue lights to gain the attention of drivers. Police Enforcement is utilized when enforcement is required to enhance the safe operation of the work zone. Police Traffic Control is to be used in detour / diversion situations.

The DOTD project engineer will extend an invitation to the appropriate Louisiana State Police (LSP) Troop Commander to attend the pre-construction conference.

Prior to commencing the work on the project, the contractor shall contact the LSP Troop Commander to obtain law enforcement services of police officers during construction. If the LSP Troop is unable to provide law enforcement services for the project work zone, the LSP Troop Commander or the contractor will extend the invitation to the appropriate local law enforcement authorities.

Police officers will report directly to the contractor. However, the contractor will not have the authority to direct the placement of the police officer or the patrol vehicle in situations that are contrary to established procedures and/or could endanger the police officer. The DOTD project engineer will make the final determination on all issues regarding police officer responsibility in work zones.

Prior to the beginning of the shift, the contractor shall provide a daily work zone briefing to the police officer. For major changes in traffic patterns, advanced notification shall be provided to the police agency working the detail. This information should also be provided to the motoring public through the DOTD district and / or the LSP Troop.

The contractor shall pay for law enforcement services provided by the police officers based on the hourly wage and vehicle rate fee schedule below. The Department will reimburse the contractor monthly for the incurred cost. The contractor shall furnish time record documentation with the request for reimbursement. The provisions of Subsection 109.04 shall not apply to this reimbursement.

The agreed upon fee schedule for police officers in the work zone is as follows:

\$25 per vehicle per day - vehicle use fee

\$40 per hour per officer (one officer per vehicle) (minimum 2 hours).

**SUBLETTING OF CONTRACT (01/83):** In accordance with Subsection 108.01 of the Standard Specifications, the following items are designated as "Specialty Items":

Item 704-01-02000, Guard Rail (Double Thrie Beam) (3' – 1 ½" Post Spacing)

Item 704-03-00100, Blocked Out Guard Rail

Item 704-08-00200, Guard Rail Transitions (Double Thrie Beam)

Item 704-11-00100, Guard Rail End Treatment (Flared)

Item 704-11-00300, Guard Rail End Treatment (Bi-Directional)

Item 729-13-00100, Mounting (Bridge Fascia Mounted)

Item 729-16-00300, Object Marker assembly (Type 3)

Item 731-02-00100, Reflectorized Raised Pavement Markers

Item 732-02-01000, Plastic Pavement Striping (Solid Line) (4" Width) (Thermoplastic 40 mil)

CRITICAL PATH METHOD (CPM) FOR CONSTRUCTION PROGRESS SCHEDULING (12/08): Critical Path Methods (CPM) as described and with terms as defined in the Associated General Contractors of America (AGC) publication, Construction Planning and Scheduling, latest edition, shall be used in construction scheduling, establishing the critical items of work, and measuring progress of the work. In case of discrepancy between these specifications and Construction Planning and Scheduling, these specifications shall govern.

Section 108, Prosecution and Progress of the 2006 Standard Specifications and the Supplemental Specifications thereto is amended as follows.

Subsection 108.03, Construction Progress Schedule: This subsection is deleted and the following substituted.

The contractor shall submit to the project engineer for approval, CPM Construction Schedules, Summary of Activities tabulations, and Scheduled Earnings tabulations, all as described hereinafter, and altogether defined as "Construction Progress Schedule" or "Construction Schedule". The Construction Progress Schedule shall be based on the planned and specified finished work, the maintenance of traffic restrictions, and other design requirements given in the plans and specifications. Each sheet or page of each submittal shall be identified with the contractor's company name, state project number, project name, date prepared, revision dates, and sheet or page number. If the submittals are not prepared by the contractor's own staff, the company name of the preparer shall be shown on each sheet or page.

The critical activities as shown on the approved Construction Schedule will be considered in establishing the controlling item of work. If the Construction Schedule has not been approved, the engineer will establish the controlling work item and charge the contract time accordingly. Scheduled Earnings will be the basis for measurement of contractor's progress.

Approved Construction Progress Schedules and approved associated data shall become part of the contract documents. Un-approved Construction Progress Schedules and associated data shall not be considered relevant or applicable for any purposes during or after completion of the project and shall not be binding on the Department. The sequence of work as represented on the Construction Progress Schedule and subsequent updates shall be interpreted as being the intention of the contractor at the time that the schedule was made.

(a) Construction Schedule: The Construction Schedule shall be a Critical Path Method (CPM) graphic diagram, computer prepared, utilizing the Precedence Diagramming Method (PDM). For the calendar day contract, the Gregorian calendar shall be used.

The schedule shall show and describe the various activities of work required to complete the contract in sufficient detail so that all activities are readily identifiable and progress on the activities can be readily measured. Sufficient detail in bridge work means each element of work (piles, footings, columns, caps, rebar, cure time, etc.) of individual bents; each element of work in individual spans (girders, strip seal joints, Class AA, rebar, cure time, etc.); individual approach slabs; railings; rebar for all of the above as separate activities; and, miscellaneous other bridge work. Sufficient detail in road work means individual runs of pipe in drainage structures; individual box culverts; individual detour roads; the embankment, excavation, base and paving layers within definable geometric limits (e.g., from station to station, within a single ramp, etc.). Physical locations of activities within definable geometric limits (e.g., from station to station, within a single ramp, individual bents, individual spans, etc.) shall be included in the activity description or shown in activity codes relative to each activity. It shall include submittals and approvals of critical samples, shop drawings, procedures, order lists (pilings for example), or other things that could have a significant schedule impact.

Relatively minor items of work, similar or non-similar, may be grouped together into one activity (or more). Activities to be performed by subcontractors shall be included and identified. The schedule shall show the sequence in which the activities are to be accomplished and their dependency relationships. The estimated contract earnings and pay item quantities associated with each activity shall be included, and the sum of the estimated earnings shall equal the current contract amount.

The duration of activities shall be in whole calendar days and no activity shall have duration of less than one calendar day or more than 30 calendar days. The ending event of the schedule shall be a finish milestone identified as "Contract Completion Date". Its sole predecessor shall be "Reserved Float". The sole predecessor of "Reserved Float" shall be "Final Inspection" which shall be a finish milestone and shall have as predecessors all of the activities that must be completed prior to the Department's final inspection of the work. The duration of "Reserved Float" is the difference between "Final Inspection" and "Contract Completion Date". "Reserved Float" is defined as that part of the shared float reserved exclusively for the contractor's use. The contract date for stipulated damages will be adjusted by change order to the beginning date of the activity "Reserved Float".

The Construction Schedule shall be computer plotted on sheets not larger than 22 inches x 36 inches and shall show a continuous flow of information from left to right with no arrows from right to left and shall be drawn to a time scale of calendar days. The critical path shall be clearly identified. Resource constraints shall be identified, as shall scheduled starts or completions imposed on the schedule by the contractor.

The contractor shall submit color-coded graphics in the required multiple copies. The choice of the color coding must remain in effect for the life of the contract.

The contractor shall provide the Department with the means to electronically translate the Construction Schedule data into a configuration that can be read and processed by the Department or its consultants' hardware and Primavera software. If the contractor elects to use SureTrak Project Manager software, the following defaults must be placed: (1) resources shall be non-driving; (2) default activity type shall be "Task"; (3) activity type shall not be "Independent"; (4) duration display style shall be "Day (d)"; (5) float style shall be "Days"; and, (6) dates time format shall be "Don't show time". The revenue feature in SureTrak Project Manager does not translate to Primavera Project Planner (P3), so in SureTrak Project Manager the earnings must be entered as cost data. In both the SureTrak Project Manager and in the Primavera Project Planner (P3) "Back up" menu selection, the contractor will ensure that the option "Remove access list during backup" is checked. In addition, the project must be saved in SureTrak as a "Concentric P3" Type project.

