

# INFORMATIONAL PROPOSAL

FOR INFORMATION ONLY, NOT TO BE USED FOR BIDDING

NEBRASKA DEPARTMENT OF ROADS  
LETTING DATE : February 07, 2002

METRIC

CALL ORDER: N16            CONTRACT ID: 3352X

CONTROL NO./SEQ. NO.: 31352 /000 PROJECT NO.: SRR-54(9)  
CONTROL NO./SEQ. NO.: 31352A /000 PROJECT NO.: SRR-54(11)

TENTATIVE START DATE: 06/24/02            CONTRACT TIME: 75 WORKING DAYS

LOCATION: NIOBRARA STATE PARK  
IN COUNTY: KNOX

BIDDER

GROUP 1 GRADING  
GROUP 4 CULVERTS  
GROUP 7 GUARDRAIL  
GROUP 9 BITUMINOUS  
GROUP 10 GENERAL ITEMS

SEE SPECIAL PROVISIONS FOR GROUP TIES

## NOTES

THE TOTAL AMOUNT OF WORK WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO \$\_\_\_\_\_.

THE NUMBER OF \_\_\_\_\_ CONTRACTS WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO \_\_\_\_\_.

### **NOTICE TO ALL BIDDERS**

To report bid rigging activities, call: 1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above 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 use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

### **LETTING QUESTIONS**

Prior to the letting, any questions pertaining to the Special Provisions or the plans for this project should be directed to Construction Division personnel at (402) 479-4568 or (402) 479-4529.

STATE OF NEBRASKA  
DEPARTMENT OF ROADS

Required Provisions Supplemental to the

**Standard Specifications for Highway Construction**

**I. Application**

These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

The contractor shall insert in each of his subcontracts all of the stipulations contained in the Special Provisions and these Required Provisions.

A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

**II. Equal Opportunity**

1. **Selection of Labor**

During the performance of this contract, the contractor shall not discriminate against labor from any other state.

2. **Nebraska Fair Employment Practices Act**

The contractor shall not discriminate against any employee or applicant for employment, to be employed in the performance of this contract with respect to his hire, tenure, terms, conditions, or privileges of employment, because of his race, color, religion, sex or national origin. The contractor agrees to post in a conspicuous place or places a notice to be provided by the State Highway Department which sets forth excerpts of the Act.

3. **Nebraska Equal Pay Act**

The contractor shall not discriminate on the basis of sex by paying wages to employees of one sex at a lesser rate than the rate paid to employees of the opposite sex for comparable work on jobs which have comparable requirements. An abstract of the Act is included on the notice which is provided by the State Highway Department.

### III. **Employment of Labor**

#### 1. **General**

No person under the age of sixteen (16) years, and no one whose age or physical condition is such as to make his employment dangerous to his health or safety, or to the health and safety of others shall be employed on any project. This paragraph shall not be construed to deny the employment of older people or physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform.

No person currently serving sentence to a penal or correction institution shall be employed on any project.

Except as specifically provided under this section, workers who are qualified by training or experience to be assigned to projects of this character shall not be discriminated against on any grounds whatsoever.

#### 2. **Payrolls**

Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working on the site of the work.

The contractor's and subcontractor's payroll records shall be available for inspection by authorized representatives of the State Highway Department and authorized representatives of Federal Agencies.

The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payment the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

Every employee on the work covered by this contract shall be permitted to lodge, board and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

No individual shall be employed as a laborer on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other

equipment from individuals. No such rental agreement, or any charges for feed, gasoline, supplies, or repairs on account of such agreement, shall cause any deduction from the wages accruing to any employee except as authorized by the regulations hereinbefore cited.

#### **IV. Safety and Accident Prevention**

In the performance of this contract, the contractor shall comply with all applicable Federal, State and local laws governing safety, health and sanitation. The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions, on his own responsibility or as the contracting officer may determine, reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

#### **V. Subletting or Assigning the Contract**

The contractor shall perform with his own organization contract work amounting to not less than 30 percent of the total contract amount except that any items designated in the contract as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the total contract amount before computing the amount of work required to be performed by the contractor with his own organization.

Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions found elsewhere in the contract.

No portion of the contract shall be sublet, assigned, or otherwise disposed of except with the written consent of the contracting officer or his authorized representative. Requests for permission to sublet assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by a showing that the organization which will perform the work is particularly experienced and equipped for such work. The contractor shall give assurance that the minimum wage for labor as stated in his proposal shall apply to labor performed on all work sublet, assigned or otherwise disposed of in any way. Consent to sublet, assign or otherwise dispose of any portion of the contract shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

**SPECIAL PROVISIONS  
FOR  
STATE  
PROJECT NOS. SRR-54(9) AND SRR-54(11)**

**GENERAL CONDITIONS**

Sealed bids for the work contemplated in this proposal form will be received at the office of the Nebraska Department of Roads in Room 104 of the Central Office Building at 1500 Highway 2 at Lincoln, Nebraska, on February 7, 2002, until 1:30 P.M.

Bids submitted by mail should be addressed to the Nebraska Department of Roads, c/o Contract Lettings Section, P.O. Box 94759, Lincoln, NE 68509-4759.

The 1997 Metric Edition of the Standard Specifications for Highway Construction, including all amendments and additions thereto effective at the date of the contract, are made a part of these Special Provisions, through reference.

The Supplemental Specifications to the 1997 Metric Edition of the Standard Specifications for Highway Construction dated July 12, 2001, including all amendments and additions thereto effective at the date of the contract, are made part of these Special Provisions, through reference.

The Required Provisions dated April 4, 1995, are attached to and are a part of this proposal form.

The attention of bidders is directed to the Required Provisions covering subletting or assigning the contract.

The proposal contains a statement that the contractor is complying with, and will continue to comply with, fair labor standards in the pursuit of his business and in the execution of the work contemplated in this proposal.

Fair labor standards shall be construed to mean such a scale of wages and conditions of employment as are paid and maintained by at least fifty per cent of the contractors in the same business or field of endeavor as the contractor filing this proposal.

GROUPS 1, 4, 7, 9 AND 10 ARE TIED TOGETHER AND BIDDING PROPOSAL FORMS FOR THIS WORK WILL BE ISSUED AND A CONTRACT AWARDED TO A CONTRACTOR WHO IS QUALIFIED FOR BITUMINOUS.

**STATUS OF UTILITIES**

No utilities have been or will be required to relocate within the limits of this project.

Underground utilities may exist within the limits of this project. The Contractor shall determine to his satisfaction the extent of occupancy of any underground utilities located within the respective construction areas and the extent of conflict with the proposed work under this contract.

Any utility adjustments or interruption of service for the convenience of the Contractor shall be the sole responsibility of the Contractor.

