

INFORMATIONAL PROPOSAL (For information only, not to be used for bidding)

NEBRASKA DEPARTMENT OF ROADS
LETTING DATE : November 13, 2003

CALL ORDER: F11 CONTRACT ID: 3429X

CONTROL NO./SEQ. NO.: 31429 /000 PROJECT NO.: EACSTPD-32-7(104)

TENTATIVE START DATE: 08/02/04 CONTRACT TIME: 50 WORKING DAYS

LOCATION: ON N-32, WEST POINT - OAKLAND.

IN COUNTY: BURT

CUMING

BIDDER

GROUP 9 BITUMINOUS

SEE NOTICE TO BIDDERS SPECIAL PROVISION FOR COMBINED BID REQUIREMENT

NOTES

THE TOTAL AMOUNT OF WORK WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO \$_____.
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THE NUMBER OF _____ CONTRACTS WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO ____.
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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.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piece-work, station work, or by subcontract.

2. Except as otherwise provided in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

- a. discriminate against labor from any other State, possession, or territory of the United States (except for employment

preference for Appalachian contracts, when applicable, as specified in Attachment A), or

- b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

- b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve

such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246 (Rev. 3-94)

tive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more

than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for

the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages:
In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form

desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of

Form FHWA-1273 (Rev. 3-94)

the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees

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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.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**1. Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant know-

ingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY
(EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE

Economic Area	Goal %	Economic Area	Goal %
103 Sioux City, IA:		Non-SMSA Counties	5.3
SMSA Counties:		IA Adams, IA Audubon, IA Cass,	
7720 Sioux City, IA-NE	1.9	IA Fremont, IA Harrison, IA Mills,	
IA Woodbury, NE Dakota		IA Montgomery, IA Page, IA Shelby,	
Non-SMSA Counties	1.2	IA Taylor, NE Burt, NE Cass, NE Colfax,	
IA Cherokee, IA Crawford, IA Ida,		NE Dodge, NE Platte, NE Saunders,	
IA Monona, IA O'Brien, IA Plymouth,		NE Washington	
IA Sioux, NE Antelope, NE Cedar,		144 Grand Island, NE:	
NE Cuming, NE Dixon, NE Knox,		Non-SMSA Counties	1.4
NE Madison, NE Pierce, NE Stanton,		NE Adams, NE Arthur, NE Blaine,	
NE Thurston, NE Wayne, SD BonHomme,		NE Boone, NE Boyd, NE Brown,	
SD Clay, SD Union, SD Yankton		NE Buffalo, NE Chase, NE Cherry,	
142 Lincoln, NE:		NE Clay, NE Custer, NE Dawson,	
SMSA Counties:		NE Dundy, NE Franklin, NE Frontier,	
4360 Lincoln, NE	2.8	NE Furnas, NE Garfield, NE Gosper,	
NE Lancaster		NE Grant, NE Greeley, NE Hall, NE	
Non-SMSA Counties	1.9	Hamilton, NE Harlan, NE Hayes,	
NE Butler, NE Fillmore, NE Gage,		NE Hitchcock, NE Holt, NE Hooker,	
NE Jefferson, NE Johnson, NE Nemaha,		NE Howard, NE Kearney, NE Keith,	
NE Otoe, NE Pawnee, NE Polk, NE		NE Keya Paha, NE Lincoln, NE Logan,	
Richardson, NE Saline, NE Seward,		NE Loup, NE McPherson, NE Merrick,	
NE Thayer, NE York		NE Nance, NE Nuckolls, NE Perkins,	
143 Omaha, NE:		NE Phelps, NE Red Willow, NE Rock,	
SMSA Counties:		NE Sherman, NE Thomas, NE Valley,	
5920 Omaha, NE-IA	7.6	NE Webster, NE Wheeler	
IA Pottawattamie, NE Douglas,		145 Scottsbluff, NE:	
NE Sarpy		Non-SMSA Counties	5.3
		NE Banner, NE Box Butte, NE Chey-	
		enne, NE Dawes, NE Deuel, NE	
		Garden, NE Kimball, NE Morrill,	
		NE Scotts Bluff, NE Sheridan, NE	
		Sioux, WY Goshen	

GOALS AND TIMETABLES FOR FEMALE PARTICIPATION IN EACH TRADE

Timetables	Goals (Percent)
From April 1, 1980 until further notice	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is by county.

November 3, 1980

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice, which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

The contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the

work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Supplemental Reporting Requirements

- A. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate the number of minority and non-minority group members and women employed in each work classification on the project.
- B. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State Highway agency and the Federal Highway Administration.
- C. The Contractor and each covered subcontractor will submit to the State Highway agency, for the month of July, for the duration of the project, a report (Form PR-1391) "Federal-aid Highway Construction Contractors Annual EEO Report), indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. If on-the-job training is being required by "Standard Federal Equal Employment Opportunity Specifications" the contractor will be required to furnish (Form FHWA 1409) "Federal-aid Highway Construction Contractor's Semi-Annual Training Report".

Equal Employment Opportunity Policy

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

GENERAL DECISION NE030002 06/13/03 NE2
General Decision Number NE030002

Superseded General Decision No. NE020002

State: Nebraska

Construction Type:
HEAVY
HIGHWAY

County(ies):

ADAMS	FURNAS	NANCE
ANTELOPE	GAGE	NEMAHA
ARTHUR	GARDEN	NUCKOLLS
BANNER	GARFIELD	OTOE
BLAINE	GOSPER	PAWNEE
BOONE	GRANT	PERKINS
BOX BUTTE	GREELEY	PHELPS
BOYD	HALL	PIERCE
BROWN	HAMILTON	PLATTE
BUFFALO	HARLAN	POLK
BURT	HAYES	RED WILLOW
BUTLER	HITCHCOCK	RICHARDSON
CEDAR	HOLT	ROCK
CHASE	HOOKE	SALINE
CHERRY	HOWARD	SAUNDERS
CHEYENNE	JEFFERSON	SCOTTS BLUFF
CLAY	JOHNSON	SEWARD
COLFAX	KEARNEY	SHERIDAN
CUMING	KEITH	SHERMAN
CUSTER	KEYA PAHA	SIOUX
DAKOTA	KIMBALL	STANTON
DAWES	KNOX	THAYER
DAWSON	LANCASTER	THOMAS
DEUEL	LINCOLN	THURSTON
DIXON	LOGAN	VALLEY
DODGE	LOUP	WAYNE
DUNDY	MADISON	WEBSTER
FILLMORE	MCPHERSON	WHEELER
FRANKLIN	MERRICK	YORK
FRONTIER	MORRILL	

HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges)

SAUNDERS COUNTY (WEST OF HWY. #109 EXTENDED NORTH AND SOUTH TO THE COUNTY LINE)

Modification Number	Publication Date
0	06/13/2003

COUNTY(ies):

ADAMS	FURNAS	NANCE
ANTELOPE	GAGE	NEMAHA

ARTHUR	GARDEN	NUCKOLLS
BANNER	GARFIELD	OTOE
BLAINE	GOSPER	PAWNEE
BOONE	GRANT	PERKINS
BOX BUTTE	GREELEY	PHELPS
BOYD	HALL	PIERCE
BROWN	HAMILTON	PLATTE
BUFFALO	HARLAN	POLK
BURT	HAYES	RED WILLOW
BUTLER	HITCHCOCK	RICHARDSON
CEDAR	HOLT	ROCK
CHASE	HOOKER	SALINE
CHERRY	HOWARD	SAUNDERS
CHEYENNE	JEFFERSON	SCOTTS BLUFF
CLAY	JOHNSON	SEWARD
COLFAX	KEARNEY	SHERIDAN
CUMING	KEITH	SHERMAN
CUSTER	KEYA PAHA	SIOUX
DAKOTA	KIMBALL	STANTON
DAWES	KNOX	THAYER
DAWSON	LANCASTER	THOMAS
DEUEL	LINCOLN	THURSTON
DIXON	LOGAN	VALLEY
DODGE	LOUP	WAYNE
DUNDY	MADISON	WEBSTER
FILLMORE	MCPHERSON	WHEELER
FRANKLIN	MERRICK	YORK
FRONTIER	MORRILL	

SUNE2002E 06/16/1999

	Rates	Fringes
CARPENTER	13.30	
CEMENT FINISHER	12.50	
ELECTRICIAN	11.90	
FLAGGER	7.60	
FORM SETTER	10.80	
LABORER	8.30	
MANHOLE BUILDER	10.20	
MECHANIC	12.95	
PAINTER	8.35	
PILE DRIVER LEADPERSON	8.35	
POWER EQUIPMENT OPERATORS:		
Asphalt distributor	9.65	
Asphalt paving machine	12.35	
Asphalt paving machine (screed)	10.45	
Asphalt roller, self-propelled	11.20	
Backhoe excavator (track type)	12.55	
Concrete finishing machine or slip		
form paver	12.80	
Concrete saw operator	11.20	
Concrete cure machine	9.20	
Concrete texture machine	9.20	
Bulldozer or push tractors:		
Less than 115 drawbar h.p.	11.60	
115 drawbar h.p. and over	12.80	
Material stockpiler	10.20	
Motor grader (finisher)	13.15	
Motor grader (rough)	10.90	

Power broom operator	9.15
Roller or compactor, earthwork, self-propelled	10.05
Scraper	12.40
Traveling plant stabilization	11.60
Water tankers:	
Under 6000 gallons	9.65
6000 gallons and over	11.20
All purpose spreader	9.50
Clamshell, dragline, crane, pile driver/shovel	13.60
Dredge pump	9.50
Front end loaders:	
4 cu. yds. or less	11.40
Over 4 cu. yds.	12.10
Hydrohammer	9.60
Loader/backhoe (rubber-tired)	9.85
Power grader machine (trimmer & profiler)	12.80
Skid steer loader	9.50
Tractor (farm type)	9.50
Trenching machine	9.85
Stationary plant (base or stabili- zation)	11.75
Stationary plant (asphalt or concrete)	12.75
Crusher (including those with integral screening plant)	11.75
TRUCK DRIVERS:	
Single axle	8.40
Tandem axle	9.65
Semi-trailer or lowboy	10.85
Transit mix	9.65
WELDER	12.25

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations

indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

**SPECIAL PROVISIONS
FOR
FEDERAL AID
PROJECT NO. EACSTPD-32-7(104)**

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 November 13, 2003, 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 English 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 English 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 Contract Provisions, Form FHWA 1273, (Rev. 4-93), and the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity and Standard Federal Equal Employment Opportunity Construction Contract Specifications dated November 3, 1980, are attached to and are a part of this proposal form. The Standard Labor Classifications and Descriptions for Highway Construction dated September 1, 1996, are made a part of these special provisions, through reference.