(b) Summary of Activities: The Summary of Activities shall be a tabulation of all activities shown on the Construction Schedule, and shall accurately reflect the data used in preparation of the Construction Schedule. The summary shall be computer generated and sequenced by activity number. Each activity shall include as a minimum the following, in calendar days:

- 1. Activity numbers.
- 2. Activity description.
- 3. Estimated duration of activity.
- 4. Early start.
- 5. Late start.
- 6. Constrained start, if constrained.
- 7. Early finish.
- 8. Late finish.
- 9. Constrained finish, if constrained.
- 10. Status (whether critical).
- 11. Free float.
- 12. Total float.
- 13. Monetary value of the activity.
- 14. Remaining duration and calendar days used.
- (c) Scheduled Earnings: The Scheduled Earnings shall be a product of the software creating the Construction Schedule and shall be a tabulation of accumulated scheduled contract earnings, based on late starts, measured in accumulated dollars for all activities, for each monthly partial estimate. The tabulation shall be prepared from the Construction Schedule and shall be computer generated. The Schedule of Earnings will not include advanced payments for stockpiled materials.
- (d) Cash Management Document: When designated as a Cash Management Project, prior to the issuance of the Notice to Proceed, the contractor shall provide to the Department and obtain approval from the Department of the Scheduled Earnings report as described above, except that it shall be based on early starts. The Department will use this report for its cash management purposes. Failure of the contractor to provide and obtain approval of the Scheduled Earnings Report will result in withholding of any funds due the contractor.
- (e) Submittal: Prior to or at the preconstruction conference the contractor shall submit to the project engineer for approval, in triplicate, a Construction Schedule giving a proposed schedule of operations that provides for completion of the work, a Summary of Activities tabulation, a Scheduled Earnings tabulation, and a Forty-Five Day Look-Ahead task list. The contractor shall also submit the Construction Schedule data electronically capable of being processed with the hardware and software being used by the Department or its consultants.

Within 7 calendar days after receipt of the submittal, the project engineer and contractor shall meet and review the proposed schedules and tabulations. Any revisions resulting from the review shall be submitted, in triplicate, for approval within 7 calendar days after the meeting. This procedure will be repeated as necessary. The approved final schedule shall be called the "Baseline Schedule".

Failure to have obtained approval of a Baseline Schedule and tabulations within 20 calendar days after the Notice to Proceed will result in withholding twenty-five percent of the amount of partial estimates until such schedules and tabulations are submitted and approved. Failure to have obtained approval of a Baseline Schedule and tabulations within the third estimate period may result in the Department's determination that the contractor is in default under the provisions of Subsection 108.09.

(f) Construction Schedule Updates: The contractor shall update and submit each month, within 7 calendar days after the partial estimate is submitted, the Construction Schedule critical path diagram, Summary of Activities tabulation, Scheduled Earnings tabulation, a Forty-Five Day Look-Ahead task list, and a current Turnaround Document as follows:

- (1) The updated Construction Schedule critical path diagram will be in the same form as that submitted in (e) Submittal. It will be updated for progress through the estimate closing date, recalculated and plotted. The contractor will revise, adjust, and recalculate the schedule so that the difference in the work completion date calculated by the Retained Logic Method shall not be more than one-half an estimate period different from the work completion date calculated by the Progress Override Method. The Construction Schedule critical path diagram will show both the look ahead critical path for the duration of the project and the look back critical path as reported in the prior months.
- (2) The updated Summary of Activities and Scheduled Earnings tabulation will be in the same form as that submitted in (e) Submittal. It will be updated for progress through the estimate closing date, recalculated and printed.
- (3) The Forty-Five Day Look-Ahead task list will show all incomplete activities which the logic has determined either should be or may be active during the next forty-five days. It will be plotted in a graphic form similar to that of the Construction Schedule critical path diagram.
- (4) The Turnaround Document will be a listing of the log record of a new activity added monthly to the schedule for the purpose of keeping a current presentation of the following information:
  - a. The original contract completion date presented as actual calendar date.
  - b. The number of days added to the contract by approved change order (if any, if none, so state).
  - c. The present computed completion date presented as an actual calendar date and as a workday number, if applicable.
  - d. A list of activities deleted and added (if any, if none, so state), including their descriptions.
  - e. A list of logic changes and the reasons for the changes (if any, if none, so state).
  - f. A list of budget changes and the reasons for the changes (if any, if none, so state).
  - g. A narrative description of any other changes to the Construction Schedule critical path diagram.

Failure to submit the monthly updates of the Construction Progress Schedules within 7 calendar days after the partial estimate was submitted will result in withholding of twenty-five percent of the amount of partial estimate payments until such schedules are submitted and approved. Failure to have obtained approval of three consecutive monthly updates of the Construction Progress Schedule may result in the Department's determination that the contractor is in default under the provisions of Subsection 108.09.

(g) CPM Reviews: The project engineer will designate the time and location for review of construction progress. The contractor's representative designated under Subsection 105.05 will be required to attend the construction progress review or a contractor's representative directed by the project engineer shall attend. The current approved Construction Schedule, Summary of Activities and Scheduled Earnings tabulations shall be reviewed, and required or desired changes discussed and documented.

As a minimum the following shall be discussed: contractor's compliance with approved schedules and tabulations, delays, proposed and approved contract quantity increases and decreases, proposed and approved extra work, actual starts, durations and finishes, and actual contract earnings.

If requested by the project engineer, within 7 calendar days following the review meeting the contractor shall submit to the project engineer for approval, in triplicate, a revised Construction Schedule, Summary of Activities tabulation, and Scheduled Earnings tabulation, and Forty-Five Day Look-Ahead, all in accordance with paragraph (e) Submittal, and all brought up to date to reflect agreements made at the review meeting. Failure to submit the revision of the Construction Progress Schedules within 7 calendar days after the request will result in withholding of twenty-five percent of the amount of partial estimate payments until such schedules are submitted and approved. Failure to have obtained approval of three consecutive monthly updates of the Construction Progress Schedule may result in the Department's determination that the contractor is in default under the provisions of Subsection108.09.

(h) The CPM Construction Schedule will be provided at no direct pay.

Subsection 108.04, Prosecution of Work: Heading (b), Disqualification, is deleted and the following is substituted.

(b) Disqualification. The contractor's progress will be determined monthly at the time of each partial estimate, and will be based on the total amount of money earned by the contractor, excluding advanced stockpiled material, as shown by the partial estimate compared to scheduled earnings as shown by the approved Scheduled Earnings tabulation, as of the end of the partial estimate period. If the contractor's progress is more than 10 percent behind scheduled earnings, the contractor may be notified that he is not prosecuting the work in an acceptable manner. If requested by the Department, the contractor must meet with and provide the project engineer with an acceptable written plan which details how the contractor will re-gain lost progress and prosecute remaining work. If the contractor's progress is more than 20 percent behind the elapsed contract time, the contractor and the surety will be notified that he is not prosecuting the work in an acceptable manner. The contractor must meet with and provide the project engineer with an acceptable written plan which details how the contractor will re-gain lost progress and prosecute remaining work.

A contractor who is in default in accordance with Subsection 108.09 (a) (1) and actual earnings versus scheduled earnings are 5.0 percent or more, the contractor shall be immediately disqualified. The contractor shall remain disqualified until the project has received a final inspection and has been recommended for final acceptance. Should the surety or the Department take over prosecution of the work, the contractor shall remain disqualified for a period of one year from the completion of the project, unless debarment proceedings are instituted.