To arrange for utilities to locate and flag their underground facilities, contact The Diggers Hotline of Nebraska at 1-800-331-5666.

**STATUS OF RIGHT-OF-WAY  
(S1-16-0801)**

According to the best information available, all necessary right-of-way has been acquired.

**SUBCONTRACTOR BIDDERS LIST INFORMATION  
(S1-43-0801)**

All bidders must complete and submit with the bidding proposal, the "Subcontractor Bidders List" form provided by the NDR Contracts office.

Bidders must identify all firms who bid or quote subcontracts on all projects. If no bids or subcontractor quotations are received, the "Subcontractor Bidders List" must be submitted with the bidding documents and the bidder must indicate on the face of the "Subcontractor Bidders List" that no bids or subcontractor quotations were received.

**CONTROL OF WORK  
(S1-43-0901)**

Subsection 105.08 in the 1997 Standard Specifications is void and replaced by the following:

105.08 - Authority and Duty of the Inspector

Department inspectors are authorized to inspect all work performed and all materials furnished. Such inspection may extend to the preparation, fabrication, or manufacture of the materials. The inspector has the authority to reject work or materials until any issues can be decided, including the right to suspend work. The inspector is not authorized to alter or waive the provisions of the contract or act as a supervisor for the Contractor.

105.13 – Tentative Acceptance of Portions of the Project

Paragraph 3.a. of Subsection 105.13 is amended by deleting the word "normal".

**LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC  
(S1-43-1001)**

107.14 – Opening of Sections of the Project to Traffic

Subsection 107.14 Paragraphs 2.b.(1) and (2) are void and replaced by the following:

- 2.b. (1) Whenever the Department permits the public use of a highway undergoing construction, repair, or maintenance in lieu of a detour route, the Contractor shall not be held responsible for damages to those portions of the project upon which the Department permitted public use, when such damages are the result of no proximate act or failure to act on the part of the Contractor.
- (2) If the traveling public should cause damage to the roadway, the Contractor shall assist the State in identifying the responsible party and the Contractor shall as a minimum if present at the time of the damage record pertinent information regarding the accident. (Who caused the damage; when the damage occurred; and how the damage was resulted.)

107.15 – Contractor’s Responsibility for Work

Subsection 107.15 is amended by adding Paragraph 1.b.(3) as follows:

- (3) The Contractor shall not be held responsible for damage caused by the traveling public on those portions of the project where the Department has permitted public use of the road in lieu of using a detour route and the damage as not the result of any proximate act or failure to act on the part of the Contractor.

**MEASUREMENT AND PAYMENT  
(S1-43-0901)**

109.08 – Acceptance, Final Payment, and Termination of Contractor’s Responsibility

Subsection 109.08 Paragraph c. amended by deleting the word “normal”.

Subsection 109.08 Paragraph d. is void and replaced by the following:

- d. If the traveling public should cause damage to the roadway the Contractor shall assist the State in identifying the responsible party and the Contractor shall as a minimum if present at the time of the damage record pertinent information regarding the accident. (Who caused the damage; when the damage occurred; and how are damage was resulted.)



**SPECIAL PROSECUTION AND PROGRESS  
(Holidays)**

Work on this project will likely impact one or more of the major summer holidays. The Contractor shall schedule his operations so that all roads, parking lots and pads are open to traffic as follows:

<u>Holiday</u>	<u>Open to Traffic</u>
Memorial Day	May 25, 26 and 27
July 4 <sup>th</sup>	July 4,5, 6 and 7
Labor Day	August 31, September 1 and 2

**CONSTRUCTION DETAILS**

**FUEL COST ADJUSTMENT PAYMENT  
(S2-1-0801)**

Section 205 in the Standard Specifications and Supplemental Specifications is amended to include the following:

Payment will be made to the contractor for monthly fluctuations in the cost of diesel fuel used in performing the items of work, "Excavation", "Excavation, Borrow", "Excavation, Established Quantity", and/or "Earthwork Measured in Embankment" when the fuel cost fluctuates by more than 10% from the base price defined below. Payments may be positive, negative, or nonexistent depending on the circumstances. Payments or deductions will only be calculated on that portion of the fuel cost fluctuation that exceeds the 10% specified above.

Payments or deductions for the fuel cost adjustment will be included in the contractor's progress estimates; and the payment or deduction authorized for each estimate will be based upon the algebraic difference between the quantities for "Excavation", "Excavation, Borrow", "Excavation, Established Quantity", and/or "Earthwork Measured in Embankment" on the current estimate and the quantities shown on the previous estimate.

The fuel cost adjustment for the current estimate will be computed according to the following formula:

FCA=QFD where

- FCA = Fuel cost adjustment, in dollars;
- Q = The algebraic difference between the quantities (in cubic yards or cubic meters) for "Excavation", "Excavation, Borrow", "Excavation, Established Quantity", and/or "Earthwork Measured in Embankment" on the current estimate and the quantities shown on the previous estimate;
- F = English  
The fuel use factor for diesel fuel, in gallons per cubic yard. For the items of work "Excavation", "Excavation, Borrow", and "Excavation, Established Quantity", "F" shall be equal to .15. For the item of work "Earthwork Measured in Embankment", "F" shall be equal to .20.
- Metric  
The fuel use factor for diesel fuel, in liters per cubic meter. For the items of work "Excavation", "Excavation, Borrow", and "Excavation, Established Quantity", "F" shall be equal to .74. For the item of work "Earthwork Measured in Embankment", "F" shall be equal to 1.00.
- D = Allowable price differential.

The allowable price differential, "D", for the current estimate will be computed according to the following formula:

When the current price, P, is greater than the base price, P(b).

$$D = P - 1.10P(b), \text{ but not less than zero.}$$

When the current price, P, is less than the base price, P(b).

$$D = P - .90P(b), \text{ but not greater than zero.}$$

In either case, P(b) shall be the base diesel price, in dollars per gallon (liter), defined as the average of the minimum and maximum prices for No. 2 Diesel Fuel (Oklahoma) published in the first issue of "*Platt's Oilgram Price Report*" for the month in which bids for the work were received.

In either case, P, shall be the current diesel price, in dollars per gallon (liter), defined as the average of the minimum and maximum prices for No. 2 Diesel Fuel (Oklahoma) published in the first issue of "*Platt's Oilgram Price Report*" for the month in which the progress estimate is generated.

**GENERAL CLEARING AND GRUBBING  
(S2-2-0801)**

Paragraph 1. of Subsection 202.03 in the Supplemental Specifications is amended to provide that General Clearing and Grubbing shall include all tree removal.

Paragraphs 2.a., b., and c. of Subsection 202.03 in the Supplemental Specifications are void.