The General Wage Decision issued under the Davis-Bacon and Related Acts is attached to and is a part of this proposal form.

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

BIDDING PROPOSAL FORMS FOR THIS WORK WILL BE ISSUED AND A CONTRACT AWARDED TO A CONTRACTOR WHO IS QUALIFIED FOR BITUMINOUS OR BRIDGES.

NOTICE TO BIDDERS

To be eligible for the award of this contract, bidders shall submit a completed bid for both Call Order No. F11 [Project No. EACSTPD-32-7(104)] and Call Order No. F12 [Project No. EACSTPD-32-7(105)].

Award of Contract, if awarded, will be made on the combined bid for both contracts.

Separate contracts will be awarded for each Call Order Number.

Paragraph 1.a.(2) of Subsection 108.01 in the 1997 English Edition of the Standard Specifications is void and superseded by the following:

With the Engineer's consent, the Contractor may sublet up to 70 percent of the work for the combined contracts.

**DISADVANTAGED BUSINESS ENTERPRISES
(S1-8-0801)**

A. Policy

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have a "level playing field" and equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this contract. Consequently, the disadvantaged business requirements of 49 CFR Part 26 are hereby made a part of and incorporated by this reference into this contract.

B. Disadvantaged Business Enterprises Obligation

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 have a "level playing field" and equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, the Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have a "level playing field" and equal opportunity to compete for and perform contracts. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of FHWA assisted contracts.

Failure of the Contractor to carry out the requirements set forth above shall constitute breach of contract and, after the notification of the FHWA, may result in termination of the agreement or contract by the State or such remedy as the State deems appropriate.

**CERTIFICATION FOR FEDERAL-AID CONTRACTS
(S1-11-0801)**

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

STATUS OF UTILITIES

The following information is current as of September 12, 2003.

Utility facilities, aerial and/or underground may exist within this project. The contractor shall determine to his satisfaction the extent of utility occupancy and utility conflict for facilities located within the construction areas.

At this time, no utilities have been required to relocate their facilities.

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.

Utilities known to be in the vicinity of this project.

Qwest Communications
Cuming County Rural Public Power District
Cuming County Rural Water District
Burt County Public Power District
Northern Natural Gas Company

Any work necessary will be concurrent with construction.

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

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

**REQUIRED SUBCONTRACTOR/SUPPLIER QUOTATIONS LIST
(S1-43-0603)**

At bid submittal, all bidders must provide to the NDOR the identity of all firms who provided quotations on all projects, including both DBEs and non-DBEs. This information must be on a form provided by the NDOR Contracts Office.

If no quotations were received, the bidder must indicate this in the space provided.

Each bidder will be required to submit one list per letting to cover all projects bid.

**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 occurred.)

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 the damage occurred.)

**LIABILITY INSURANCE
(S1-43-1103)**

Paragraph 2.a. of Subsection 107.13 in the Standard Specifications is void and superseded by the following:

- a. The General Liability coverage for bodily injury liability shall be not less than \$1,000,000 for injuries, including accidental death, in any one occurrence, and subject to an aggregate limit of not less than \$2,000,000.

Paragraph 2.b. of Subsection 107.13 is void and superseded by the following:

- b. The amount of property damage liability insurance shall be not less than \$1,000,000.

CONSTRUCTION DETAILS

REMOVING ASPHALT SURFACE FROM PAVEMENT

Section 203 in the 1997 English Edition of the Standard Specifications is amended to include the removal of asphalt patches, as directed by the Engineer, from existing concrete pavement surface.

Bituminous material produced from the removal operation shall become the property of the Contractor and removed from the project.

Subsection 203.03 is amended to provide for the measurement of Removing Asphalt Surface From Pavement in square yards.

Subsection 203.04 is amended to provide that the removing of asphalt surface shall be paid for at the contract unit price per square yard for the item "Remove Asphalt Surfacing from Pavement".

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.

TRENCHED WIDENING

Description

Trenched widening will consist of the removal of existing shoulder material and a portion of the existing bituminous surfacing for the placement of asphaltic concrete. Included will be the excavation required outside the remaining surfacing, for the placement of any foundation course and surfacing shown in the plans. Also included will be the compaction of the subgrade outside the remaining surfacing.

Construction Methods

1. Removal
 - a. The Contractor shall remove any vegetation in the area to be widened.
 - b. The Contractor shall remove existing shoulder material and a portion of the existing bituminous surfacing to expose a vertical face, as shown in the plans, using methods approved by the Engineer. A milling type machine shall be used to produce the trench. Removal by scarifying or blading will not be allowed. The excavated material shall be placed in a windrow outside of the trench to be used as shouldering material. The Contractor will be allowed to trench a maximum of two day's production ahead of the placement of asphaltic concrete in the trench.

2. Preparation of Subgrade

- a. Compact the underlying subgrade with two complete coverage's with a device capable of attaining compaction, as determined by the Engineer. Any unsuitable subgrade material shall be removed and replaced with acceptable material and recompact to meet the above mentioned requirements.

3. Placement of Asphaltic Concrete

The first lift of asphaltic concrete in the widening section can be placed with the first lift of asphaltic concrete on the mainline paving if all of the following conditions occur:

1. There is more than one lift of mainline paving.
2. The widening is 4 inches or less in depth in reference to the existing pavement.
3. The required density is obtained in the widening section.

If any of the above conditions are not met, the asphaltic concrete being placed in the widening areas shall be placed level with the existing surface before any subsequent layer of asphaltic concrete is placed. Density samples shall be taken and tested by the Contractor in accordance with Section 1028 of the Supplemental Specifications.

Method of Measurement

Trenched Widening shall be measured for payment by measuring each side separately in stations of 100 feet, measured horizontally along the project centerline, of completed and accepted work.

Basis of Payment

The work of Trenched Widening, measured as provided herein, will be paid for at the contract unit price per station for the item "Trenched Widening". This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete the work.

Removal and replacement of unsuitable subgrade materials shall be measured and paid for as extra work.

**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.

**TYPE B HIGH INTENSITY WARNING LIGHTS
(S4-9-1002)**

All references in the plans to Type B High Intensity Warning Lights shall be considered void. The plans will not be revised to reflect this change.

**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.

BITUMINOUS PATCHING OF CONCRETE PAVEMENT

Approximately 10 of bituminous patching material will be required to patch approximately 67 spalled areas. The average patch area will be about 3-4 inches (75-100 mm) in depth and cover about 2.5 square feet (0.25 square meters).

Paragraph 4. of Subsection 520.02 in the Supplemental Specifications is void and superseded by the following:

4. Composition of Mixture – The mixture shall consist of the bituminous material and aggregate as described above, plant-mixed in such a manner as to contain 100 – 120 lbs. (45.4 – 54.4 kg) of bituminous material for each finished ton (.9 Mg).

**ASPHALTIC CONCRETE
(S5-5-0801)**

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

**ASPHALTIC CONCRETE
(S5-7-0902)**

Paragraph 11.a. in Subsection 503.04 of the 2001 Supplemental Specifications is void.

Paragraph 4 in Subsection 503.05 of the 1997 Standard Specifications is void.

The pay item “Asphalt Pavement Smoothness Testing” in Subsection 503.06 of the 1997 Standard Specifications is void.

**ASPHALTIC CONCRETE PAVEMENT SMOOTHNESS
(S5-7-0902)**

Section 502 in the 1997 Standard Specifications for Highway Construction and the 2001 Supplemental Specifications is void and superseded by the following:

502.01 – General

1. This specification establishes a standard for asphaltic concrete pavement smoothness, and defines defective pavement smoothness. The intent of the specification is to produce a finished asphaltic concrete pavement driving surface with a Profile Index no greater than 12 inches per mile. Pavement smoothness will be evaluated as prescribed in this section.
2. When the pay item "Asphalt Pavement Smoothness Testing I/D" is included in the contract, all the requirements of the following sections including the incentive/disincentive provisions shall apply.
3. When the pay item "Asphalt Pavement Smoothness Testing" is included in the contract, the incentive/disincentive provisions of this section do not apply, but the smoothness testing shall be performed as prescribed. The asphaltic concrete pavement shall be evaluated in accordance with Paragraph 11. b. of Subsection 503.04 in the 2001 Supplemental Specifications.
4. When the contract contains no item for smoothness testing, the asphaltic concrete pavement shall be evaluated in accordance with Paragraph 11. b. of Subsection 503.04 in the 2001 Supplemental Specifications.