During the period of disqualification, the contractor will not be permitted to bid on contracts nor be approved as a subcontractor on contracts. Any bid submitted by the contractor during the period of disqualification will be considered irregular.

Subsection 108.07, Determination and Extension of Contract Time: This subsection is amended as follows.

The third and fourth paragraphs are deleted and the following substituted.

The contract time for the work as awarded is based on the original quantities as defined in Subsection 102.05 and includes time to procure material, equipment and an adequate labor force to complete the work. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those specified, or requires performance of extra work in accordance with Subsection 104.02 and the contractor requests additional contract time, the contractor shall submit a proposed CPM schedule based on the latest approved CPM schedule showing the increased time and revised completion date for approval by the Department. When the contract is altered in accordance with Subsection 104.02 and the engineer determines that a reduction in contract time is warranted due to decreased effort, the contractor shall submit a proposed CPM

schedule based on the latest approved CPM schedule showing the reduced time and revised completion date for approval by the Department. A CPM schedule will be required for the engineer to process a change order that either increases or decreases the contract time.

If the contractor finds it impossible, for reasons beyond the contractor's control, to complete the work within the contract time as specified or as extended in accordance with the provisions of this subsection, the contractor shall, at the time the delay occurs make a written request to the engineer for an extension of time setting forth therein the reasons which justify granting the request. Such written request shall conform to the requirements of EDSM III.1.28. If the request does not so conform, the contractor hereby agrees to and shall be deemed to have expressly waived any claim for such additional time. The contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the engineer finds that the work was delayed because of conditions beyond the control and without the fault of the contractor, the engineer may extend the contract time in such amount as conditions justify. The contractor's written request to the engineer for an extension of contract time shall include a proposed CPM schedule based on the latest approved CPM schedule update showing the increased time and revised completion date for approval by the Department. This CPM schedule document will be required for the engineer to process a change order that changes the contract time.

## **DETERMINATION AND EXTENSION OF CONTRACT TIME (12/08):** Subsection 108.07, Determination and Extension of Contract Time, is amended to include the following.

The contractor shall document for each month of scheduled construction, the occurrence of adverse weather conditions having an impact on controlling items of work. An adverse weather day is a previously scheduled or normally scheduled work day on which rainfall, wet conditions or cold weather will prevent construction operations on the controlling work activity from proceeding for at least 5 continuous hours of the day or 65 percent of the normal work day, whichever is greater, with the normal working force engaged in performing the controlling item of work. If the contractor submits a written request for additional contract time due to adverse weather conditions, the contractor's request will be considered only after the Department agrees with the days and then only for adverse weather days in excess of the allowable number of days per month stated below. Adverse weather days will be documented by the Engineer and agreed upon monthly. Adverse weather days will be prorated for partial months when a work order or final inspection is issued other than the first or last of the month and agreed to by the Department. If the contractor is being considered for disqualification by the Department, an equitable adjustment in contract time may be made at the end of the original contract period. including all days added by approved change orders. Contract time will be adjusted by comparing the actual number of adverse weather days to the statistical number of adverse weather days over the specific time period per the table below. The resulting number of adverse weather days will be multiplied by 1.45 to convert to calendar days. Adjustments for adverse weather cannot result in a contract time reduction. Once adjusted, a new adverse weather day accounting will begin using the adverse weather conditions having an impact on the controlling items of work, in excess of the allowable number of days per month stated below. A second and final contract time adjustment will then be done at the final acceptance of the project. An adjustment in the contract time due to adverse weather will not be cause for an adjustment in the contract amount. There will be no direct or indirect cost reimbursement for excess adverse weather days.

The following are anticipated adverse weather days that the contractor shall include in each month of his calendar day construction schedule.

January	10 days	May	5 days	September	4 days
February	9 days	June	6 days	October	3 days
March	8 days	July	6 days	November	7 days
April	7 days	August	5 days	December	7 days

**PAYMENT ADJUSTMENT (12/08):** Section 109, Measurement and Payment of the 2006 Standard Specifications and the supplemental specifications thereto, is amended to add the following.

This project is designated for payment adjustment for asphalt cements and fuels in accordance with Subsection 109.09 as follows.

#### 109.09 PAYMENT ADJUSTMENT (ASPHALT CEMENTS AND FUELS).

(a) General: Payment for contract items indicated herein will be adjusted to compensate for cost differentials of Performance Graded (PG) asphalt cements, gasoline, and diesel fuel when such costs increase or decrease more than 5 percent from the Department's established base prices for these items. The base price indices for asphalt cements and fuels will be the monthly price indices in effect at the time bids are opened for the project. The base price indices for asphalt cements will be as stated in paragraph (b) below. The base price index for fuels will be as stated in paragraph (c) below.

Payment adjustments will be made each monthly estimate period when a price index for this period varies more than 5 percent from its respective base price index. The monthly price indices to be used with each monthly estimate will be the price indices for the month in which the estimate period begins.

If the project is placed in default, payment adjustments will be based on the monthly price indices used for the last monthly estimate period prior to the project being placed in default, unless a monthly price index decreases in which case the lower monthly price index will be used.

If it is determined after completion of work on any eligible item that the total quantity paid to date must be adjusted to reflect more accurate quantity determinations, the Department will prorate the additional quantity to be added or subtracted over all previous estimate periods in which the item of work was performed in order to determine additional payment adjustments. If payment adjustments were made during any of these partial estimate periods, this added or subtracted quantity that has been prorated will likewise have payment adjustments calculated and included.

(b) Performance Graded (PG) Asphalt Cements: The base price index will be the monthly price index in effect at the time of bid opening as shown elsewhere herein. The monthly price indices will be the average, excluding the extreme outliers, of the unit prices for PG 64-22, the average, excluding the extreme outliers, of the unit prices for PG 70-22m, and the average, excluding the extreme outliers, of the unit prices for PG 76-22m. The monthly prices for each of these asphalt materials will be F.O.B. refinery or terminal as determined from the quoted prices effective on the first calendar day of each month from suppliers of these materials. Suppliers considered are those who have requested to participate in the liquid asphalt index determination and have supplied materials on DOTD projects within the past twelve months. These suppliers and materials shall be listed on the Department's Qualified Products List (QPL 41) and must be marketed in Louisiana. For Asphalt Cements not listed above, the following shall be considered equivalent for payment adjustments:

#### Pay Item Equivalents Eligible for Asphalt Pay Adjustment

Performance Graded Asphalt Cement	Equivalent PG Asphalt Cement for Payment Adjustment
PG 58-28	PG 64-22
PG 64-22	PG 64-22
PG 70-22m	PG 70-22m
PG 76-22m	PG 76-22m
PG 82-22rm	PG 64-22

Payment adjustments will be made in accordance with the following formulas:

If Monthly Price Index exceeds Base Price Index,  

$$P_a = (A - 1.05B) \times C \times D \times (1.00 + T)$$

If Base Price Index exceeds Monthly Price Index,  $P_a = (0.95B - A) \times C \times D \times (1.00 + T)$ 

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P<sub>a</sub> = Price adjustment (increase or decrease) for asphalt cement.

A = Monthly Price Index for respective PG 64-22, PG 70-22m, or PG 76-22m

in dollars per ton/megagram.

B = Base Price Index for respective PG 64-22, PG 70-22m, or PG 76-22m in

dollars per ton/megagram.

C = Tons/megagrams of asphaltic concrete.

D = Percent of respective asphalt cement, per job mix formula, in decimals.