Paragraph 3. of Subsection 202.04 in the Supplemental Specifications is void and superseded by the following:

3. All tree removal is subsidiary to the pay item "General Clearing and Grubbing".

**SPECIAL EXCAVATION**

Paragraph 1. of Subsection 205.05 in the Standard Specifications is amended to include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Special Excavation	Cubic Meters (m3)

**SUBGRADE PREPARATION  
(S3-1-0801)**

Paragraph 2.a. of Subsection 302.03 in the Standard Specifications is amended to include that trimming on narrow, irregular or roadway grading of 1/2 mile (0.8 km) or less may be accomplished using conventional methods.

**TEMPORARY TRAFFIC CONTROL DEVICES  
(S4-9-1201)**

Paragraphs 2.a. of Subsection 422.05 in the Standard Specifications is void and superseded by the following:

2.a. If signs are not returned or are returned damaged, and the damage is beyond reasonable "wear and tear" and the damage was caused by the Contractor, then the Contractor shall be charged the value of the missing or damaged items. These charges shall be deducted from monies due the Contractor upon final payment.

**LOCAL MATERIAL SOURCES  
(S5-1-0801)**

Information regarding possible sources of local materials is available at the Materials and Research Division of the Department of Roads, Lincoln, Nebraska.

## ASPHALTIC CONCRETE (S5-5-0801)

Paragraph 5. of Subsection 503.02 in the Standard Specifications is void.

### REINFORCED CONCRETE PIPE FOR PRINCIPAL SPILLWAY

#### A. MATERIAL SPECIFICATIONS

##### 1. SCOPE

This specification covers the quality of reinforced concrete pressure pipe and fittings.

##### 2. DESIGN AND FABRICATION

The pipe and fittings shall be designed to withstand the specified external load and internal pressure. The pipe, the materials used in its manufacture, and the methods of fabrication shall conform to the requirements of the following specifications applicable to the specified type of pipe.

- a. Steel Cylinder Type, Prestressed: AWWA Standard C301 for Prestressed Concrete Pressure Pipe, Steel Cylinder Type, for Water and Other Liquids.
- b. Steel Cylinder Type, Not Prestressed: AWWA Standard C300 for Reinforced Concrete Pressure Pipe, Steel Cylinder Type, for Water and Other Liquids.
- c. Non-Cylinder Type, Not Prestressed: AWWA Standard C302 for Reinforced Concrete Pressure Pipe, Non-cylinder Type, for Water and Other Liquids.
- d. Low Head Pressure Pipe: ASTM Specification C361.

Sections 1.5 and 1.6 of AWWA Standards C300, C301 and C302 shall not apply.

Minimum gage of steel cylinder used to manufacture pipe shall be 16 gage.

##### 3. STEEL REINFORCEMENT

The steel reinforcements shall conform to the requirements of the specifications cited in Section 2 for the specified type of pipe, except that elliptical reinforcing cages or other reinforcements that require special orientation of the pipe during placement will not be allowed.

##### 4. JOINTS

The pipe joints shall conform to the requirements of the applicable specification for the pipe. They shall be bell-and-spigot type or double- spigot-and-sleeve type and shall have a positive groove in the spigot to contain the rubber gasket. The size and shape of the groove shall be such that it will prevent displacement of the gasket by either internal or external water pressure when the joint is in any position within the required range of

movement capability. Joint sleeves, also referred to as "collars" or "coupling bands," shall conform to the requirements for bell rings in the applicable pipe specification.

The joints shall be constructed so as to permit relative movement of the adjoining pipe sections with no reduction of watertightness. The joint length and the limiting angle defining the required capability of relative movement at each joint shall be no less than specified.

Joint length refers to the permissible axial movement in the joint, and is defined as the maximum distance through which the spigot can move, relative to the bell or sleeve, from the fully engaged to the fully extended condition of the joint when the adjoining pipe sections are in parallel, concentric alignment. The joint is considered to be fully engaged when the spigot is inserted as far as it will go into the bell or sleeve, and fully extended when it is inserted the least amount that will insure full confinement of the gasket and complete watertightness.

Joint length specified for double-spigot joints refers to the permissible movement in each of the spigot-to-sleeve connections, not the sum of the two.

The limiting angle of the joint is defined as the maximum deflection angle between adjoining pipe sections the joint will permit before the outer surface of the spigot comes into direct contact with inside of the mating bell or sleeve. If both spigot-to-sleeve connections of a double-spigot joint permit angular movement, the limiting angle of the joint is the sum of the two deflection angles permitted by the two connections.

## 5. GASKETS

The pipe joint gaskets shall conform to the requirements of the specifications cited in Section 2 of this specification. They shall be endless rubber gaskets having circular cross section. The cross-sectional diameter of the gaskets shall conform to the pipe manufacturer's recommendation for the type and size of pipe furnished.

## 6. MARKING

All pipe sections and special fittings shall be marked by the manufacturer with the manufacturer's name or trademark, the date of manufacture, the nominal size, design head, design external load and the structure site for which it was designed and manufactured.

## 7. INSPECTION, TESTING, AND CERTIFICATION

The pipe shall be inspected by methods prescribed in the specifications cited herein, except that external crushing strength test required as a basis for certification shall be performed by the three-edge bearing method described in ASTM Methods C497.

The three-edge bearing load shall be defined as:

- a. For pipe conforming to ASTM Specification C361, AWWA Standard C300 or AWWA Standard C302, the load required to produce a 0.01 - inch crack one foot long (0.25 mm crack 305 mm long) or,

- b. For pipe conforming to AWWA Standard C301, the load required to produce a 0.001-inch crack one foot long (0.25 mm crack 305 mm long) or the load 10 percent greater than the specified three-edge bearing load, whichever occurs first.

The technical materials including test data and other information shall include:

- a. The pipe manufacturer's supporting data of the design strength of the pipe, consisting of:
  - 1. For types of pipe for which design curves have been approved by the Soil Conservation Service, (a) a copy of the appropriate design curve marked to show the resultant concrete core stress and corresponding three-edge bearing load of the pipe furnished; and (b) a specification sheet for the pipe furnished showing all data and dimensions needed to compute the resultant concrete core stress; or
  - 2. Results of external crushing strength tests on pipe or specimen [at least 2 feet (600 mm) in length] of equivalent size and design and composed of equivalent materials.
- b. The pipe manufacturer's supporting data of results of the hydrostatic tests required by the reference specification appropriate to the type of pipe furnished.
- c. The pipe manufacturer's supporting data of current typical test reports on steel and steel wire reinforcing and compression tests of the concrete used in the manufacture of the pipe.
- d. Such drawings and descriptions of the pipe joint as may be necessary to show that the joint conforms to the specified requirements.