502.02 – Equipment

1. The Contractor shall furnish a 25-ft California profilograph approved by the Nebraska Department of Roads.
2. The profilograph shall have multiple, non-uniformly spaced, articulated support wheels arranged such that no two wheels pass the same location on the pavement surface at the same time (ASTM Designation: E 1274, Paragraph 5.1.2)
3. The profilograph shall be equipped with a computerized system that will record, analyze, and print the test data.
4. The profilograph shall produce a printed pavement profile trace (profilogram) with a vertical scale of 1:1, and a horizontal scale of 1:300 (1" paper = 25' pavement). The profilogram shall include the following information:
 - a. Project number
 - b. Test date
 - c. Traffic lane
 - d. Test direction
 - e. Test path
 - f. Pass number (1 for initial test; 2, 3, etc. for repeat runs)
 - g. Operator's name
 - h. Project stations
 - i. Data filter values
 - j. Blanking (Null) band width
 - k. Profile counts for each test section
 - l. Profile Index for each test section
 - m. Bump locations for each test section

502.03 – Certification and Independent Assurance Testing

1. The Department shall calibrate and certify the Contractor's profilograph annually at a test site established by the Department.
 - a. The profilograph shall be inspected for compliance with general equipment requirements, including wheel configuration, effective length, data analysis system, guidance system, and overall condition.
 - b. The profilograph shall be calibrated for distance measurement by moving it over the prescribed path of a premeasured test distance at walking speed, and determining its distance calibration factor.
 - c. The profilograph shall be checked for vertical measurement accuracy by placing a 1-inch and 2-inch calibration block, measured to the nearest 0.01 inch, under the sensing wheel while the profilograph is stationary. The vertical measurement indicated by the profilograph shall be within 4.0% tolerance of the actual premeasured block height.
 - d. The profilograph shall be checked for overall performance by moving it over the prescribed path of a pre-measured pavement test section at walking speed.
 - e. Distance measurement indicated by the profilograph shall be within 0.2% tolerance of the actual premeasured test section distance. To ensure accurate distance measurement during test runs, the air pressure of the distance measurement tire must always be maintained at the same level used for calibration.
 - f. The Profile Index reported by the profilograph for the test section shall be within 10.0% tolerance of the Profile Index reported by a Nebraska Department of Roads profilograph for the same test section.
 - g. A dated and signed decal will be placed on the profilograph to certify its acceptability for use on Nebraska Department of Roads pavement construction projects.
2. The Department shall certify the Contractor's profilograph operator at least every 5 years. The operator may be certified by presenting certification from another State Highway Agency or by completing certification training conducted by the Nebraska Department of Roads.
3. The Department shall schedule and perform Independent Assurance tests for the Contractor's profilographs and operators at least once per construction season. Independent Assurance testing shall be conducted at a randomly selected time on an active construction project. The criteria for the test will be similar to those used for certification.

502.04 – Profilograph Test Procedures

1. The Contractor shall perform all pavement smoothness specification tests except the 10-foot straight edge testing as shown in Paragraph 16. below:
2. The Engineer shall furnish a report form to the Contractor identifying all required test sections.
 - a. The pavement surface shall be divided into lane-width segments that end at a bridge, railroad crossing, or other designated termini.
 - b. The lane-width segments shall be further divided into individual 528 feet (0.10 mile) long test sections in the direction of project stationing. The last test section in a segment is usually shorter than 528 feet.
 - c. If a test section is less than 300 feet long, it shall be combined with the preceding 528 feet long test section for analysis.
3. The Contractor's certified profilograph operator shall perform smoothness specification tests in the Engineer's presence. Smoothness testing shall be performed during normal daylight working hours unless otherwise approved by the Engineer. If the Contractor notifies the Engineer of a proposed test and the Engineer elects not to be present, then the Contractor may proceed unaccompanied.
4. The Contractor shall report test results to the Engineer within 2 NDR workdays after initial asphaltic concrete placement or surface corrective work. The Contractor shall report additional test results to the Engineer as soon as possible, but not later than 7 calendar days after completion of the mainline pavement.
5. The asphaltic concrete pavement surface temperature shall be 150 degrees F. or lower when smoothness tests are performed.
6. The profilograph operator shall perform pavement smoothness measurements in the right-hand or left-hand wheel path of all driving lanes, as directed by the Engineer, including climbing and fly-by lanes. In urban areas, where inlet block-outs or manholes are in the right or left-hand wheel path, the pavement smoothness measurements shall be made in a location determined by the Engineer. All wheels of the profilograph shall be on the new pavement for which the Contractor is responsible.
7. The Contractor shall remove all objects and foreign material from the pavement surface before testing.
8. The profilograph operator shall guide the profilograph along the specified wheel path of each traffic lane at walking speed. Propulsion may be by personnel pushing manually, or by a suitable propulsion unit that does not exceed a speed of 4 miles per hour. Excessive speed can produce erratic test results.
9. A lateral location indicator shall be used to keep the profilograph in the required test path during testing. Pavement edges, longitudinal joints, or longitudinal pavement markings may be used as reference lines. An additional person may be required to hold the back end of the profilograph on the required path on horizontal curves.

10. Before testing, the profilograph operator shall lower the profilograph's recording wheel to the pavement surface and move the profilograph forward to the beginning location of a test section to stabilize the measurement system. To ensure consistent distance measurement, the profilograph operator shall also check and adjust the recording wheel tire pressure several times a day.
11. All station references on the profilograms and report forms shall be actual project stations. Stations shall be accurately noted on the profilogram at least every 200 feet.
12. The profilograph operator and the Engineer shall sign the profilograms immediately after completion of the tests. If the Engineer was not present at the time of the tests, then the absence shall be noted on the profilograms.
13. The Engineer shall perform or schedule verification tests on at least 10 percent of the pavement surface, using a profilograph owned by the Department.
14. If the verification test, Independent Assurance tests, or other observations indicate that the Contractor's procedures and/or results are not acceptable or accurate, the Engineer may do any of the following:
 - a. require the Contractor to calibrate the profilograph and re-run the tests.
 - b. disqualify the Contractor's equipment and/or operator.
 - c. perform the tests for part, or all, of the project with a profilograph owned by the Department, and charge the Contractor \$500.00 per lane mile for all testing done by the Department.
15. The following areas of pavement shall be excluded from the Profile Index, unless otherwise specified in the Special Provisions.
 - a. Pavement on horizontal curves having a centerline radius of curvature of less than 1,000 feet, and pavement within the superelevation transition of such curves.
 - b. Pavement within 50 feet of a transverse joint that separates the pavement from an approach slab to a bridge deck or existing pavement not constructed under the contract.
 - c. Pavement for truck weigh stations or rest areas, acceleration/deceleration lanes, and interchange ramps and loops.
 - d. Pavement within 50 feet of railroad crossings and associated transitions.
 - e. Pavement with a posted speed limit of 45 miles per hour or less.
 - f. Pavement where the Engineer requires the contractor to open an area prematurely to cross traffic at intersections and driveways.
 - g. Additional exceptions shown on the summary sheet in the plans.
16. Excluded pavement sections shall be measured for bumps with either a profilograph or a 10-foot straight edge. If the profilograph is used, the deviation shall not exceed

0.40 inch. The deviation of the surface shall not exceed 1/8 inch, if a 10-foot straightedge is used.

502.05 – Evaluation

1. The Contractor shall determine a Profile Index and number of correctable bumps and dips for each test section, record the information on the report form, and provide a copy of the report, along with the corresponding profilograms, to the Engineer.
 - a. The Profile Index shall be calculated by adding the absolute value of the vertical deviations (inches) outside of a 0.1 inch blanking band and dividing the sum by the length of the test section (miles). The resulting Profile Index is in units of inches per mile.
 - b. Correctable bumps shall be separately identified on the profilograms. They appear as high points on the profilogram and correspond to high points on the pavement surface. Correctable bumps are vertical deviations on the pavement surface that exceed 0.40 inch in height above a base line span of 25 feet.
 - c. Correctable dips shall be separately identified on the profilograms. They appear as low points on the profilogram and correspond to low points on the pavement surface. Correctable dips are vertical deviations on the pavement surface that exceed 0.40 inch in depth below a base line span of 25 feet.

502.06 – Pavement Surface Correction

1. The Contractor shall locate and perform all required pavement surface corrective work, with the approval of and in the presence of, the Engineer.
2. Corrective work may be required for any bump, dip, or a combination of bumps and dips or other roughness that, in the opinion of the Engineer, produces an objectionable ride. Corrective work shall be accomplished at no cost to the Department.
 - a. When the initial Profile Index of a test section is 21 in/mi or less, bump and dip correction is the only corrective work allowed for that section.
 - b. When the Profile Index of a test section exceeds 21 in/mi, corrective work shall be performed.
 - c. The Contractor shall retest all corrected test sections with the profilograph.
3. All bumps, as defined in Subsection 502.05, Paragraph 1.b., and all test sections with a Profile Index exceeding 21 in/mi shall be corrected by diamond grinding.
 - a. Bumps shall be considered corrected when they are at or below the 0.40 inch maximum height.
 - b. Sections with a Profile Index exceeding 21 in/mi shall be considered corrected when the Profile Index for that section has been reduced to a value of 21 in/mi or less.

4. All dips, as defined in Subsection 502.05, Paragraph 1.c., shall be corrected until they are at or below the 0.40 inch maximum depth. The Contractor shall have the following options:
 - a. diamond grind on either or both sides of the dip,
 - b. with the approval of the Engineer, remove and replace a sufficient length of the surface layer to correct the deficiency, under the following conditions:
 - (1) The Contractor shall furnish replacement material that meets the original specifications for the material removed.
 - (2) Removal and replacement shall be for the full lane width.
 - c. a combination of the grinding and removal and replacement methods, or
 - d. with the approval of the Engineer, elect to leave an uncorrected or partially corrected dip in place for a monetary deduction.
5. Diamond grinding equipment used for surface correction shall be power driven, self-propelled units specifically designed to grind and texture pavements. The cutting head shall be at least 36 inches wide and consist of many diamond blades with spacers. The Engineer may approve equipment with a narrower width for irregular and confined areas, which will not accommodate larger equipment, and for bumps of limited number and area.

502.07 - Traffic Control

The Contractor shall provide all traffic control for smoothness testing and corrective work at no cost to the Department.

502.08 - Method of Measurement

1. "Asphalt Pavement Smoothness Testing I/D" and "Asphalt Pavement Smoothness Testing" shall be measured on a lump sum basis.
2. a. When the pay item "Asphalt Pavement Smoothness Testing I/D" is included in the contract, the unit price of the accepted quantity of asphaltic concrete pavement and performance graded binder in the surface layer of each profilograph test section shall be adjusted according to the schedule in Table 502.01, subject to the limitations in Paragraphs 3 and 4 of this Subsection. Pavement sections excluded from this smoothness specification shall not qualify for incentive pay.
- b. When the pay item "Asphalt Pavement Smoothness Testing " is included in the contract, the incentive/disincentive provisions of this Subsection do not apply.