T = Louisiana sales tax percentage, in decimals.

(Note: Local tax is not considered)

The engineer will furnish the weights (mass) of asphaltic concrete placed during the monthly estimate period with the respective asphalt cement content, excluding the asphalt content in reclaimed asphaltic pavement (RAP) as per job mix formula. If the asphalt cement content changes during the estimate period, the respective weight (mass) of asphaltic concrete produced at each cement content will be reported.

All contract pay items using PG 58-28, PG 64-22, PG 70-22m, PG 76-22m, and PG 82-22rm shall be eligible for payment adjustments of asphalt materials; except no payment adjustment will be made for contract pay items under Subsection 510-01, "Pavement Patching", Section 507, "Asphaltic Surface Treatment", nor for any emulsions or cutbacks.

Item 510-02, Pavement Widening, and all contract pay items under Sections 502 and 508, will be eligible for payment adjustments of asphalt materials. No payment adjustment will be made for other asphalt materials, including emulsions and cutbacks.

The base price indices for asphalt cements and fuels will be posted on the DOTD internet website before the 10<sup>th</sup> calendar day of each month at the following URL: www.dotd.louisiana.gov/lettings/lac\_price\_index/priceindices.asp.

(c) Fuels: The base price index for this project will be the monthly price index in effect when bids are opened for the project. The monthly price index will be the minimum price

quotations for unleaded gasoline and No. 2 diesel fuel listed for the New Orleans area in *Platt's Oilgram and Price Report* effective on the first calendar day of each month.

Payment adjustment will be made in accordance with the following formulas:

If Monthly Price Index exceeds Base Price Index,  $P_a = (A - 1.05B) \times Q \times F$ 

If Base Price Index exceeds Monthly Price Index,  $P_a = (0.95B - A) \times Q \times F$ 

Where:

P<sub>a</sub> = Price adjustment.

A = Monthly Price Index in dollars per gallon/liter.
B = Base Price Index in dollars per gallon/liter.

Q = Pay Item Quantity (Pay Units).
F = Fuel Usage Factor Gal (L)/Pay Unit.

The following is a listing of contract pay items that are eligible for payment adjustment and the fuel usage factors that will be used in making such adjustment. Contract items that expand the items listed herein by use of letter or number designations are also eligible for fuel price adjustments; for example:

Item 601-01-G, Portland Cement Concrete Pavement 8 inches (200 mm) thick.

# ELIGIBLE CONTRACT PAY ITEMS & FUEL USAGE FACTORS FOR FUEL PAYMENT ADJUSTMENT<sup>7</sup>

ITEM NO.	PAY ITEM	UNITS	MIN. ORIGINAL CONTRACT	FUEL USAGE FACTOR	
			QUANTITY FOR PAY ADJUSTMENT	Diesel <sup>2</sup>	Gasoline
203-01 <sup>1</sup>	General Excavation	gal/cu yd	10,000 cu yd	0.29	0.15
203-02	Drainage Excavation	gal/cu yd	10,000 cu yd	0.29	0.15
203-03 <sup>1</sup>	Embankment	gal/cu yd	10,000 cu yd	0.29	0.15
203-04	Nonplastic Embankment	gal/cu yd	10,000 cu yd	0.29	0.15
203-07	Borrow (Vehicular Measurement)	gal/cu yd	10,000 cu yd	0.29	0.15
301-01	Class I Base Course	gal/cu yd	3,000 cu yd	0.88	0.57
301-02	Class I Base Course ( "Thick)	gal/sq yd	50,000 sq yd	0.04	0.03
302-01	Class II Base Course	gal/cu yd	3,000 cu yd	0.88	0.57
302-02	Class II Base Course ( " Thick)	gal/sq yd	50,000 sq yd	0.04	0.03
303-01	In-Place Cement Stabilized Base Course	gal/sq yd	50,000 sq yd	0.04	0.03
304-02	Lime Treatment (Type B)	gal/sq yd	50,000 sq yd	0.04	0.03
304-03	Lime Treatment (Type C)	gal/sq yd	50,000 sq yd	0.04	0.03
304-04	Lime Treatment (Type D)	gal/sq yd	50,000 sq yd	0.04	0.03
305-01	Subgrade Layer ( " Thick)	gal/sq yd	50,000 sq yd	0.04	0.03
308-01	In-Place Cement Treated Base Course	gal/sq yd	50,000 sq yđ	0.04	0.03
401-01	Aggregate Surface Course (Net Section)	gal/cu yd	3,000 cu yd	0.88	0.57
401-02	Aggregate Surface Course (Adjusted Vehicular Measurement)	gal/cu yd	3,000 cu yd	0.88	0.57
502-01	Superpave Asphaltic Concrete	gal/ton	1000 ton	$2.40^{3}$	0.2
502-02	Superpave Asphaltic Concrete	gal/cu yd	500 cu yd	4.80 <sup>4</sup>	0.4
502-03	Superpave Asphaltic Concrete ( "Thick)	gal/sq yd	10,000 sq yd	0.13 <sup>5,6</sup>	0.01 <sup>6</sup>
508-01	Asphaltic Concrete (SMA)	gal/ton	1000 ton	$2.40^{3}$	0.2
510-02	Pavement Widening	gal/sq yd	3,000 sq yd	0.86	0.24
601-01	Portland Cement Concrete Pavement ( " Thick)	gal/sq yd	15,000 sq yd	0.11	0.15

1 If project has both 203-01 & 203-03, only the item with larger quantity is eligible.

<sup>2</sup> For fuel adjustment purposes, the term "diesel" shall represent No. 2 or No. 4 fuel oils or any of the liquified petroleum gases, such as propane or butane.

<sup>3</sup> If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 1.67 gal/ton.

<sup>4</sup> If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 13.34 gal/cu yd.

<sup>5</sup> If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 0.09 gal/sq yd.

<sup>6</sup> Per inch of thickness.

<sup>7</sup> No fuel adjustment will be allowed for waste oil.