## B. CONSTRUCTION SPECIFICATIONS

### 1. SCOPE

The work shall consist of furnishing and installing reinforced concrete pressure pipe, fittings and accessories in principal spillway conduits appurtenant to earth dams.

### 2. MATERIALS

Reinforced concrete pressure pipe, fittings and accessories shall conform to the requirements of Material Specification 541.

Portland cement concrete for bedding and cradles shall be Class "47B-30" concrete and shall be considered subsidiary to the items of work for which direct payment is made.

3. LAYING THE PIPE

Pipe shall be laid only in the presence of the Engineer. The pipe shall be set to the specified line and grade and temporarily supported on precast concrete blocks or wedges. Bell and spigot pipe shall be laid with the bell upstream.

Just before each joint is connected the connecting surfaces of the bell and spigot or spigots and sleeve shall be thoroughly cleaned and dried, and the rubber gasket and the inside surface of the bell or sleeve shall be lubricated with a light film of soft vegetable soap compound (flax soap). The rubber gasket shall be stretched uniformly as it is placed in the spigot groove to insure a uniform volume of rubber around the circumference of the pipe.

The joint shall be connected by means of a pulling or jacking force so applied to the pipe that the spigot enters squarely into the bell.

When the spigot has been seated to within ½ inch (12 mm) of its final position, the position of the gasket in the joint shall be checked around the entire circumference of the pipe by means of a metal feeler gauge. In any case where the gasket is found to be displaced, the joint shall be disengaged and properly reconnected. After the position of the gasket has been checked, the spigot shall be completely pulled into the bell and the section of pipe shall be adjusted to line and grade.

4. FILLING JOINTS

Before the placement of the bedding or cradle, the exterior annular space between the ends of the pipe sections shall be cleaned and completely filled with joint sealing compound. Before the compound is applied, the surfaces against which it is to be placed shall be cleaned of all dust, lubricant and other substances that would interfere with a bond between the compound and the pipe. If recommended by the manufacturer of the compound, the concrete surfaces shall be coated with a primer in accordance with the manufacturer recommendations. Primers shall be applied to the concrete surfaces only and shall not come in contact with the gasket or gasket sealing surfaces. Unless the compound or primer is specifically recommended for use on moist concrete, the surfaces shall be dry when it is applied.

The joint sealing compound shall be allowed to cure until it is sufficiently firm to prevent the entry of concrete or earth into the joint before concrete, bedding or backfill is placed against it.

5. PRESSURE TESTING

Pressure testing of the completed conduit will not be required.

6. MEASUREMENT AND PAYMENT

For items of work for which specific unit prices are established in the contract, the quantity of each size, type, and class of pipe will be determined as the sum of the nominal laying lengths of the pipe sections used. Payment for each size, type, and class of reinforced concrete pressure pipe will be made at the contract unit

price for that size, type, and class of reinforced concrete pressure pipe. Such payment will constitute full compensation for furnishing, transporting, and installing the pipe complete in place including accessories such as wall fittings, joint gaskets, coupling bands, sleeves, or collars and all other items necessary and incidental to the completion of the work.

### **CLASS "47B" CONCRETE FOR RISER AND PIPE SUPPORT**

#### **A. MATERIAL SPECIFICATIONS**

##### **1. SCOPE**

"Class 47B Concrete for Riser and Pipe Support" shall include furnishing and installing all concrete and miscellaneous hardware required to construct the concrete riser, pipe support, drawdown trash rack and valves and inlet trash rack.

### **GEOTEXTILE FABRIC**

Section 728 in the Standard Specifications is amended to include Geotextile Fabric.

Paragraph 1. in Subsection 728.05 is amended to include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Geotextile Fabric	Square Meter (m2)

### **P.V.C. PIPE**

Paragraph 1. OF Subsection 718.05 in the 2001 Supplemental Specifications is amended to include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
_____ mm P.V.C. Pipe	Meter (m)

### **EXCAVATION FOR STRUCTURES**

Section 702 in the Standard Specifications and Supplemental Specifications is amended to provide that the Excavation for all new culvert pipes will not be measured for payment, but shall be considered subsidiary to the pipe being built.



## SEEDING

Subsection 803.02 in the 1997 Metric Edition of the Standard Specifications is amended to include the following:

Type "B"	Minimum Purity (%)	Broadcast or Hydraulic Seeder Application Rate in kg of Pure Live Seed/ha	Approved Mech. Drill Application Rate in kg of Pure Live Seed/ha
Perennial Ryegrass – Linn	85		12
K-31 Fescue	85		16
Western Wheatgrass - Flintlock	85		12
Sideoats Grama – Butte	75		4.5
Buffalograss – Sharps 2, Cody	80		5.5
Blue Grama – NE, KS, CO	35		2.25
Purple Poppy Mallow – Native	90		0.3
Oats	90		17

All seed shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety, or origin shall submit for the engineer's consideration a seed tag representing the seed which shows the variety, origin and analysis of the seed.

Rates of application of commercial inorganic fertilizer shall be:

	Rate of Application Per ha (Minimum)
Available Nitrogen (N <sub>2</sub> ) -----	35 or 40 kg
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> ) -----	102 or 107 kg

Rate of application of granular sulphur coated urea fertilizer shall be:

Nitrogen (total available) -----	67 kg
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The contractor may, at his option, apply granular urea formaldehyde in lieu of the sulphur coated urea fertilizer at the following rate:

Nitrogen (total available) -----	67 kg
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### EROSION CONTROL

Subsection 807.02 in the 1997 Metric Edition of the Standard Specifications is amended to include the following:

<b>For Erosion Control on Backslopes, A, AA &amp; AAA and All Erosion Checks</b>	Minimum Purity (%)	Application rate in kg of Pure Live Seed/1000 m <sup>2</sup>
Intermediate Wheatgrass – Slate Oahe	85	0.45
Western Wheatgrass – Flintlock	85	0.9
Switchgrass – NE-28, Summer	90	0.3
Indiangrass – Holt, Oto	75	0.35
Big Bluestem – Champ	55	0.35
Little Bluestem – Blaze	55	0.45
Sideoats Grama – Butte	75	0.35
Sand Lovegrass – NE-27, Native	90	0.3
Blackeyed Susan	90	0.08
Grayhead Prairie Coneflower	90	0.08
Pitcher Sage – NeKan	90	0.15
Shell Leaf Penstemon - Native	90	0.06
Ill. Bundle Flower – Inoculated	90	0.06
Plains Coreopsis	90	0.06
Partridge Pea – Platte	90	0.15
Echinacea Angustifolio	90	0.15
Oats	90	1

All seeds shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety or origin shall submit for the engineers consideration a seed tag representing the seed, which shows the variety, origin and analysis of the seed.