Table 502.01

Payment Adjustment Schedule	
Profile Index Inches Per Lane Mile	Percent of Contract Prices
0 to 2	107
Greater than 2 to 4	105
Greater than 4 to 6	103
Greater than 6 to 8	102
Greater than 8 to 12	100
Greater than 12 to 14	98
Greater than 14 to 16	96
Greater than 16 to 18	94
Greater than 18 to 20	92
Greater than 20 to 21	90
Greater than 21	Corrective Work Required

3. When the initial Profile Index of a test section is 21 in/mi or less, that value shall determine the percent of incentive pay for the section unless bump and dip correction performed in that section increases the percent of pay.
4. When the initial Profile Index of a test section is greater than 21 in/mi, corrective work performed in that section may increase the percent of pay up to the level indicated in Table 502.01.

502.09 – Basis of Payment

1. When the pay item “Asphalt Pavement Smoothness Testing I/D” is included in the contract, the overall pay factor for the accepted quantity of asphaltic concrete and performance graded binder in the surface layer of all profilograph test sections shall be determined according to the formula in Table 502.02.

Table 502.02

Pay Factor Formula	
$PF = \frac{A(1.07) + B(1.05) + C(1.03) + D(1.02) + E(1.00) + F(0.98) + G(0.96) + H(0.94) + I(0.92) + J(0.90)}{A + B + C + D + E + F + G + H + I + J}$	
Where:	
A	= Length of pavement with a Profile Index of 0 to 2 inches per mile.
B	= Length of pavement with a Profile Index greater than 2 to 4 inches per mile.
C	= Length of pavement with a Profile Index greater than 4 to 6 inches per mile.
D	= Length of pavement with a Profile Index greater than 6 to 8 inches per mile.
E	= Length of pavement with a Profile Index greater than 8 to 12 inches per mile.
F	= Length of pavement with a Profile Index greater than 12 to 14 inches per mile.
G	= Length of pavement with a Profile Index greater than 14 to 16 inches per mile.
H	= Length of pavement with a Profile Index greater than 16 to 18 inches per mile.
I	= Length of pavement with a Profile Index greater than 18 to 20 inches per mile.
J	= Length of pavement with a Profile Index greater than 20 to 21 inches per mile.

2. The Contractor shall be assessed \$500 each for all uncorrected or partially corrected dips left in place.
3. The work of Asphalt pavement Smoothness Testing I/D" and "Asphalt Pavement Smoothness Testing" shall be paid at the lump sum contract unit price. This price shall be full compensation for all smoothness testing as set forth in this specification.

CONCRETE PAVEMENT JOINT REPAIR

Section 605 in the Standard Specifications and Supplemental Specifications is amended to include the following:

Approximately 2 lane joints will require the full depth joint repair.

Paragraph 6. of Subsection 605.01 is amended to include the following:

When performing this operation on multi-lane highways, the Contractor will be permitted to have one lane closed at night. Where the pavement has been removed, the Contractor will be required to have the excavated area filled with either (1) the appropriate patching concrete material for curing overnight, or (2) a commercially available cold-mix bituminous mixture or other suitable temporary patch material with a durable surface, as directed by the Engineer. The next day, the Contractor will then be required to remove any "temporary patches", thoroughly clean the repair area and complete the required permanent patch so that the lane can be opened to traffic by the end of the second day. The material, installation, removal and disposal of these temporary patches will not be measured and paid for directly, but shall be considered subsidiary to the concrete pavement repair work being performed.

Paragraph 1. of Subsection 605.02 is amended to include the following:

Repairs may be made with Class PR1-3500 (PR1-24 MPa) concrete after June 1 and before September 15, provided the maximum strength is met in the allotted time.

The last sentence of Paragraph 2. of Subsection 605.04 is void.

Paragraphs 16. and 17. of Subsection 605.04 are void.

Paragraph 19.a. of Subsection 605.04 is amended to include the following:

When joint repairs are overlaid with asphaltic concrete, the curing method shall be with tack coat, or an approved asphalt emulsion.

Paragraph 20. of Subsection 605.04 is amended to include the following subparagraphs.

- f. From June 1 through August 31, if the daytime temperature is 85°F or greater, covering of the repair concrete with polyethylene film and insulation board is optional, provided the maturity method is used to measure the strength of the concrete.
- g. From June 1 through August 31, if the pavement is to remain closed to traffic for at least 24 hours, covering of the repair concrete with polyethylene film and insulation board is optional.

Paragraph 21. of Subsection 605.04 is amended to include the following:

- b. Class PR1 Concrete may be used for concrete repair if the repaired area is to remain closed to traffic for at least 24 hours.
- c. Class PR3 Concrete shall be used for all concrete repair if the repaired areas must be opened to traffic within 24 hours.
- d. Strength measurements for the opening and the 24-hour pay strengths of the PR1 and PR3 Concrete may be performed using the maturity meter method.

Paragraphs 24. a. and 24. b. of Subsection 605.04 are void.

Paragraphs 25. b. (1) and 25. b. (2) of Subsection 605.04 are void and superseded by the following:

A full depth diamond blade saw cut shall be made and dowel bars and/or tie bars anchored into the faces of the existing concrete as designated in the plans. A full depth cut approximately 4 inches(100 mm) wide may be made with a wheel cutter through the repair section if the repair will be overlaid. The wheel-type cutter shall be operated to produce minimum disturbance of the foundation course material, with no encroachment of the cut into the concrete of the adjoining lane.

Dowel bars or tie bars shall be anchored into the faces of the existing concrete as designated in the plans. To provide proper alignment, a drill approved by the Engineer shall be used to install the dowel bars. The drill shall be capable of drilling the holes parallel to the surface of the pavement and to the centerline of the highway $\pm 1/8$ inch. The dowel bar holes shall be drilled in the same plane $\pm 1/8$ inch and at the spacing shown in the plans. The tie bars

can be drilled independently. The drilled holes shall be thoroughly cleaned with compressed air to remove all dust, dirt, loose material and moisture.

After cleaning and prior to dowel or tie bar insertion, an application of grout shall be made at the back of the hole. The grout shall be from the Approved Products List. Twist the dowel or tie bar one full turn during insertion to completely surround it with the grout. Grout retention disks shall be placed on the bars as designated in the plans. The furnishing and installation of dowel and tie bars will not be paid for directly but shall be considered subsidiary to the concrete pavement or joint repair work being performed.

Paragraph 25. c. of Subsection 605.04 is amended to include the following:

Any loosened foundation course material shall be removed and replaced with concrete.

The last sentence of Paragraph 25. d. of Subsection 605.04 is void.

Paragraph 1. of Subsection 605.06 is amended to include the following:

Pay Item	Pay Unit
Concrete Pavement, _____ Joint Repair	Square Yard (SY) Square Meter (m ²)

CONCRETE PAVEMENT REPAIR

Section 605 in the Standard Specifications and Supplemental Specifications is amended to include the following:

Paragraph 6. of Subsection 605.01 is amended to include the following:

When performing this operation on multi-lane highways, the Contractor will be permitted to have one lane closed at night. Where the pavement has been removed, the Contractor will be required to have the excavated area filled with either (1) the appropriate patching concrete material for curing overnight, or (2) a commercially available cold-mix bituminous mixture or other suitable temporary patch material with a durable surface, as directed by the Engineer. The next day, the Contractor will then be required to remove any "temporary patches", thoroughly clean the repair area and complete the required permanent patch so that the lane can be opened to traffic by the end of the second day. The material, installation, removal and disposal of these temporary patches will not be measured and paid for directly, but shall be considered subsidiary to the concrete pavement repair work being performed.

Paragraph 1. of Subsection 605.02 is amended to include the following:

Repairs may be made with Class PR1-3500 (PR1-24 MPa) concrete after June 1 and before September 15, provided the maximum strength is met in the allotted time.

The last sentence of Paragraph 2. of Subsection 605.04 is void.

Paragraph 10. of Subsection 605.04 is void.

Paragraph 16. of Subsection 605.04 is void and superseded by the following:

The minimum concrete placement shall be as shown in the plans or as directed by the engineer. Interior transverse joints shall be sawed to a minimum of one-third the actual thickness of the slab at the spacing designated in the plans.

Paragraphs 17. and 18. of Subsection 605.04 are void.

Paragraph 19.a. of Subsection 605.04 is amended to include the following:

When pavement repairs are overlaid with asphaltic concrete, the curing method shall be with tack coat, or an approved asphalt emulsion.

Paragraph 20. of Subsection 605.04 is amended to include the following subparagraphs.

- f. From June 1 through August 31, if the daytime temperature is 85°F or greater, covering of the repair concrete with polyethylene film and insulation board is optional, provided the maturity method is used to measure the strength of the concrete.
- g. From June 1 through August 31, if the pavement is to remain closed to traffic for at least 24 hours, covering of the repair concrete with polyethylene film and insulation board is optional.

Paragraph 21. of Subsection 605.04 is amended to include the following:

- b. Class PR1 Concrete may be used for concrete repair if the repaired area is to remain closed to traffic for at least 24 hours.
- c. Class PR3 Concrete shall be used for all concrete repair if the repaired areas must be opened to traffic within 24 hours.
- d. Strength measurements for the opening and the 24-hour pay strengths of the PR1 and PR3 Concrete may be performed using the maturity meter method.

Paragraphs 24. a. and b. of Subsection 605.04 are void.

Paragraphs 25. b. (1) and 25. b. (2) of Subsection 605.04 are void and superseded by the following:

A full depth diamond blade saw cut shall be made and dowel bars and/or tie bars anchored into the faces of the existing concrete as designated in the plans. A full depth cut approximately 4 inches wide may be made with a wheel cutter through the repair section if the repair will be overlaid. The wheel-type cutter shall be operated to produce minimum disturbance of the foundation course material, with no encroachment of the cut into the concrete of the adjoining lane.