ELIGIBLE CONTRACT PAY ITEMS & FUEL USAGE FACTORS FOR FUEL PAYMENT ADJUSTMENT (METRIC)<sup>7</sup>

	I A LIVUUTTI ADJ				
ITEM NO.	PAY ITEM	UNITS	MIN. ORIGINAL CONTRACT QUANTITY FOR PAY ADJUSTMENT	FUEL USAGE FACTORS  Diesel <sup>2</sup> Gasoline	
203-01 <sup>1</sup>	General Excavation	l/m³	7,600 m <sup>3</sup>	1.44	0.74
203-02	Drainage Excavation	l/m³	7,600 m <sup>3</sup>	1.44	0.74
203-03 <sup>1</sup>	Embankment	l/m³	7,600 m <sup>3</sup>	1.44	0.74
203-04	Nonplastic Embankment	l/m³	7,600 m <sup>3</sup>	1.44	0.74
203-07	Borrow (Vehicular Measurement)	1/m <sup>3</sup>	7,600 m <sup>3</sup>	1.44	0.74
301-01	Class I Base Course	1/m³	2,300 m <sup>3</sup>	4.36	2.82
301-02	Class I Base Course ( mm Thick)	l/m <sup>2</sup>	41,800 m <sup>2</sup>	0.18	0.14
302-01	Class II Base Course	l/m <sup>3</sup>	2,300 m <sup>3</sup>	4.36	2.82
302-02	Class II Base Course ( mm Thick)	l/m²	41,800 m <sup>2</sup>	0.18	0.14
303-01	In-Place Cement Stabilized Base Course	$l/m^2$	41,800 m <sup>2</sup>	0.18	0.14
304-02	Lime Treatment (Type B)	l/m <sup>2</sup>	41,800 m <sup>2</sup>	0.18	0.14
304-03	Lime Treatment (Type C)	$1/m^2$	41,800 m <sup>2</sup>	0.18	0.14
304-04	Lime Treatment (Type D)	1/m²	41,800 m <sup>2</sup>	0.18	0.14
305-01	Subgrade Layer ( mm Thick)	l/m²	41,800 m <sup>2</sup>	0.18	0.14
308-01	In-Place Cement Stabilized Base Course	l/m²	41,800 m <sup>2</sup>	0.18	0.14
401-01	Aggregate Surface Course (Net Section)	1/m³	2,300 m <sup>3</sup>	4.36	2.82
401-02	Aggregate Surface Course (Adjusted Vehicular Measurement)	l/m³	2,300 m <sup>3</sup>	4.36	2.82
502-01	Superpave Asphaltic Concrete	l/Mg	900 Mg	10.01 <sup>3</sup>	0.83
502-02	Superpave Asphaltic Concrete	l/m³	400 m <sup>3</sup>	23.774	1.98
502-03	Superpave Asphaltic Concrete ( mm Thick)	l/m²	8,400 m <sup>2</sup>	0.59 <sup>5,6</sup>	0.45 <sup>6</sup>
508-01	Asphaltic Concrete (SMA)	l/Mg	900 Mg	10.01 <sup>3</sup>	0.83
510-02	Pavement Widening	l/m <sup>2</sup>	2,500 m <sup>2</sup>	3.89	1.09
601-01	Portland Cement Concrete Pavement (mm Thick)	1/m <sup>2</sup>	12,500 m <sup>2</sup>	0.5	0.68

- If project has both 203-01 & 203-03, only the item with larger quantity is eligible.
- For fuel adjustment purposes, the term "diesel" shall represent No. 2 or No. 4 fuel oils or any of the liquified petroleum gases, such as propane or butane.
- If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 6.97 l/mg. If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 16.53 l/m<sup>3</sup>.
- If natural gas or coal is used instead of diesel for aggregate drying and heating the fuel usage factor shall be 0.41 l/m<sup>2</sup>.
- Per mm of thickness.
- No fuel adjustment will be allowed for waste oil.

**SUPERPAVE ASPHALTIC CONCRETE MIXTURES (11/08):** Section 502, Superpave Asphaltic Concrete Mixtures of the 2006 Standard Specifications as amended by the supplemental specifications thereto, is further amended as follows.

Subsection 502.04, Job Mix Formula Validation.

Delete the first sentence of the sixth paragraph and substitute the following.

A JMF is considered validated if the following parameters are 71 percent within limits of the JMF and meet the specifications requirements.

Subsection 502.05, Plant Quality Control.

Delete the first paragraph and substitute the following.

For quality control purposes, the contractor shall obtain a minimum of two (2) samples of mixture from each sublot using a stratified random sampling approach. Test results for theoretical maximum specific gravity ( $G_{mm}$ ) and measured bulk specific gravity ( $G_{mb}$ ) at  $N_{max}$ and percent G<sub>mm</sub> at N<sub>initial</sub>, on samples of each sublot shall be reported. Control charts may be requested by the engineer if mixture problems develop. Quality control gyratory samples may be aged or unaged at the contractor's option, but the method chosen shall be used consistently throughout the project. If aged samples are used, report the measured  $G_{mb}$  at  $N_{max}$ . If unaged samples are used, report the estimated  $G_{mb}$  at  $N_{max}$ . One loose mix sample shall be taken from each sublot after placement of the mix in the truck. The mix shall be tested by the contractor at the plant for aggregate gradation, asphalt content and percent crushed aggregate. The mix shall be tested in accordance with DOTD TR 309, TR 323 and TR 306. The lot average and standard deviation shall be determined for aggregate gradation and asphalt content. The percent within limits (PWL) shall be determined on the Nos. 8 and 200 (2.36 mm and 75 µm) sieves and for G<sub>mm</sub>. Corrective action shall be taken if these parameters fall below 71 PWL. For each lot, the contractor shall report all quality control data to the DOTD Certified Plant Technician. The full range of gradation mix tolerances will be allowed even if they fall outside the control points. The District Laboratory Engineer may require re-validation of the mix when the average of the Quality Control data indicates non-compliance with the specified limits or tolerances.

Subsection 502.15, Measurement.

Subheading (c), Surface Tolerance Incentive Measurement.

Delete the first paragraph and substitute the following.

At the completion of construction of the project, an independent certified profiler such as that of a private company or the Materials and Testing Section, approved by the Department, shall be used to measure a continuous profile from the start station to the end station of the construction project for the purpose of determining qualification for incentive pay under Subsection 502.16(e). Bridges and 300 feet (90 m) on each end of the bridge will be excluded from measurements for surface tolerance incentive pay.

Delete Table 502-7A, Payment Adjustment Schedule for Plant Acceptance and substitute the following.

Table 502-7A
Payment Adjustment Schedule for Plant Acceptance

1 dymont majacinioni conc	dale for i falli Acceptance
Air Voids PWL (90 AQL)	Percent Payment
71-100	100
61-70	90
51-60	80
≤50	50 or Remove <sup>1</sup>

<sup>&</sup>lt;sup>1</sup>At the option of the Department after investigation.

Delete Table 502-7B, Payment Adjustment Schedule for Roadway Density and substitute the following.

Table 502-7B
Payment Adjustment Schedule for Roadway Density

Roadway Density PWL (90 AQL)	Percent Payment
99-100	102
81-98	100
71-80	95
51-70	80
≤50	50 or Remove <sup>1</sup>

<sup>&</sup>lt;sup>1</sup>At the option of the Department after investigation.

Delete Table 502-8A, Payment Adjustment Schedules for Longitudinal Surface Tolerance, Maximum International Roughness Index, inches per mile (mm per km) and substitute the following.

#### Table 502-8A

#### Payment Adjustment Schedules for Longitudinal Surface Tolerance, Maximum International Roughness Index, inches per mile (mm per km)

	nies bei mi	C (IIIIII P	<del>21 (())</del>		
Percent of Contract Unit Price (by Sublot) <sup>1</sup>	102%²	100%	90%	80%	50% or Remove <sup>3</sup>
Category A All Interstates, Multi-Lift New Construction and Overlays of More than two Lifts	<45 (<710)	<65 (<1030)	65-75 (1030-1180)	NA	>75 (>1180)
Category B One or Two Lift Overlays Over Cold Planed Surfaces, and Two-Lift Overlays Over Existing Surfaces <sup>4</sup>	<55 (<870)	<75 (<1180)	75-89 (1180-1400)	NA	>89 (>1400)
Category C Single-Lift Overlays Over Existing Surfaces <sup>4</sup>	N/A	<85 (<1340)	85-95 (1340-1500)	>95-110 (>1500-1740)	>110 (>1740)
Longitudinal Surface Tolerance Incentive Pay, Final Completion, Average of All Travel Lanes <sup>5</sup>			≤ 45 (≤ 710)		

<sup>&</sup>lt;sup>1</sup>Or portion of sublot placed on the project.

Delete Table 502-8B, Individual Wheelpath Deficient Area Limits, Maximum International Roughness Index, Inches per Mile (mm per km) and substitute the following.

**Table 502-8B** Individual Wheelpath Deficient Area Limits Maximum International Roughness Index, inches per mile (mm per km)

	<del>,                                    </del>	
Any 0.05 Mile (0.08 km) Segment	Wearing Course	Binder Course
Category A	89 (1400)	130 (2050)
Category B	99 (1560)	150 (2370)
Category C	N/A	N/A

ASPHALT MATERIALS AND ADDITIVES (04/08): Section 1002 of the 2006 Standard Specifications and the supplemental specifications thereto is amended as follows.