Rate of application of inorganic fertilizer shall be:

	Rate of Application Per 1000 m <sup>2</sup> (Min.)
Available Nitrogen (N <sub>2</sub> ) -----	4 or 5 kg
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> ) -----	12 or 13 kg

Rate of application of granular sulphur coated urea fertilizer or urea-formaldehyde fertilizer shall be:

	Rate of Application Per 1000 m <sup>2</sup> (Min.)
Nitrogen (Total Available) -----	10 kg

**FABRIC SILT FENCE, TYPE COIR FIBER  
(S8-13-0801)**

Section 809 in the Standard Specifications is amended to include Fabric Silt Fence, Type Coir fiber.

Fabric silt fence type coir fiber may also be installed with wooden posts. The posts shall be 1 1/2" x 1 1/2" x 6' (38 mm x 38 mm x 1.8 m) and shall only be driven until firm.

Wet and Below Water Installation:

Trenching is not required. Fold a 6 inch (150 mm) flap toward the silt source and pin as shown on the special silt fence plan. Install the stakes as for a dry installation. Attach the fabric to the posts with zip ties or other approved methods and secure from slipping down the post. All splice joints shall overlap a minimum of 16 inches (400 mm).

The silt fence shall be left in good working condition. For a dry site, the silt shall be disposed of as directed by the engineer. For a wet and/or below water installation, the silt shall be left in place.

**EROSION CONTROL  
(S8-14-0202)**

Subsection 807.02 in the Supplemental Specifications is void.

Paragraph 6.b. of Subsection 807.03 in the Standard Specifications is amended to include the following:

The soil retention blanket for Erosion Control Type B, Type B-1, and Type B-2 shall be placed longitudinally next to the shoulder of the roadway. The soil retention blanket shall be placed after the area is seeded and before the area is mulched. One-third more staples are required than shown in the plans.

**EROSION CONTROL, TYPE A & AA  
(S8-15-0801)**

This work shall consist of placing a soil retention blanket, filter fabric, seed, fertilizer, and soil fill at the locations shown in the plans. The installation shall be as shown in the plans and as directed by the engineer.

Paragraph 1. of Subsection 807.02 in the Standard Specifications is void and superseded by the following:

The soil retention blanket for Erosion Control "A & AA" shall be as shown on the approved products list for Erosion Control A & AA.

The filter fabric shall be from the approved products list for Erosion Control Type A, Type AA, or Erosion check or approved equal. Place the erosion control material with the filter fabric attached over the prepared area. Pin the area. Seed and fertilize and then soil fill. The soil fill shall be fine enough to fill the voids and cover all of the seed. If the filter fabric is not attached to the erosion control material, the installation is as follows: prepare the area, lay out the filter fabric, pin the filter fabric, lay out the erosion control material and pin, seed and fertilize and soil fill.

Paragraph 2. of Subsection 807.02 of the Standard Specifications is void and superseded by the following:

The pins for the filter fabric shall be made of No. 11 gauge (3 mm diameter) steel wire. The pins shall be "U" pins with a one-inch (25 mm) throat and at least six inches (150 mm) long.

The pins for the "A & AA" mat shall be a minimum of 8 or 9 gauge (4 mm diameter) wire, u-shaped pins with 8"-10" (200 mm to 250 mm) legs and a 1" or 2" (25 mm or 50 mm) throat. The 11 gauge (3 mm diameter) 6 inch (150 mm) "U" pins may be used in lieu of the 8 or 9 gauge (4 mm diameter) pins if the 11 gauge (3 mm diameter) pins are machine placed and one-third more pins are used.

### **EROSION CONTROL, TYPE "AAA" (S8-16-0801)**

This work shall consist of placing a soil retention blanket, filter fabric, seed, fertilizer, and soil fill at the locations shown in the plans. The installation shall be as shown in the plans and as directed by the engineer.

Paragraph 1. of Subsection 807.02 in the Standard Specifications is void and superseded by the following:

The soil retention blanket for Erosion Control "AAA" shall be as shown on the approved products list for Erosion Control AAA.

The filter fabric shall be from the approved products list for Erosion Control Type A, Type AA, or Erosion check or approved equal. After the area around the culvert is shaped and graded, the filter fabric shall be placed and pinned. The filter fabric shall be placed under the pipe and the full length of the installation as shown in the plans. Place the Erosion Control "AAA" mat over the pipe to allow for a three foot (1 meter) ± piece of material on top of the pipe. Cut out the hole for the pipe, leaving an area uncut that will be tucked under the culvert and in front of the culvert. Pin the mat as shown and trench in and compact the downstream end. Seed and fertilize the area and soil fill, raking the soil in well. Reseed and rake the area.

Paragraph 2. of Subsection 807.02 of the Standard Specifications is void and superseded by the following:

The pins for the filter fabric shall be made of No. 11 gauge (3 mm diameter) steel wire. The pins shall be "U" pins with a one-inch (25 mm) throat and at least six inches (150 mm) long.

The pins for the "AAA" mat shall be a minimum of 8 or 9 gauge (4 mm diameter) wire, u shaped pins with 8"-10" (200 mm to 250 mm) legs and a 1" or 2" (25 mm or 50 mm) throat.

## TEMPORARY SILT CHECKS

### Description

This work shall consist of furnishing and installing temporary silt checks at the locations shown in the plans, or directed by the Engineer.

### Material Requirements

1. The temporary silt checks shall be on the NDR Approved Products List.
2. The wire staples shall be 3 mm steel wire with a 25 mm or larger throat with 150 mm to 200 mm long legs.

### Construction Methods

The temporary silt checks shall be installed at the locations shown in the plans, and as directed by the Engineer. The upstream edge shall be slightly buried and pinned with wire staples on approximately 0.6 meter spacings. The pins may be left slightly exposed for easier removal. The triangular portion shall be pinned on 1 meter centers.

The temporary silt checks shall be in place immediately after the rough grading is done in an area.

The temporary silt check shall be left in place until the finish grading begins. When the finish grading is done they shall be replaced until the permanent erosion control is initiated.

At the completion of the project, the temporary silt checks shall remain the property of the contractor.

### Method of Measurement

All work and materials as described herein, shall be included in the item "Temporary Silt Check." The Temporary Silt Checks shall be measured by the meter for the initial installation. The removing or relocating of the temporary silt checks will not be measured for payment, but will be considered subsidiary to the initial installation.

### Basis of Payment

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Silt Check	Meter (m)

**FLY ASH  
(S10-5-0801)**

Subsection 1008.01 in the Standard Specifications is void and superseded by the following:

Fly ash shall be Class C or F meeting the requirements of ASTM C 618.