Dowel bars shall be placed on the new transverse joint nearest the existing transverse joint. A minimum of 2 tie bars shall be placed on each side of a full depth pavement repair as designated in the plans.

Dowel bars or tie bars shall be anchored into the faces of the existing concrete as designated in the plans. To provide proper alignment, a drill approved by the Engineer shall be

used to install the dowel bars. The drill shall be capable of drilling the holes parallel to the surface of the pavement and to the centerline of the highway $\pm 1/8$ inch. The dowel bar holes shall be drilled in the same plane $\pm 1/8$ inch and at the spacing shown in the plans. The tie bars can be drilled independently. The drilled holes shall be thoroughly cleaned with compressed air to remove all dust, dirt, loose material and moisture.

After cleaning and prior to dowel or tie bar insertion, an application of grout shall be made at the back of the hole. The grout shall be from the Approved Products List. Twist the dowel or tie bar one full turn during insertion to completely surround it with the grout. Grout retention disks shall be placed on the bars as designated in the plans. The furnishing and installation of dowel and tie bars will not be paid for directly but shall be considered subsidiary to the concrete pavement or joint repair work being performed.

Paragraph 25. c. of Subsection 605.04 is amended to include the following:

Any loosened foundation course material shall be removed and replaced with concrete.

Paragraph 25. d. of Subsection 605.04 is void.

Subsection 605.05 in the 1997 Standard Specifications is amended to provide that adjoining full depth repair areas of varying widths in the same traffic lane, which are situated such the removals of the areas may be accomplished concurrently, shall be considered as a single repair. The total area of the adjoining areas shall be combined to determine the repair type as shown in Table 605.01.

SEEDING

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

Type "B"	Minimum Purity (%)	Broadcast or Hydraulic Seeder Application Rate in lb. of Pure Live Seed/Acre	Approved Mech. Drill Application Rate in lb. of Pure Live Seed/Acre
Perennial Ryegrass – Linn	85		8
K-31 Fescue	85		15
Sheeps Fescue	85		5
Western Wheatgrass – Flintlock	85		10
Buffalograss – Sharps II, Cody	80		5
Blue Grama – NE, KS, CO	35		2
Birdsfoot Trefoil – Empire 5X inoculation	90		4
Oats/Wheat	90		12

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 Acre (Minimum)
Available Nitrogen (N2) -----	32 or 36 lb.
Available Phosphoric Acid (P2O5) -----	92 or 96 lb.

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

Nitrogen (total available) -----	60 lb.
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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) -----	60 lb.
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**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.

Table 1045.01			
English-Metric Steel Plate Substitution Table			
Metric (millimeters)	English (inches)	Metric (millimeters)	English (inches)
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.

**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 (in²/ft. (mm²/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 (S10-5-0903)

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

2. Samples and 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*.

**EPOXY COATED REINFORCING STEEL
(S10-5-0403)**

Table 1021.01 in Section 1021 of the Standard Specifications is void and superseded by the following:

Table 1021.01			
Bend Test Requirements			
English		Metric	
Bar No.	Mandrel Diameter (inches)	Bar	Mandrel Diameter (millimeters)
3	3	10	75
4	4	13	100
5	5	16	125
6	6	19	150
7	7	22	175
8	8	25	200
9	9	29	230
10	10	32	250
11	11	36	280
14	17	43	430
18	23	57	580

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 64-28 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 sample 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.

The binder supplier agrees to inspection of their plant or terminal without notice anytime during production or supplying of material to the Department. The inspection may also include the supplier's laboratory.

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 at least 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 AASHTO M320 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 Tables 2, 3 and 4. Overall project average testing requirements and price adjustments will also apply, as stated in Table 5.

6. Material Requirements

- a. Performance graded binder, as specified in the contract items shall be in accordance with the PG+ specifications as noted, and AASHTO M320 with the exception of Direct Tension.
- 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. The Material Certification must state that acid has not been used. The Material Certification must also state that the material has not been air blown or oxidized.
- 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 AASHTO M320 specifications when tested as $\pm 3^{\circ}$ C of the specified PG binder. The sample of the blended material will 1) be considered as a lot sample, 2) be taken during initial production following the blending of the binders, and 3) deductions when not meeting M320, 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 M320 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.
- f. If the Engineer determines that there is a need for an anti-stripping additive the Contractor shall be compensated for the cost of liquid anti-strip additive needed, as determined during mixture design verification, at the invoice price of the additive. The PG Binder Supplier will add liquid anti-strip additives to the PG Binder when required by the Engineer.
- g. When PG 64-28 and 70-28 are specified the following PG+ specifications (Table 1) and AASHTO M320 with the exception of Direct Tension) will apply:
- (1) The performance graded binder shall be a binder, which incorporates a blend of base asphalt and elastomer modifiers of styrene-butadiene (SB), styrene-butadiene-styrene (SBS) or styrene-butadiene-rubber (SBR). Acid shall not be used. Air blown and/or oxidized asphalt will not be allowed. The supplier must certify that the binder is not acid modified, and that acid was not used. The binder supplier must also certify that air blowing or oxidization has not been done/used to modify the binder or used to change the properties of the binder. The composite material shall be thoroughly blended at the asphalt refinery or terminal prior to being loaded into the transport vehicle. The polymer modified binder shall be heat and storage stable and shall not separate when handled and stored per the suppliers storage and handling recommendations.
 - (2) Samples of binder proposed for use and production lot samples shall be submitted to the Materials and Research, Bituminous Laboratory for testing to insure the binder is of a modification system in which no acid is used. ARR-MAZ AD-here LOF65-00, amine anti strip will be added at the rate of 0.5% to sample(s) that have been heated to 300 degrees F or until viscous and stirred for a minimum of 5 minutes. The resultant blend will then be tested for PG grading and compared to PG grading prior to the blending. The resultant blend shall meet M320 specifications and shall not show a drop of $G^*/\sin(\delta)$ of more than 25% when compared to the result(s) of the sample prior to blending the anti strip. If the resultant blend does not meet M320 specification or shows a drop of greater than 25%, the material that is represented by the sample will be rejected.
 - (3) Approval for initial use will be based on the sample(s) meeting the PG+ specifications as stated in Table 1 and M320 specifications. Approval for use will also be based on PG grading when

comparing results after blending anti strip to PG grading prior to the addition of anti strip.

- (4) Lot samples of the binder shall meet or exceed the PG+ specifications as listed, in addition to M320 specifications. For PG+, Table 1 specification testing, material will be tested on original unaged binder for phase angle specification and RTFO aged material for elastic recovery. Anti strip will also be added to project lot samples as described in 6.g.(2).
- (5) When it is determined that material does not meet Table 1 specifications, Table 2 and 3 will apply, depending on the grade of binder. When it is determined that a single sample(s) does not meet M320 specifications, Table 4 will apply.
- (6) All project samples will be tested for PG+ specification compliance.

Table 1
Additional Specifications for PG 64-28 and 70-28
Original Unaged Binder

	PG 64-28	PG 70-28
Elastic Recovery; AASHTO T301 tested at 77°F (RTFO Aged AASHTO T301)	Minimum 60%	Minimum 70%
Phase Angle; degrees (Max) (Original Binder)	77.0	75.0

Table 2
Single Sample Tolerance and Pay Factor Table
Pg 64-28

	(1) Pay Factor of 0.75	(2) Pay Factor of 0.50 or Removal
Elastic Recovery Percentage (RTFO Aged AASHTO T301)	54 to 57.5%	Less than 54%
Phase Angle (degrees) (Original Unaged)	78.5 – 79.0	Greater than 81.0°

Table 3
Single Sample Tolerance and Pay Factor Table
Pg 70-28

	(1) Pay Factor of 0.75	(2) Pay Factor of 0.50 or Removal
Elastic Recovery Percentage (RTFO Aged AASHTO T301)	64 to 67.5%	Less than 64%
Phase Angle (degrees) (Original Unaged)	76.5 – 79.0	Greater than 79.0°

Table 4
Single Sample Tolerance and Price Factor Table

	Pay Factor of 0.75 ¹	Pay Factor of 0.50 or Removal ²
<u>Tests on Original Binder</u> Dynamic Shear, $G^*/\sin \delta$, kPa	0.86-0.92	< 0.86
<u>Tests on Rolling Thin Film</u> <u>Oven Residue</u> Dynamic Shear, $G^*/\sin \delta$, kPa	1.76-1.97	< 1.76
<u>Tests Pressure Aging Vessel</u> <u>Residue</u> Dynamic Shear, $G^*\sin \delta$, 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.

- ¹ Price Reduction will be based on contract unit price of asphalt binder.
- ² The Engineer will determine if the non-compliant material will be removed. Removal and replacement will be at no additional cost to the Department. If the non-compliant material is accepted, a price factor of 0.50 will be applied. The price factor will be applied to 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 M320 Testing

Overall Project Averages does not apply to tested samples after the addition of anti strip. Samples not meeting PG+ specifications and the requirements after the addition of anti strip will be rejected.

PG+, Table 1 specifications do not apply to Overall Project Averages. PG+, Table 1 specification testing will be conducted on each Lot sample.

Out of specification material will be determined by the specifications outlined in AASHTO M320, excluding Direct Tension.

The Nebraska Department of Roads, Materials and Research, Bituminous Laboratory will do complete testing, per M320 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 M320 testing out of every five samples received. When any test result shows sample not meeting M320 specifications, the previous and following sample received will be tested for complete M320 compliance. Testing will continue in this manner until tested samples meet all of M320 specifications, or there are no more lot samples to be tested.

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 M320 specification, it will then be tested for complete M320 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 M320 compliance is in addition to the minimum number of samples that will be tested for complete M320 compliance.

At the completion of testing, all complete M320 test results will be averaged. For averages that do not meet M320 specifications, the largest reduction shown in Table 5 will be applied to all the Performance Graded Binder used on the project.