Subsection 1002.02, Asphalt Material Additives is amended as follows.

Table 1002-1, Performance Graded Asphalt Cements is deleted and the following substituted.

<sup>&</sup>lt;sup>2</sup>Maximum payment for sublots with exception areas, exclusions or grinding is 100 percent, unless the excluded area is a bridge end.

At the option of the engineer.

Existing surfaces include reconstructed bases without profile grade control.

<sup>&</sup>lt;sup>6</sup>Only Category A projects are eligible for incentive. However, any grinding except within 300 feet (90 m) of a bridge end will cause the roadway to be ineligible for surface tolerance incentive pay. Measurements must be verified by an independent entity.

Table 1002-1
Performance Graded Asphalt Cements

		i ·	Sphan Ceme	T	1	
Property	AASHTO Test	PG82-22rm <sup>6</sup>	PG76-22m	PG70-22m	PG64-22	PG58-28
Troporty	Method	Spec.	Spec.	Spec.	Spec.	Spec.
Tests on Original Binder:						
Rotational Viscosity @ 135°C, Pa·s 1	T 316	3.0	3.0	3.0	3.0	3.0
Dynamic Shear, 10 rad/s, G*/Sin Delta, kPa	T 315	1.00+ @ 82°C	1.00+ @ 76°C	1.00+ @ 70°C	1.30+ @ 64°C	1.00+ @ 58°C
Flash Point, °C	T 48	232+	232+	232+	232+	232+
Solubility, % <sup>2</sup>	T 44	N/A	99.0+	99.0+	99.0+	99.0+
Separation of Polymer, 163°C, 48 hours, degree C difference in R & B from top to bottom <sup>5</sup>			2-	2-		
Force Ductility Ratio $(f_2/f_1, 4^{\circ}C, 5 \text{ cm/min.}, f_2 @ 30 \text{ cm elongation})^3$			0.30+			
Force Ductility, (4°C, 5 cm/min, 30 cm elongation, kg) <sup>3</sup>				0.23+		
Tests on Rolling Thin Film Oven Residue:	T 240					
Mass loss, %	T 240	1.00-	1.00-	1.00-	1.00-	1.00-
Dynamic Shear, 10 rad/s, G*/Sin Delta, kPa	T 315	2.20+ @ 82°C	2.20+ @76°C	2.20+ @ 70°C	2.20+ @ 64°C	2.20+ @ 58°C
Elastic Recovery, 25°C, 10 cm elongation, % <sup>4</sup>	Т 301	60+	60+	40+		
Ductility, 25°C, 5 cm/min, cm	T 51				100+	
Tests on Pressure Aging Vessel Residue:	R 28					
Dynamic Shear, @ 25°C, 10 rad/s, G* Sin Delta, kPa	Т 315	5000-	5000-	5000-	5000-	5000- @ 19°C
Bending Beam Creep Stiffness, S, MPa @ -12°C.	T 313	300-	300-	300-	300-	300- @ -18°C
Bending Beam Creep Slope, m value,@ -12°C	Т 313	0.300+	0.300+	0.300+	0.300+	0.300+ @ -18°C

The rotational viscosity will be measured to determine product uniformity. The rotational viscosity measured by the supplier shall be noted on the Certificate of Delivery. A binder having a rotational viscosity of 3.0 Pa·s or less will typically have adequate mixing and pumping capabilities. Binders with rotational viscosity values higher than 3.0 Pa·s should be used with caution and only after consulting with the supplier as to any special handling procedures and guarantees of mixing and pumping capabilities.

2Not all polymers are soluble in the specified solvents. If the polymer modified asphalt digested

Not all polymers are soluble in the specified solvents. If the polymer modified asphalt digested in the solvent will not pass the filter media, a sample of the base asphalt used in making the

polymer modified asphalt should be tested for solubility. If the solubility of the base asphalt is at least 99.0%, the material will be considered as passing.

Add the following Table 1002-12, Anionic Trackless Tack Coat Grade NTSS-1HM.

Table 1002-12 Anionic Trackless Tack Coat Grade NTSS-1HM

	AASHTO	Specification Deviation		
Property	Test Method	100% Pay	50% Pay or Remove <sup>1</sup>	
Viscosity, Saybolt Furol @ 25°C, s	T 59	15 - 100		
Storage Stability, 24 Hour, %	T 59	1.0-		
Settlement, 5 Days, %	T 59	5.0-		
Residue by Distillation, %	T 59	50+	49-	
Oil Distillate, %	T 59	1.0-		
Sieve Test <sup>2</sup> , (Retained on the 850 μm), %	T 59	0.3-		
Tests on Residue				
Penetration @ 25°C, 100g, 5s, dmm	T 49	20-		
Softening Point, Ring and Ball, °C	T 53	65+	64-	
Solubility, %	T 44	97.5+		
DSR @ 25°C; G*Sin δ, 10 rad / s, kPa	T 315	1.0+		

At the option of Engineer.

## CONCRETE CURING MATERIALS, ADMIXTURES AND SPECIAL FINISHES (04/09). Section 1011 of the 2006 Standard Specifications is amended as follows.

Subsection 1011.01, Curing Materials is amended to delete paragraphs (b), (c), (d), and (e) and substitute the following:

- (b) Moist Cure Materials:
- (1) Sheet materials for curing concrete shall meet the physical and performance requirements of AASHTO M 171.
- (2) Burlap Cloth made from Jute or Kenaf shall comply with AASHTO M 182, Class 3.

<sup>&</sup>lt;sup>3</sup>AASHTO T 300 except the second peak (f2) is defined as the stress at 30 cm elongation.

<sup>&</sup>lt;sup>4</sup>AASHTO T 301 except elongation shall be 10 cm.

<sup>&</sup>lt;sup>5</sup>Prepare samples per ASTM D 7173. Determine softening point of top and bottom per AASHTO T 53.

<sup>&</sup>lt;sup>6</sup>The quality assurance plan for this product will require the contractors who use this material to submit written documentation of tank cleaning annually. Contractors must have tank mixers. Written certificates of analysis from the asphalt binder supplier confirming rubber source and size distribution of rubber used shall be furnished to the Materials Laboratory.

<sup>&</sup>lt;sup>2</sup> Sieve tests may be waived if no application problems are present in the field.

#### NS BENT PATCHING (06/09):

DESCRIPTION. This work consists of identifying cracks, spalls, delaminations, and or corroding reinforcement on concrete bents and repairing by concrete patching. The repair shall restore the bent as shown on the construction plans and be in accordance with the 2006 Louisiana Standard Specifications for Roads and Bridges as amended, and as directed by the engineer.

MATERIALS: Patching materials shall be selected from QPL 49 "Patching Materials for Precast or Prestressed Concrete Products". Structural concrete and steel reinforcing items shall comply with the following Sections or Subsections of the standard specifications.

Mortar	702.02, 1003.02
Portland Cement Concrete, Class A	901
Reinforcing Steel	1009
Epoxy Coated Reinforcing Steel and Repair Material	1009.01(e)
Curing Materials	1011.01
Special Surface Finish for Concrete	1011.03
Epoxy Resin Systems	1017.02
Form Release Agents	1018.24

#### Submittals.

The contractor shall submit the following for engineer's approval:

- 1. Name and generic type of the proposed repair mortar material and associated portland cement concrete.
- 2. Name and address of supplier and manufacturer of the repair mortar and associated bonding agent.
- 3. Product data sheets will show compliance in accordance with the materials sampling manual 2006 specifications. The engineer will require documentation from an approved independent testing authority to confirm the performance criteria stated on product data sheets.
- 4. Detailed proposal of concrete removal, application, and curing techniques to be used.
- 5. For site mixed cementious mortar, the following additional information is required:
  - a. Name, type, and manufacturer of the proposed cement
  - b. Name, type, and supplier of the proposed aggregates
- 6. Details for repairs of the damaged deformed reinforcing steel. These details shall conform to Section 806.