**STRUCTURAL STEEL  
(S10-5-0801)**

Section 1045 of the Standard Specifications is amended to include the following:

1045.03 -- Steel Plate Substitution

The Contractor may use either English or Metric steel plates in accordance with Table 1045.01.

<b>Table 1045.01</b>			
<b>English-Metric Steel Plate Substitution Table</b>			
<b>Metric (millimeters)</b>	<b>English (inches)</b>	<b>Metric (millimeters)</b>	<b>English (inches)</b>
9	3/8	32	1 1/4
10	3/8	35	1 3/8
11	7/16	38	1 1/2
12	1/2	40	1 5/8
14	9/16	45	1 3/4
16	11/16	50	2
18	3/4	55	2 1/4
20	13/16	60	2 3/8
22	7/8	70	2 3/4
25	1	80	3 1/4
28	1 1/8	90	3 1/2
30	1 1/4		

**REPAIR OF DAMAGED METALLIC COATINGS  
(S10-5-0801)**

Paragraph 2. of Subsection 1061.01 in the Standard Specifications is void and superseded by the following:

2. The material used for repair shall provide a minimum coating thickness of at least 50 µm with one application.

**DOWEL BARS  
(S10-5-0801)**

Subsection 1022.02 in the Standard Specifications is amended to include the following:

In addition to these certificates, two 1.8 meter samples of the coated bar (for tension testing and bend testing) of each size bar and each heat number shall be sent to the NDR Materials and Research Laboratory, Lincoln, Nebraska. These bars will be properly identified with tags showing the size and heat number.

**CORRUGATED METAL PIPE  
(S10-5-0801)**

Table 1035.01 in Section 1035 of the Supplemental Specifications is amended by deleting the title "Steel and Aluminum Culvert Thickness".

**METAL FLARED-END SECTIONS  
(S10-5-0801)**

Table 1036.01 in Section 1036 of the Supplemental Specifications is amended by deleting the title "Steel and Aluminum Flared-End Thickness".

**REINFORCED CONCRETE PIPE, MANHOLE RISERS,  
AND FLARED-END SECTIONS  
(S10-5-0801)**

Paragraph 3.a. of Subsection 1037.02 in the Supplemental Specifications is void and superseded by the following:

3.a. Round reinforced concrete pipe shall conform to the requirements of AASHTO M 170-95 with the exception of the minimum circumferential reinforcing (in<sup>2</sup>/ft. (mm<sup>2</sup>/m) of pipe wall) for 15, 21, and 24 inch (380, 460, 600 mm) Class III pipe, as shown below:

Paragraph 3.b. of Subsection 1037.02 is void and superseded by the following:

b. AASHTO M 170-95 Specifications are modified as follows:

Paragraph 4. of Subsection 1037.02 is void and superseded by the following:

4. Reinforced concrete arch pipe shall conform to the requirements of AASHTO M 206-95.

Paragraph 5. of Subsection 1037.02 is void and superseded by the following:

5. Reinforced concrete elliptical pipe shall conform to the requirements of AASHTO M 207-95.

Paragraph 7. of Subsection 1037.02 is void and superseded by the following:

7. Concrete flared-end sections shall be of the design shown in the plans and in conformance with the applicable requirements of AASHTO M 170-95, Class II pipe, AASHTO M 206-95, Class A-II pipe, or AASHTO M 207-95, Class HE-II pipe for the diameter of pipe which it is to be installed.

### **HIGH TENSILE BOLTS, NUTS, AND WASHERS (S10-5-1001)**

Subsection 1058.02 in the Supplemental Specifications is void.

Paragraph 4.b.(5) in the Standard Specifications is void and superseded by the following:

- (5) The bolt, nut, and washer assembly shall be assembled in a Skidmore-Wilhelm calibrator or an acceptable equivalent device. For bolts that are too short to be assembled in the calibrator, see Subsection 1058.03, Paragraph 4.b.(9).

### **ELASTOMERIC BEARINGS AND LAMINATED BEARING PADS (S10-5-0202)**

Paragraph 2. of Subsection 1068.02 in the Standard Specifications is void and superseded by the following:

2. Certification shall be furnished in accordance with NDR's *Materials Sampling Guide*.

Paragraph 3. of Subsection 1068.02 is void.



## **STEEL BARS FOR CONCRETE REINFORCEMENT (S10-5-1201)**

Section 1020 in the Standard Specifications is void and superseded by the following:

### 1020.01 - Description

Steel tie bars for longitudinal joint reinforcement in concrete pavements shall be epoxy coated and deformed Grade 40 or 60 billet steel as shown in the plans, specifications or Special Provisions.

### 1020.02 - Material Characteristics

1. Billet-steel bars shall conform to the requirements of ASTM A 615/A 615M.
2. Epoxy coatings shall conform to the requirements in Section 1021 of the Standard Specifications and Supplemental Specifications.

### 1020.03 - Acceptance Requirements

Acceptance shall be based on sampling, testing, and certification requirements in accordance with the NDR *Materials Sampling Guide*.

## **PERFORMANCE GRADED BINDER**

Section 503 in the Standard Specifications and Supplemental Specifications is amended to include Performance Graded Binders.

### I. Description:

The performance graded binder to be used on this project shall be PG Binder 64-22, supplied by a Certified Supplier.

### Certified Supplier

A supplier must be certified by the Nebraska Department of Roads to be allowed to supply Performance Graded Binder in Nebraska. A certified supplier must be a participant in one or more of the following PG Binder groups.

1. AASHTO Materials Reference Laboratory (AMRL)
2. Western Cooperative Testing Group
3. Combined States Binder Group

The supplier must maintain and follow the requirements of the group or groups in which they participate in to maintain certification by the Nebraska Department of Roads. In addition, active participation is required to maintain certification by the Department. Active participation will include submitting of round robin samples results, along with meeting other requirements of the group or groups. Failure to do so will result in loss of certification by the Department.

A certified supplier may be asked to supply to the Department, past round robin results, laboratory inspection reports, reasons for and investigative reports on out lying results, quality control testing, and/or technician training and proficiency testing reports.

## Supplier Certification

A supplier may request certification by contacting the Nebraska Department of Roads, Materials and Research Division, Flexible Pavement Engineer at (402) 479-4675. A temporary certification may be issued for a period of up to one year. Split sample testing will be required prior to receiving a temporary certification. Split sample testing will be done on all grades of binder that the supplier intends to supply during the temporary certification. The supplier will have up to one year to become certified by participating in and following the requirements of one or more of the approved binder groups.

A supplier may become certified through active participation in other binder certification/round robin groups that are approved by the Department. The Department may request from the supplier prior to approval, past or current round robin results, quality control testing, laboratory inspection reports, and/or technician training and proficiency testing reports.