Table 5
Overall Project Average – Pay Factor Table

	Range of Average	Pay Factor Applied
<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 M320 Specification, will have a reduction for the material that the sample represents. Only the largest reduction from Table 4, will apply when more than one result of a single sample does not meet M320 specifications. Only the largest overall project average reduction from Table 5, will apply when more than one test average falls out of M320 specifications. Pay Factors based on both Table 4 and Table 5 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 greater 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.

SUPERPAVE ASPHALTIC CONCRETE

Section 1028 of the Standard Specifications and Supplemental Specifications is void.

Asphaltic Concrete Type SP4 shall use the 0.375 gradation band.

Paragraph 2.b.(1) of Subsection 503.04 is void and superseded by the following:

The contractor shall take at least four (4) control strip mixture samples and record the test results for the mixture properties identified in Paragraph 4.h.(3) of Subsection 1028.03. The contractor will also record compaction density values and rolling pattern information. This data will be for information only and shared with the Engineer.

SECTION 1028 -- SUPERPAVE ASPHALTIC CONCRETE

1028.01 -- Description

1. a. Superpave Asphaltic Concrete is a Contractor-designed mix.
 - b. The Contractor will be required to define properties using a gyratory compactor that has met the Superpave evaluation test procedures, during mix design and production.
2. a. Before production of asphaltic concrete, the Contractor shall submit, in writing, a tentative job mix formula on the NDOR Mix Design Submittal Form for verification to the NDR Flexible Pavement Engineer at the Lincoln, Nebraska Central Laboratory.
 - b. The job mix formula shall identify the virgin mineral aggregates, RAP, if used, and mineral filler, if needed, with the value of the percent passing each specified sieve for the individual and blended materials.
 - c. (1) The Contractor shall submit six – 95 mm and two – 75 mm gyratory pucks compacted to $7\% \pm 0.5\%$ air voids for testing and 3 proportioned 22 lb. (10,000-gram) samples of the blended mineral aggregates and two one-quart (liter) sample of the proposed PG Binder to be used in the mixture to the NDR Materials and Research Central Laboratory at least 15 NDR working days before production of asphaltic concrete. These samples will be used to verify the Contractor's Superpave mix design test results and mix properties.
 - (2) Submitted with these samples shall be a copy of the Contractor's results for all Superpave mix design tests.
 - (3) This mix design shall include at a minimum:
 - (i) The bulk specific gravity of the blended aggregate. Whenever RAP is used it shall be processed through an ignition oven and then combined proportionally with the virgin aggregate. The bulk specific gravity shall be determined for the blend from an unwashed sample of the - #4 and a washed sample of + #4 material in accordance with AASHTO T 84 and AASHTO T 85 respectively.
 - (ii) The target binder content.
 - (iii) The supplier and grade of PG Binder.
 - (iv) The maximum specific gravity of the combined mixture (Rice).

- (v) The bulk specific gravity and air voids at N initial (Nini), N design (Ndes) and N maximum (Nmax) of the compacted gyratory specimens.
 - (vi) Voids in the Mineral Aggregate (VMA) and Voids Filled with Asphalt (VFA) at Ndes.
 - (vii) Fine Aggregate Angularity (FAA), Coarse Aggregate Angularity (CAA), Flat and Elongated Particles and Clay Content of the aggregate blend.
 - (viii) Location description and/or legal descriptions and producers of materials used in the mix.
 - (ix) Dust to Binder Ratio
 - (x) PG Binder recommended mixing and compaction temperatures.
 - (xi) Type of PG Binder modification, if modified
- d. Before the mix design is approved, the Materials and Research Laboratory shall test all properties. This approval is on the submitted laboratory materials, and allows the contractor to begin plant production test strip and verification testing with the QA/QC Program.
3. PG Binder in Recycled Asphalt Pavement:
- a. The Contractor may approach the State with a proposal to supplement the virgin aggregates of the asphaltic concrete mix with a Contractor's 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 and quantity of the RAP material.
 - b. In recycled asphaltic concrete mixtures, the allowable maximum percent of Reclaimed Asphalt Pavement (RAP) will be as shown in Table 1028.01. If the Contractor elects to exceed these values, the Contractor will be required to lower the minimum pavement design temperature of the PG Binder, one grade, according to AASHTO MP1.

Table 1028.01

Asphaltic Concrete Type	Percent, Maximum RAP
SPS	50
SP1	35
SP2	25
SP3	25
SP4	15
SP4 Special	25
SP5	15

4. Quality Control Program:

- a. The Contractor shall establish, provide, and maintain an effective Quality Control(QC) Program. The QC Program shall detail the methods and procedures that will be taken to assure that all materials and completed construction conforms to all contract requirements.
- b. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract, the Contractor shall assume full responsibility for placing a pavement course that meets the target field values.
- c. The Contractor shall establish a necessary level of control that will:
 - (1) Adequately provide for the production of acceptable quality materials.
 - (2) Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
 - (3) Allow the Contractor as much latitude as possible in developing control standards.
- d.(1) The Contractor shall develop and keep on file with the Materials and Research Flexible Pavements Engineer a copy of their QC Program. A copy of the QC Program shall be kept on file in the QC lab trailer. This Program shall be updated as needed and submitted annually for review.
- (2) The Contractor shall not begin any construction or production of materials without an approved QC Program.
- e. The QC Program shall address, as a minimum, the following items:
 - (1) QC organization chart.
 - (2) Submittals schedule.
 - (3) Inspection requirements.
 - (i) Equipment.
 - (ii) Asphalt concrete production.

- (iii) Asphalt concrete placement.
 - (4) QC testing plan.
 - (5) Documentation of QC activities.
 - (6) Requirements for corrective action when QC and/or acceptance criteria are not met.
 - (7) Any additional elements deemed necessary.
 - (8) A list, with the name and manufacturers model number, for all test equipment used during laboratory testing.
 - (9) A description of maintenance and calibration procedures, including the frequency that the procedures are performed.
- f. The QC organization chart shall consist of the following personnel:
- (1) A Program Administrator:
 - (i) The Program Administrator shall be a full-time employee of the Contractor or a Subcontractor (Consultant) hired by the Contractor.
 - (ii) The Program Administrator shall have a minimum of 5 years experience in highway construction.
 - (iii) The Program Administrator need not be on the job site at all times but shall have full authority to institute any and all actions necessary for the successful implementation of the QC Program.
 - (iv) The Program Administrator's qualifications and training shall be described in the QC Program.
 - (2) One or more Quality Control Technicians:
 - (i) The quality control technicians shall report directly to the Program Administrator and shall perform all sampling and quality control tests as required by the contract.
 - (ii) The QC technicians shall be certified by the NDR Materials and Research Division.
 - (iii) Certification at an equivalent level by a state or nationally recognized organization may be acceptable.
 - (iv) The QC technician's credentials and NDR training records shall be submitted to the NDR Materials and Research Division.
 - (v) The Contractor may have a non-certified technician working under the direct supervision of a certified technician for no more than one construction season.

- g.(1) Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the work.
- (2) QC test results and periodic inspections shall be used to ensure the mix quality and to adjust and control mix proportioning.
- h. QC Testing Plan:
 - (1) The testing plan shall include the NDR statistically based procedure of random sampling for acquiring test samples.
 - (2) The Contractor may add any tests necessary to adequately control production.
 - (3) All QC test results shall be reported on NDR software by the Contractor with a copy provided to the Engineer within 1 week after the tests are complete. Daily review by the Engineer will be allowed if requested.
- i. Corrective Action Requirements:
 - (1) The Contractor shall establish and utilize QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.
 - (2) The Contractor's QC Program shall detail how the results of QC inspections and tests will be used to determine the need for corrective action.
 - (3)
 - (i) A clear set of rules to determine when a process is out of control and the type of correction to be taken to regain process control will be provided.
 - (ii) As a minimum, the plan shall address the corrective actions that will be taken when measurements of the following items or conditions approach the specification limits:
 - (I) Plant produced mix gradations at laydown.
 - (II) Binder content.
 - (III) Air voids.
 - (IV) VMA
 - (V) VFA (mix design only)
 - (VI) FAA AASHTO T 304
CAA ASTM D 5821
 - (VII) Dust to Binder Ratio
 - (iii) Corrective actions that will be taken when the following conditions occur:

- (I) Rutting
- (II) Segregation
- (III) Surface voids
- (IV) Tearing
- (V) Irregular surface due to mix tenderness

1028.02 -- Material Characteristics

1. The type of PG Binder shall be shown in the plans or special provisions.
2. Aggregates:
 - a. Aggregates for use in superpave asphaltic concrete shall be tested on an individual basis.
 - b. With the exception of Asphaltic Concrete Type SPS the blended mineral aggregate shall not contain more than 60 percent limestone on the final surface lift of asphaltic concrete.
 - c. Crushed rock material for use in asphaltic concrete, 1/4 inch (6.35 mm) down, screenings and manufactured sand shall have a Sodium Sulfate loss of not more than 12 percent by mass at the end of 5 cycles. One 20-lb. (10-kg) sample shall be taken by NDR personnel at the project for every 5,000 tons (4500 Mg) of aggregate used, with a minimum of one per project for quality testing.
 - d. Quartzite, granite, and chat shall conform to the requirements of Subsection 1033.02, Paragraph 4, a. (8). One 60-lb. (30 kg) sample shall be taken by NDR personnel at the project every 3,000 tons (2700 Mg) of aggregate used, with a minimum of one per project for quality testing.
 - e. Crushed rock (Limestone) and Dolomite shall conform to the requirements of Paragraph 4.a. (4), (5) and (6). of Subsection 1033.02 of the Standard Specifications, Sampling size and frequency shall adhere to the current NDR Materials Sampling Guide. (Some aggregate can be adversely affected by ignition ovens resulting in erroneous reading for asphalt content and gradation unless corrected for.)
 - f. Amend Paragraph 4.a. (7) of Subsection 1033.02 to provide that soundness tests shall not be required for fine sand.
 - g. Amend Subsection 1033.02 to provide that once the satisfactory quality of aggregates from a source has been established, sufficient additional soundness tests will be performed to insure the continued satisfactory quality of the material.
 - h. The coarse aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type as shown in Table 1028.02

**Table 1028.02
Coarse Aggregate Angularity
(ASTM D 5821)**

Asphaltic Concrete Type	CAA (minimum)
SPS	35
SP1	55
SP2	65
SP3	75
SP4	85/80*
SP4 Special	85/80*
SP5	95/90*

* Denotes two faced crushed requirements

- i. The fine aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type as shown in Table 1028.03.