#### Storage of Materials

Materials shall remain in their original sealed containers until the time of use and shall be stored in strict accordance with the manufacturer's specification.

Each consignment of material shall be accompanied by a manufacturer's certificate of manufacture. Materials stored beyond the manufacturer's recommended shelf life shall not be used.

EQUIPMENT. Equipment shall be specific to the required bent patching repair project and shall be used at the job site after approval by the engineer.

#### CONSTRUCTION REQUIREMENTS.

Existing concrete areas designated to be repaired shall be prepared by chipping or other methods to remove all loose or defective concrete. Feathered edges shall be eliminated by saw cutting and/or chipping a perpendicular or back-tapered face, as approved by the engineer, along the periphery of the area to be repaired so that the minimum depth of repair is approximately one-half inch (13 mm). The area being prepared shall be cleaned by sandblasting, or other means approved to remove all loose particles, dirt, deteriorated concrete or other substance that could impair the bond between the old concrete and the repair material. Materials removed from the bridge shall become property of the contractor and shall be disposed of outside the limits of the right of way, as arranged by the contractor and approved by the engineer, or otherwise disposed of in a manner satisfactory to the engineer.

Surface preparation shall include the removal of all loose or delaminated concrete from the reinforcing steel within the spalled area. All reinforcement shall be maintained at original position and all exposed steel shall be sandblasted to a near white condition to meet SSPC-SP10 requirements prior to placement of patching material.

Severely damaged reinforcing steel as established by the engineer shall be repaired by lap splicing or other means as approved.

Bonding agent shall be the term used to designate the bonding material between the new material/concrete and the existing hardened portland cement concrete.

A bonding agent shall be applied to the entire spall area to be repaired prior to new mortar/concrete placement. Bonding agent shall also be applied to all exposed reinforcing steel within the repair area (including back of rebars). Bonding agent shall be epoxy resin/portland cement adhesive. Mixing, application and curing shall be performed according to manufacturer's specifications. Mixed material shall be uniform in appearance. No lumps or irregularities shall be allowed. Application time shall not exceed manufacturer's specified pot life.

Removal of forms will be as approved by the engineer. Care shall be taken to prevent freezing of the mortar or concrete during the curing period. Upon completion of curing, repairs shall be sounded by hammer to locate any defective areas. Any repaired areas found defective shall be removed and repaired at the expense of the contractor.

MEASUREMENT. Bent Patching will be measured for payment by the square foot (sq m), of in-place repaired surface When a repair involves multiple surfaces, such as a corner, measurement will be made on all surfaces repaired.

PAYMENT. Payment for Bent Patching Repairs will be made at the contract unit price per square foot (sq m) and will include all transportation, labor, equipment, materials, and incidentals required to complete the work.

<u>Item No.</u> NS-602-00005 Pay Item
Bent Patching

Pay Unit Square Foot (Sq m)

NS DYNAMIC MESSAGE SIGN UNIT (12/04): This work consists of furnishing, operating and maintaining solar powered portable dynamic (changeable) message signs to be used at locations designated on the plans or as directed by the engineer.

The dynamic message sign shall be in good operational condition when delivered to the job site. The engineer will inspect the signs, and if they are found to be in good operational condition with all working parts functioning, the signs will be approved for use on the project.

The message sign shall consist of three separate lines. Each line shall consist of eight characters. Each character shall nominally be 18 inches (450 mm) in height. The width shall be adequate to meet the below legibility requirements. Each character shall be a 5 x 7 LED module or hybrid LED disk. Characters shall be separated at a distance such that the legibility requirements are maintained.

All internally illuminated portions of the sign shall be amber in color. All other illuminated surfaces meant for message display shall be fluorescent yellow. All other surfaces on the front panel shall be flat black in color.

The sign shall be clearly visible under all conditions and all lanes of travel from a distance of 1000 feet (300 m) perpendicular to the sign center. The sign shall maintain this legibility throughout the entire project. The contractor shall be responsible for maintaining this minimum legibility. Determination of legibility distance shall rest solely with the engineer.

The portable dynamic message sign shall be used in conjunction with other traffic signs and devices in accordance with the plans, project specifications and as directed by the engineer.

The signs shall be stored in an approved secure storage area when not in use. The contractor shall be required to perform all maintenance operations recommended by the manufacturer and keep adequate records of such operations.

The signs shall be kept clean and in good repair at all times. This includes keeping unit clean.

Measurement of the dynamic message sign unit will be per each.

Payment for the dynamic message signs will be made at the contract unit price per each which will be full compensation for furnishing, operating, relocating and maintaining the unit during the life of the contract and includes all equipment, tools, labor and incidentals necessary for this item of work.

Payment will be made under:

<u>Item No.</u> NS-713-00001 Pay Item
Dynamic Message Sign Unit

Pay Unit Each

#### NS SPAN MOVEMENT (03/09):

DESCRIPTION: This item includes all work necessary to transport a superstructure span between the bridge substructure and a staging area.

CONSTRUCTION REQUIREMENTS: The contractor will be responsible for all temporary works, span jacking, lifting, and movement of a superstructure span using mechanized methods and the restoration of the staging areas to their original condition.

A pre-construction and movement plan shall be designed and stamped by a Licensed Professional Engineer in the State of Louisiana which addresses all environmental and traffic management goals and commitments. This plan shall be submitted to the Bridge Design Engineer for approval prior to beginning work.

All work shall be in accordance with the plan details and the latest version of the Louisiana Standard Specifications for Roads and Bridges.

MEASUREMENT: Span Movement will be measured per each movement.

PAYMENT: Payment for this item will be at the contract unit price and shall include all labor, materials, and equipment necessary to complete the work.

Payment will be made under:

Item No. NS-800-00001 Pay Item
Span Movement

Pay Unit Each

#### NS PIER PROTECTION SYSTEM (VEHICLE) (06/09):

DESCRIPTION. This item consists of furnishing and installing a pier protection system at the locations shown on the plans and shall be in accordance with the plans, the 2006 Standard Specifications for Roads and Bridges, and as directed by the project engineer. The pier protection system shall consist of a concrete barrier, concrete footing, and any required removal of the existing revetment or embankment.

MATERIALS. All construction materials shall be in accordance with Sections 805, 806, and 901 of the Standard Specifications. Concrete shall be Class AA and the reinforcing steel shall be Grade 60.

#### CONSTRUCTION REQUIREMENTS.

Any removed material shall be disposed of in accordance with Section 202 of the Standard Specifications.

The contractor shall repair any damage caused by construction operations as directed by and to the satisfaction of the project engineer.

Slopes of 10:1 or flatter shall be constructed in between the edge of the travel lane and the face of the concrete barrier.

MEASUREMENT. Pier Protection System (Vehicle) will be measured per each installation site, which includes the pier protection systems on both sides of the roadway, and shall include all materials, labor, equipment, tools, and any incidental work necessary to remove any existing revetment or embankment at the installation site.

Any required fill, revetment, or guard rail will be measured for payment under their respective items.

PAYMENT. Payment for Pier Protection System (Vehicle) will be made at the contract unit price per.