### II. Binder Sampling and Testing:

1. Lots. Each 3750 tons (3400 Mg) of HMA produced will be a binder lot.
2. A binder lot will include only one PG Binder grade or a blend as allowed in paragraph 6.e.
3. A Binder lot will only include one supplier of the PG Binder or a blend as allowed in paragraph 6.e.
4. Blending of different binder grades and binders from different suppliers will be allowed with restrictions as noted in paragraph 6.e. The Engineer must be notified of the intent to blend prior to actual blending.
5. All binders shall be sampled at the rate of one sample per lot with a minimum of three samples per project.
  - a. The sample shall consist of two one-quart (liter) cans and shall be taken by the Contractor's Certified Sampling Technician, with assistance from or under supervision of NDR personnel. The sample shall be taken at the plant from the line between the storage tank and the mixer or from the tank supplying material to the line, at a location at which material sampled is representative of the material in the line to the mixer. One can will be tested for compliance with MP1 specifications and the other can portion will be saved for dispute resolution, if needed. The sampling process shall follow procedures of the NDR Materials Sampling Guide and NDR T 40.
  - b. Testing. When the tested PG Binder is in compliance, the binder lot will be accepted and both cans of the sample can be discarded. If the tested PG Binder does not comply, then the price of the PG Binder lot represented by the sample shall be adjusted according to Table 1. Overall project average testing requirements and price adjustments will also apply, as stated in Table 2.

6. Material Requirements:

- a. Performance graded binder, as specified in the contract items shall be in accordance with AASHTO Designation MP1 and meet all minimum and maximum requirements.
- b. Substitution of a PG Binder, which exceeds the upper and lower grade designations from the specified, requires advance notification of the Engineer, and be documented by a no cost change order. The bill of lading or delivery ticket shall state the binder grade and specific gravity.
- c. Material Certification - A Material Certification shall be submitted prior to construction stating, the type of modifier being used, and the recommended mixing and compaction temperatures for the Hot Mix Asphalt.
- d. The Contractor shall receive from the supplier, instructions on the proper storage and handling of each grade and shipment of PG Binder.
- e. Blending of PG Binders at the hot mix plant site will be allowed only when transitioning to an asphalt mixture requiring a different grade of binder and with the following restrictions:
  - (1) The resultant blend will meet MP-1 specifications when tested as  $\pm 3^\circ$  of the specified PG binder. The sample of the blended material will 1) be considered as a lot sample, 2) will be taken during initial production following the blending of the binders, and 3) deductions when not meeting MP-1, will apply. On the blended sample's identification form will be a note explaining the blending conditions and a statement that the sample is a blend of materials. The next lot sample, following the sample representing the blend, will be tested as the specified binder grade for the asphalt mixture being produced and shall meet MP-1 specifications.
  - (2) Modified Binders - When a type of modification is used and stated in the Material Certification as required in paragraph 6.c., it will not be allowed to be blended with a binder containing a different type of modification. Blending of the same type of modifiers will be allowed.

**TABLE 1**

<b>SINGLE SAMPLE TOLERANCE AND PRICE REDUCTION TABLE</b>		
	<b>Price Reduction<sup>1</sup> Pay Factor of 0.75</b>	<b>Determined by Engineer<sup>2</sup> Pay Factor of 0.50 or Removal</b>
<u>Tests on Original Binder</u> Dynamic Shear, G*/Sin δ, kPa	0.86-0.92	< 0.86
<u>Tests on Rolling Thin Film Oven Residue</u> Dynamic Shear, G*/Sin δ, kPa	1.76-1.97	< 1.76
<u>Tests Pressure Aging Vessel Residue</u> Dynamic Shear, G*Sin δ, kPa	5601-6200	> 6200
<u>Creep Stiffness</u> S, Mpa	325-348	> 348
m-value	0.270-0.284	< 0.270

**NOTE:** If more than one test fails to meet requirements, the largest individual price reduction (pay factor of 0.75 or 0.50) will be used to calculate price reduction for the asphalt binder.

<sup>1</sup>Price Reduction will be based on contract unit price of asphalt binder.

<sup>2</sup>The Engineer will determine if the non-compliant material will be removed. If the non-compliant material is accepted, a price reduction of 50% will be applied. The price reduction shall be based on the contract unit price of asphalt binder.

The pay factor will be applied to the quantity of material that the sample represents.

#### Overall Project Average - Price Reduction Based on Complete MP-1 Testing

Out of specification material will be determined by the specifications outlined in AASHTO MP-1, excluding Direct Tension.

The Nebraska Department of Roads, Materials and Research, Bituminous Laboratory will do complete testing, per MP-1 specifications, on a minimum of three samples or 20% of the total samples from the project, whichever is the greatest. The Department will randomly select one sample for complete MP-1 testing out of every five samples received. When any test result shows sample not meeting MP-1 specifications, the previous and following sample received will be tested for complete MP-1 compliance. Testing will continue in this manner until tested samples meet all of MP-1 specifications.

Original Dynamic Shear Rheometer testing will be completed on all samples. When a sample being tested for only Original Dynamic Shear Rheometer compliance falls out of MP-1 specification, it will then be tested for complete MP-1 specification compliance. Adjacent samples will be tested when results, other than the Original Dynamic Shear Rheometer result, do not meet specification. This additional complete testing for MP-1 compliance is in addition to the minimum number of samples that will be tested for complete MP-1 compliance.

At the completion of testing, all complete MP-1 test results will be averaged. For averages that do not meet MP-1 specifications, the largest reduction shown in Table 2 will be applied to all the Performance Graded Binder used on the project.

**Table 2**

<b>OVERALL PROJECT AVERAGE - PRICE REDUCTION TABLE</b>		
	<b>Range of Average</b>	<b>Pay Factor Applied</b>
<u>Tests on Original Binder</u> Dynamic Shear, $G^*/\sin \delta$ , kPa Min. 1.00 kPa	< 1.00 - 0.98	0.98
	< 0.98 - 0.96	0.95
	< 0.96 - 0.94	0.92
	< 0.94	0.85
<u>Tests on Rolling Thin Film</u> <u>Oven Residue</u> Dynamic Shear, $G^*/\sin \delta$ , kPa Min. 2.20 kPa	< 2.20 - 2.156	0.98
	< 2.156 - 2.09	0.95
	< 2.09 - 2.024	0.92
	< 2.024	0.85
<u>Tests Pressure Aging Vessel</u> <u>Residue</u> Dynamic Shear, $G^*\sin \delta$ , kPa Max. 5000 kPa	< 5000 - 5100	0.98
	< 5100 - 5250	0.95
	< 5250 - 5400	0.92
	< 5400	0.85
m-Value Min. 0.300	< 0.300 - 0.298	0.98
	< 0.298 - 0.293	0.95
	< 0.293 - 0.290	0.92
	< 0.290	0.85
<u>Creep Stiffness</u> S, MPa Max. 300 MPa	< 300 - 306	0.98
	< 306 - 315	0.95
	< 315 - 324	0.92
	< 324	0.85

#### Single Sample Reduction and Overall Project Average Reduction

A sample representing a lot, not meeting MP-1 Specification, will have a reduction for the material that the sample represents. Only the largest reduction from Table 1, will apply when more than one result of a single sample does not meet MP-1 specifications. Only the largest overall project average reduction from Table 2, will apply when more than one test average falls out of MP-1 specifications. Pay Factors based on both Table 1 and Table 2 test results are separate from each other and both will be applied.