Note: The specific gravity for calculation of the Fine Aggregate Angularity (FAA) shall be determined on a combined aggregate sample of the material passing the No. 8 (2.36 mm) sieve and retained on the No. 100 (150 µm) sieve. The Contractor will determine the specific gravity to be used in the calculation of FAA mixture design value(s) and, if verified by the NDOR Aggregate Laboratory, this same value can be used throughout production. The verification value determined by the NDOR Aggregate Laboratory will be on a combined aggregate sample supplied by the Contractor that is representative of the material proposed or being used during production. The specific gravity to be used throughout production to calculate FAA values will be the Contractor's verified value or the NDOR determined value (whenever verification is not made) and will be noted on the Mix Design. Changes in aggregate percentages during production may require determination of a revised specific gravity for FAA.

**Table 1028.03
Fine Aggregate Angularity
(AASHTO T304 Method A)**

Asphaltic Concrete Type	FAA (minimum)
SPS	--
SP1	40.0
SP2	43.0
SP3	43.0
SP4	45.0
SP4 Special	45.0
SP5	45.0

- j. The coarse aggregate shall not contain flat and elongated particles exceeding the maximum value for the appropriate asphaltic concrete type category shown in these provisions according to Table 1028.04.

Table 1028.04
Flat and Elongated Particles*
(ASTM D 4791)

Asphaltic Concrete Type	Percent, Maximum
SPS	25
SP1	10
SP2	10
SP3	10
SP4	10
SP4 Special	10
SP5	10

*Criterion based on a 5:1 maximum to minimum ratio.

- k. The sand equivalent of the blended aggregate material from the fine and coarse aggregates shall meet or exceed the minimum values for the appropriate asphaltic concrete type shown in these provisions according to Table 1028.05.

Table 1028.05
Clay Content Criteria
(AASHTO T 176)

Asphaltic Concrete Type	Sand Equivalent, Minimum
SPS	30
SP1	40
SP2	40
SP3	45
SP4	45
SP4 Special	45
SP5	45

- I. The blended aggregate shall conform to the gradation requirements specified below for the appropriate nominal size.
- (1) It is recommended that the selected blended aggregate gradation does not pass through the restricted zones as specified in the following control points for nominal size. The plot of the blended aggregate gradation of Superpave mix designs with FAA values of less than 43.0 will not enter the limits of the restricted zone. The plot of the blended aggregate gradation of Superpave mix designs with FAA values of 43.0 to less than 45.0 passing through the restricted zone must intersect both the upper and lower limits of the restricted zone between 1) any two consecutive sieves used to define the restricted zone limits, or 2) two vertical lines plotted between the #8 and #50 sieve a distance apart no greater than 1/3 the horizontal distance between the #8 (2.36-mm) and #50 (300- μ m) sieves. Superpave mix designs with FAA values of 45.0 or greater will not be restricted from passing through the restricted zone.

Table 1028.06
Gradation Control Points for 0.375 Inch (9.5 mm) Nominal Size

English Sieve (Metric)	Control Points (percent passing)		Restricted Zone Boundary (percent passing)	
	Minimum	Maximum	Minimum	Maximum
1/2 inch (12.5 mm)	100.0			
3/8 inch (9.5 mm)	90.0	100.0		
No. 4 (4.75 mm)		90.0		
No. 8 (2.36 mm)	32.0	67.0	47.2	47.2
No. 16 (1.18 mm)			31.6	37.6
No. 30 (600 μ m)			23.5	27.5
No. 50 (300 μ m)			18.7	18.7
*No. 200 (75 μ m)	2.0	10.0		

* see note following Table 1028.08

Table 1028.07
Gradation Control Points for 0.5 Inch (12.5 mm) Nominal Size

English Sieve (Metric)	Control Points (percent passing)		Restricted Zone Boundary (percent passing)	
	Minimum	Maximum	Minimum	Maximum
3/4 inch (19 mm)	100.0			
1/2 inch (12.5 mm)	90.00	100.00		
3/8 inch (9.5 mm)		90.00		
No. 8 (2.36 mm)	28.0	58.0	39.1	39.1
No. 16 (1.18 mm)			25.6	31.6
No. 30 (600 μ m)			19.1	23.1
No. 50 (300 μ m)			15.5	15.5
* No. 200 (75 μ m)	2.0	10.0		

* see note following Table 1028.08

Table 1028.08
Gradation Control Points for 0.75 Inch (19 mm) Nominal Size

English Sieve (Metric)	Control Points (percent passing)		Restricted Zone Boundary (percent passing)	
	Minimum	Maximum	Minimum	Maximum
1 inch (25 mm)	100.0			
3/4 inch (19 mm)	90.0	100.0		
1/2 inch (12.5 mm)		90.0		
No. 8 (2.36 mm)	23.0	49.0	34.6	34.6
No. 16 (1.18 mm)			22.3	28.3
No. 30 (600 μ m)			16.7	20.7
No. 50 (300 μ m)			13.7	13.7
* No. 200 (75 μ m)	2.0	8.0		

* Dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 (75 μ m) sieve to the asphalt content expressed as a percent by weight of total mix. The dust to binder ratio shall be between 0.60 and 1.60.

- m. The combined mineral aggregate for Asphaltic Concrete, Type SPS, shall be an aggregate or a combination of aggregates, and mineral filler if needed.

Table 1028.09
Gradation Control Points for Type SPS

English Sieve (Metric)	Control Points (percent passing)	
	Minimum	Maximum
1 inch (25 mm)	100.0	
3/4 inch (19 mm)	94	100.0
1/2 inch (12.5 mm)	81	94
No. 8 (2.36 mm)	42	70
No. 16 (1.18 mm)	29	43
No. 30 (600 μ m)	19	34
No. 50 (300 μ m)	11	20
* No. 200 (75 μ m)	2	8

* see note following Table 1028.08

- n. Mineral filler shall consist of pulverized soil, pulverized crushed rock, broken stone, gravel, sand-gravel, sand or a mixture of these materials that conforms to the following requirements.

Table 1028.10
Mineral Filler for Type SPS

	Min.	Max.
Total Percent Passing the No. 50 (300 μ m) Sieve	95	100
Total Percent Passing the No. 200 (75 μ m) Sieve	80	100
Plasticity Index (material passing the No. 200 (75 μ m) Sieve, except soil)	0	3
Plasticity Index for Soil	0	6

3. Contractor's Lab Equipment:

- a. The Contractor shall calibrate and correlate the testing equipment according to the procedures prescribed for the individual tests and conduct tests in conformance with specified testing procedures.
- b. The Contractor shall have the following equipment (or approved equal) at or near the project location:
 - (1) An AASHTO approved gyratory compactor and molds.
 - (2) An AASHTO approved Asphalt Content Ignition Oven.
 - (3) Rice equipment specified in AASHTO T 209, procedure 9.5.1, Weighing in Water. The thermometer being used to measure water temperature will be as specified in T 209.
 - (4) FAA equipment
 - (5) To test density of compacted asphaltic concrete, a minimum 6000 gm balance, 0.1 gm resolution, with under body connect and water container large enough to conveniently place specimen in the basket and completely submerge the basket and specimen without touching the sides or bottom is required.
 - (6) QC Laboratory (suggested size 8 ft. x 45 ft.) (2.4 m x 13.7 m) which contain the following:
 - Air conditioner.
 - Dedicated phone (where available).
 - FAX machine.
 - Xerox type copy machine.
 - Sample storage.
 - Work table.
 - Bulletin board.
 - Running water.
 - Desk and chair.
 - Separate power supply.
 - Incidental spoons, trowels, pans, pails.
 - (7) Diamond saw for cutting cores.
 - (8) Diamond core drill (6 inch (150 mm) and 4 inch (100 mm) diameter core.
 - (9) Oven, 347°F (175°C) minimum, sensitive $\pm 5^\circ\text{F}$. ($\pm 2^\circ\text{C}$).
 - (10) USA Standard Series Sieves for coarse and fine aggregate with appropriate shakers (12 inch (300 mm) recommended).
 - (11) Personal Computer capable of running NDR software and Color Printer.

1028.03 -- Acceptance Requirements

1. Volumetric Mix Design

- a. The job mix formula shall be determined from a mix design for each mixture. A volumetric mixture design in accordance with AASHTO PP 28 as modified within this special provision will be required. However, the mixture for the Superpave specimens and maximum specific gravity mixture shall be short-term aged for two hours.
 - (1) Practice for Short and Long-Term Aging of Hot Mix Asphalt (HMA), AASHTO R30
 - (2) Method for Preparing and Determining the Density of Hot Mix Asphalt Specimens by Means of the SHRP Gyratory Compactor, AASHTO T312
- b. The optimum binder content shall be the binder content that produces 4.0 percent air voids at Ndes. The design shall have at least four binder content points, with a minimum of two points above and one point below the optimum. Submitted with the design will be plots showing the values of Air Voids, VMA, VFA and Density at the four binder contents. The amount of uncompacted mixture shall be determined in accordance with AASHTO T209. For Type SPS Asphaltic concrete the optimum binder content shall be that which produces air voids at Ndes of 1.5 percent to a maximum of 5.0 percent.
- c. The Contractor shall inform the Engineer when changes in mixture properties occur for any reason, such as, but not limited to, the result of changes in the types or sources of aggregates are made or when changes in grades, sources, properties or modification procedures (if modified) of PG Binders are made. These changes may require a new job mix formula, mix design and moisture sensitivity test. The new proposed job mix formula shall be in accordance with the requirements as stated above and submitted 5 working days prior to use for verification.
- d. Each Superpave mixture shall be tested for moisture sensitivity in accordance with AASHTO T 283. The loose mixture shall be short-term aged for two hours in accordance with AASHTO R30. The 6-inch (152-mm) specimens shall be compacted in accordance with AASHTO T 312 to seven percent air voids at 95-mm in height and evaluated to determine if the minimum Tensile Strength Ratio (TSR) of 80 percent has been met. If the mixture has not met the minimum TSR value, an anti-stripping additive shall be added at a dosage rate, such that the mix will meet the minimum TSR of 80 percent. All data shall be submitted with the mix design verification request. For mixtures containing an anti-stripping additive; during production of Lot #1, the Contractor shall provide to the NDR Central laboratory properly prepared gyratory samples for AASHTO T 283 testing. A TSR test result of less than 80 percent will require mixture modification(s) and a sample from subsequent lots will be tested until a TSR value of at least 80 percent is achieved. Moisture sensitivity testing is not required for Asphaltic Concrete Type SPS.