Payment will be made under:

Item No.	<u>Pay Item</u>	Pay Unit
NS-800-00120	Pier Protection System (Vehicle) STATION 49+66.30	Each
NS-800-00120	Pier Protection System (Vehicle) STATION 51+21.30	Each

#### NS PATCHING AND/OR JOINT REPAIR (POLYMER CONCRETE)(03/09):

DESCRIPTION. This item consists of mixing, handling, preparing surfaces, placing and curing polymer concrete for the repair and restoration of portland cement concrete deck joint nosings and deck patching in accordance with the plans, the 2006 Louisiana Standard Specifications for Roads and Bridges, and as directed by the engineer.

MATERIALS. The polymer concrete material used for this item shall conform to the following specifications requirements:

- (a) Aggregate: Kiln dried well-graded sand (70 percent passing Nos. 4-16 sieve, 20 percent passing No. 85 sieve, 10 percent passing No. 325 sieve) siliceous aggregate blend with shrinkage control additives. The aggregate shall be packaged in 0.5 cubic foot poly-lined paper bags.
  - (b) Resin: Polyester based resin in a 5 or 50-gallon container.
- (c) Catalyst: 50 percent Methyl Ethyl Ketone Peroxide in Dimethyl Phthalate contained in a scribed (mark) pint or gallon container.

The mix ratio for the product shall be a 1:1:1 (1 mark catalyst: 1 gallon resin: 1 bag aggregate) mixture of the above items. The product shall conform to the following physical requirements.

Table 1
Physical Properties of Polymer Concrete

Requirement	ASTM Specification	Value
Working time		12-20 minutes
Compressive Strength	C579-82	
2 hours		2500 psi (17.2 MPa)
Open to Traffic		3000 psi (20.7 MPa)
24 hours		7000-8000 psi (48.3-
7 days		55.2 MPa)
		12000 psi (82.7 MPa)
PCC Bond Strength	C882-78	3500 psi (24.1 MPa)
Flexural Strength	C580-74	3000 psi (20.7 MPa)
Linear Shrinkage	C531-81	.01% maximum
Coefficient of Thermal	C531-81	11 x 10 <sup>-6</sup> in/in/°F
Expansion		
Tensile Strength	C307-77	1200 psi (8.3 MPa)

(d) Sampling: Sampling shall be in accordance with the Department's Materials Sampling Manual.

CONSTRUCTION REQUIREMENTS. Surface preparation shall be in accordance with Subsection 805.06(2) of the standard specifications and this special provision. The existing concrete deck surface shall be clean, dry, and free of loose concrete. The concrete surface shall be primed with one layer of the same polyester resin used in the polymer concrete..

All existing embedded steel angles or metal end dams to be bonded with concrete shall be cleaned and blasted prior to application of primer adhesive and polymer concrete.

Materials used for forming new concrete joints where a seal will be placed, shall be in accordance with the joint seal manufacturer's recommendations.

WARRANTY. Manufacturer shall warrant the product performance for three years from final acceptance. Manufacturer shall be responsible for all costs associated with repair or replacement for the warranty period.

MEASUREMENT. Polymer concrete joint repair will be measured as plan quantity per linear foot (lin m), which includes furnishing all labor, materials, tools, equipment, and incidentals

necessary to complete the work. Polymer concrete patching will be measured by the square yard (sq m). Design quantities will be adjusted if the engineer makes changes to adjust to field conditions, if plan errors are proven, or if design changes are necessary.

PAYMENT. Payment for polymer concrete joint repairs will be made at the contract unit price per linear foot (ln m). Payment for polymer concrete patching will be made at the contract unit price per square yard (sq m).

Payment will be made under:

<u>Item No.</u> NS-805-00002 Pay Item

Pay Unit

Joint Repair (Polymer Concrete)

Lin. Foot (Lin m)

#### NS JOINT SEALING SYSTEM (PREFORMED SILICONE) (03/09):

DESCRIPTION. This item consists of handling, testing, preparing surfaces, placing and bonding a preformed silicone joint seal with adhesive to concrete bridge deck joints as indicated in the plans.

MATERIALS. The preformed silicone joint seal used for this item shall conform to the following specifications:

	ASTM Test	
Preformed Silicone Seal Property	Method	Value
Durometer (Shore A)	D 2240	55 +/- 5
Tensile Strength	D 412	550 psi. minimum
Elongation	D 412	250% minimum
Tear (die B)	D 624	80 ppi. minimum
Compression set at 350°F, 22 hrs	D 395	30% maximum
Operating Temperature Range	·	-60° F to +450° F
Specific Gravity		1.51

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

Adhesive Property	Test Method	Value
Sag / Flow	ASTM C 639	3/16in. max.
Color	Visual	Black
Hardness	ASTM C 661	20-25
Tack free time	ASTM C 679	30 minutes max.
Cure through to	@75° F / 50% RH	5 minutes max.
1/4 inch thickness		
Resistance to UV	ASTM C 793	No cracking, ozone
		chalking or degradation
Skim over time	@75° F / 50% RH	5 minutes max.
(tooling time)		
Peel adhesion	ASTM C 794	50 PLI
to substrates		

Any rips, tears, or bond failure will be cause for rejection.

CONSTRUCTION REQUIREMENTS. Surface preparation shall be in accordance with Subsection 805.12(c) of the standard specifications along with this special provision. Bond breaker residue shall be completely removed to the satisfaction of the engineer. Existing deck concrete or steel surfaces shall be clean, dry and free of all loose concrete prior to application of the adhesive. The joint seal dimensions shall be sized in accordance with the plans. Materials used for forming new concrete joints where the seal is to be adhered shall be applied in accordance with the joint seal manufacturer's recommendations. The adhesive shall be applied in accordance with the manufacturer's specifications and all handling and installation shall follow the manufacturer's instructions and recommendations.

WARRANTY. Manufacturer shall warrant the product performance for three years from final acceptance. Manufacturer shall be responsible for all costs associated with repair or replacement for the warranty period.

MEASUREMENT. Preformed Silicone Joint Sealing System, will be measured for payment per linear foot (lin m), which includes all materials, labor, equipment, tools, and incidentals necessary to complete the work. Design quantities may be adjusted by the engineer to facilitate sealing of joints.

PAYMENT. Payment for Preformed Silicone Joint Sealing System will be made at the contract unit price per linear foot (lin m)

Payment will be made under:

<u>Item No.</u> <u>Pay Item</u> <u>Pay Unit</u> NS-805-00005 Joint Sealing System (Preformed Silicone) Linear Foot (Lin m)

**CONTRACT TIME (03/05):** The entire contract shall be completed in all details and ready for final acceptance in accordance with Subsection 105.17(b) within the time specified by the contractor, which shall not exceed the maximum allowable contract time stated on the "Contract Time" form contained elsewhere herein.

Prior to assessment of contract time, the contractor will be allowed 120 calendar days from the date stipulated in the Notice to Proceed to commence with portions of the contract work including but not limited to assembly periods, preparatory work for materials fabrications such as test piles, or other activities which hinder progress in the beginning stages of construction. Prior to issuance of the Notice to Proceed, the Department will consider extending the assembly period, upon written request from the contractor justifying the need for additional time.

The contractor shall be responsible for maintenance of traffic from the beginning of the assembly period. During the assembly period, the contractor will be allowed to do patching and other maintenance work necessary to maintain the roadway with no time charges when approved by the engineer.

If the contractor begins regular construction operations prior to expiration of the assembly period, the assessment of contract time will commence at the time construction operations are begun.

The contractor is directed to the special provisions and the plans for any restrictions that may affect work schedules.