#### Investigation of Verification Lot Samples That Do Not Meet Specifications

When the lot sample shows test results out of specification limits, the process of resolving the sample failure will include the following actions as appropriate:

1. The Bituminous Lab may conduct retesting of the remaining portion of the original can sample as determined necessary to confirm or disaffirm the original test result(s).

2. The Flexible Pavement Engineer will notify the Contractor who will arrange to investigate all aspects of the testing, loading, handling and delivery of the material in question. The Contractor shall report findings to the Central Laboratory, Flexible Pavement Engineer.
3. The Department will collect and compile all information and prepare a report. A copy of the report will be distributed to the District and the Contractor.
4. The Bituminous Laboratory will issue the standard report of tests for all samples tested, to include any resulting pay factor deductions. A copy of the report of tests will be distributed to the District, Construction Division, and Contractor.

#### Dispute Resolution

After testing and investigations have been completed on the one can of the sample and there is still a dispute, the Department will select an independent laboratory for referee testing to take place on the second can of the sample. If the independent lab's tests indicate failing results and pay deductions equal to or great than the Department's, the Contractor will reimburse the Department for the cost of testing. If the independent lab's tests indicate that the material meets specification or is at a pay deduction less than the Department's, the Department will assume the cost of testing. When the independent lab's tests indicate a pay deduction, the lesser of the Department's and the independent lab's deductions will be applied.

#### Basis of Measurement

PG Binder shall be measured in accordance with Subsection 503.05 in the Standard Specifications and Supplemental Specifications.

#### Basis of Payment:

Subsection 503.06 in the Standard Specifications and Supplemental Specifications is amended to provide that PG Binder, accepted by the Engineer for use in asphaltic concrete, will be paid for at the contract unit price per ton (Megagram) for the item "Performance Graded Binder \_\_\_\_\_", less any deductions as prescribed in the tolerance and price reduction tables.

### **ASPHALTIC CONCRETE, TYPE SPL**

Asphaltic Concrete, Type SPL shall conform to the AASHTO T 245 test for a 50 blow mix criteria.

Section 1028 in the 1997 Metric Edition of the Standard Specifications is amended to include Asphaltic Concrete, Type SPL.

The following subsections in the Standard Specifications are void: 503.02 6., 7.a.b., 8., 503.04 5.c.(3) (4) (5) (6) and (7), 1028.01, 2.d.(3)(vii), 3., 4., 5.i.(ii) (iv), 1028.02 3., 4.a., 5.a.b., Table 1028.02 (Asphalt Content), 1028.02 6.f.(8) and (9), 1033.02 4.a.(1), and Table 1033.04A & B.

Subsections 1028.01 5.i. (3) (II) (IX) and 1028.02 6.h. (3) (vii) in the Standard Specifications are amended to include the Marshall Stability and Flow Test.

Paragraph 8.a. of Subsection 1028.02 in the Standard Specifications is void and superseded by the following:

The Contractor's sample testing of laboratory air voids, aggregate gradation, compacted in place density and Marshall stability shall be verified by comparison to Department acceptance tests.

The Contractor may approach the State with a proposal to supplement the virgin aggregates of the asphaltic concrete mix with a contractor specified percentage of recycled asphalt pavement (RAP). The State may accept or reject the proposal based on whether the mix design meets the specified criteria of the asphaltic concrete proposed. The RAP may come from the project or an existing stockpile. The contractor is responsible for investigating the quality of the RAP material.

The combined mineral aggregate for Asphaltic Concrete, Type SPL, shall be composed of not less than 30 percent crushed rock, crushed mineral aggregates which contain no more than 20 percent naturally occurring fine aggregate retained on the 2.0 mm sieve and mineral filler if needed. The target field air voids shall be 2 percent. The gradation of the individual components shall be such that a mix design meeting the target value requirements shown below can be established.

#### RANGE FOR TARGET VALUES

SIEVE SIZE	PERCENT PASSING	
	Min.	Max.
2.00 mm	48.0	54.0
300 µm	15.0	21.0
*75 µm	4.0	6.0

\* This requirement is based on a specific gravity range of 2.55 to 2.75 for the material passing the 75 µm sieve. For specific gravities outside the limits shown, the range may be adjusted by the Materials and Research Engineer to maintain an equivalent volume of material passing the 75 µm sieve.

Field control target air voids shall consist of a maximum equal to the target plus one percent and a minimum equal to the target minus one percent, based on the moving average of four tests.

In addition to the above requirements, the gradation of the combined mineral aggregate proposed for use shall have 100 percent passing the 25.0 mm sieve, 98 percent or more passing the 19.0 mm sieve, 81 percent to 89 percent passing the 9.50 mm sieve and the plasticity index of the portion of the combined mineral aggregate passing the 75 µm sieve of the materials submitted for experimental bituminous mixtures shall not exceed six for approval of the mixture design.

The bituminous mixture shall also have a Marshall Stability and Flow values required to produce a Bearing Capacity of no less than 1585 kPa, as defined by the equation:

$$\text{Bearing Capacity} = \frac{\text{Stability}}{\text{Flow}} \times \frac{(120 - \text{Flow})}{100} \times 6.9$$

Note: Stability in lbs. Flow in 1/100 in. x 6.9 converts equation to kPa.

Mineral aggregates shall comply with the quality requirements of Paragraph 4. of Subsection 1033.02 for mineral aggregate other than crushed rock for asphaltic concrete.

### **PROPOSAL GUARANTY (S1-38-0801)**

As an evidence of good faith in submitting a proposal for this work or for any portion thereof as provided in the proposal form, the bidder must file with his proposal a bid bond, which must be executed on the Department of Roads' Bid Bond form, in the amount of 5 percent of the amount bid for any group of items or collection of groups for which the bid is submitted. Any alterations, conditions or limitations added to the Department of Roads' Bid Bond form will be unacceptable and cause the bid not to be opened and read.

\* \* \* \* \*

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