- (1) When tests indicate the need for an anti-stripping additive the Contractor shall be compensated for the cost of liquid anti-strip additive needed, as determined during mixture design verification, at the invoice price of the additive. Liquid anti-strip additives will be added to the PG Binder by the PG Binder Supplier.

e. Design Criteria:

- (1) The target value for the air voids of the asphaltic concrete design shall be 4 percent at the Ndes number of gyrations. For Type SPS Asphaltic concrete the air voids at Ndes shall be a minimum of 1.5 percent with a maximum of 5.0 percent.

Table 1028.11
Gyratory Compaction Effort
(Average Design High Air Temperature ≤ 39 degrees C)

Asphaltic Concrete Type	Nini	Ndes	Nmax
SPS	6	40	62
SP1	7	68	104
SP2	7	76	117
SP3	7	86	134
SP4	8	96	152
SP4 Special	7	76	117
SP5	8	109	174

- (2) The design criteria for each mixture shall be determined from Tables 1028.12, 1028.13, and 1028.14.

Table 1028.12

Mix Criteria	SPS, SP1	SP2	SP3, SP4, SP4 Special, SP5
Voids In Mineral Aggregate	See Table 1028.13		
Voids Filled with Asphalt	See Table 1028.14		
%Gmm at Nini	91.5*	90.5	89.0
%Gmm at Nmax	98.0*	98.0	98.0

* No specification requirement for SPS, only %Gmm at Ndes = 95 to 98.5

Table 1028.13
Voids in Mineral Aggregate
Criteria at Ndes

Nominal Maximum Aggregate Size (Metric)	Minimum VMA, Percent*
3/8 inch (9.5 mm)	15.0
1/2 inch (12.5 mm)	14.0
3/4 inch (19 mm)	13.0

* No specification requirement for SPS

Table 1028.14
Voids Filled with Asphalt
Criteria at Ndes
(for mix design only)

Asphaltic Concrete Type	Design VFA, Percent
SPS	N/A
SP1	70 – 80
SP2	65 – 78
SP3	65 – 78
SP4	65 – 75
SP4 Special	65 - 75
SP5	65 – 75

2. The Contractor shall make Mix adjustments when:
 - a. Air voids, VMA, FAA, CAA or Binder content do not meet the currently approved criteria.
 - b. Surface voids create a surface and/or texture that does not meet the criteria of Sections 502 and 503 in the 1997 English and Metric Edition of the Standard Specifications.
 - c. Pavement does not meet any other design criteria.
 - d. Rutting occurs.
3. Mix adjustments at the plant are authorized within the limits shown in Table 1028.15 as follows:
 - a. The adjustment must produce a mix with the percent air voids and all other properties as stated in these specifications.
 - b. All adjustments must be reported to the Engineer.
 - c. The adjustment values in Table 1028.15 will be the tolerances allowed for adjustments from the NDR verified mix design "Combined Gradation" target values which resulted from production or mix design adjustments, but cannot deviate from Superpave gradation criteria, or violate restricted zone criteria specified in paragraph 2. I. (1) of Subsection 1028.02. Mix adjustments for individual aggregates, including RAP, greater than 25% of the original verified mix design proportion or greater than 5% change in the original verified mix design percentage, whichever is greater, may require the Contractor to submit a new mix design, as determined by the Engineer. The contractor is responsible for requesting new mix design targets as they approach these tolerances, failure to do so may result in a suspension of operations until a new mix design is approved.

Table 1028.15

Aggregate Adjustments	
Sieve Size	Adjustments
1 inch (25 mm), 3/4 inch (19 mm), 1/2 inch (12.5 mm), 3/8 inch (9.5 mm)	$\pm 6\%$
No. 8 (2.36 mm), No. 16 (1.18 mm), No. 30 (600 μm), No. 50 (300 μm)	$\pm 4\%$
No. 200 (75 μm)	$\pm 2\%$

4. Sampling and Testing:
- a. The Contractor shall take samples at frequencies identified by the Engineer, according to the NDR statistically based procedure. The samples shall be approximately 75 pounds (34 kg) and split according to NDR T-248 either at: 1) the sampling location, with the NDR taking custody of their sample at that time or 2) after being transported to the test facility in an insulated container, as determined by the Engineer. The details of sampling, location, splitting etc. shall be determined at the pre-construction conference.
 - b. All samples transported to the test facility and companion samples within the Lot shall be identified by attaching the lab calculation sheet from the superpave 2002 software, stored, and retained by the Contractor until the NDR has completed the verification testing process.
 - c.
 - (1) The sample shall be taken from the roadway, behind the paver before compaction or from the windrow.
 - (2) At least one QC sample shall be tested for every 750 tons (680 Mg) of plant produced mix.
 - (i) If, at the completion of the project, the final lot consists of less than 3,750 tons (3,400 Mg) of asphaltic concrete, 1 sample for each 750 tons (680 Mg) or fraction thereof, shall be taken and tested.
 - (3) Additional sampling and testing for the Contractor's information may be performed at the Contractor's discretion. Any additional testing will not be used in pay factor determination.
 - (4) At least 1 sample shall be taken between the first 110 tons (100 Mg) and 300 tons (270 Mg) at the following times: 1) at the project start-up, 2) when a test result, identified in Paragraph 4,h,(3) of Subsection 1028.03, is out of specification, and 3) when a substantial aggregate proportion or other major mix change has been made. This sample, when other than at start-up, will be in lieu of the next scheduled random sample location.

- (5) The Contractor will be notified what subplot sample must be tested for FAA and CAA according to the NDR random sampling schedule. The FAA and CAA may be sampled from the blended cold feed material but in addition the Contractor will be required to test FAA and CAA from a roadway sample using an ignition oven sample for correlation. If the coarse portion of the blend is all ledge rock the CAA tests can be waived. If the samples tested with the ignition oven meet the CAA and FAA minimum requirement, then the cold feed sample does not have to be tested. When both ignition oven and cold feed samples are being tested the acquisition of the samples shall be timed such that each sample represents, as close as possible, the same aggregate being fed into the plant.
- (6) For projects using RAP material the FAA shall be established as follows:

A RAP sample will be processed through an ignition oven and then combined with the proportioned amount of virgin aggregate defined by the mix design and then proceeding with FAA and CAA testing.
- d. The sample shall be compacted immediately while still hot (additional heating may be required to raise the temperature of the sample to compaction temperature).
- e. Each production sample shall be tested as follows:
 - (1) (i) Bulk Specific Gravity (Gmb) shall be determined for each specimen in accordance with AASHTO T 166- Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens. One specimen shall be compacted for each production sample.
 - (2) One Theoretical Maximum Specific Gravity (Gmm) test for each production sample of uncompacted mixture shall be determined in accordance with AASTHO T 209 procedure 9.5.1. Weight in water - Maximum Specific Gravity of Bituminous Paving Mixtures.
 - (3) (i) The Blended Aggregate Bulk Specific Gravity (Gsb) shall be determined from a combined aggregate blend, including any RAP following ignition burn-off, on the + #4 and - #4 material. This test and recalculation will be required if the mix design changes according to the tolerances in Paragraph 3.c. of subsection 1028.03 and/or table 1028.15.
 - (ii) AASHTO T 84 - Specific Gravity and Absorption of Fine Aggregate.
 - (iii) AASHTO T 85 - Specific Gravity and Absorption of Coarse Aggregate.

- (4) The laboratory air voids shall be determined in accordance with the following:

Table 1028.16

$\text{Gmb}(\text{corr})@\text{Nany} = \text{Gmb}(\text{meas})@\text{Nmax} \times (\text{height}@\text{Nmax} \div \text{height}@\text{Nany})$ $\% \text{Gmm}(\text{corr})@\text{Nany} = 100 \times (\text{Gmb}(\text{corr})@\text{Nany} \div \text{Gmm}(\text{meas}))$ $\% \text{Air Voids}@\text{Nany} = 100 - \% \text{Gmm}(\text{corr})@\text{Nany}$ $\text{VMA}@\text{Ndes} = 100 - (\text{Gmb}(\text{corr})@\text{Ndes} \times \text{Ps} \div \text{Gsb})$ $\text{VFA}@\text{Ndes} = 100 \times ((\text{VMA}@\text{Ndes} - \% \text{Air Voids}@\text{Ndes}) \div \text{VMA}@\text{Ndes})$ $\text{Measured} = (\text{meas})$ $\text{Corrected} = (\text{corr})$

5. (i) The percent of PG Binder shall be determined for each QC test. The percent of PG Binder will be computed by ignition oven results.
- (ii) The gradations shall be determined for each QC test using AASHTO T 30.
- (6) Except as noted in this Subsection, all sampling and testing shall be done as prescribed in the *NDR Materials Sampling Guide and Standard Method of Tests*.
- f. Testing Documentation:
- (1) All test results and calculations shall be recorded and documented on data sheets using the 2002 version of NDOR provided "Superpave" software. A copy containing complete project documentation will be provided to the Materials and Research Division at the completion of the project.
- g. QC Charts:
- (1) QC charts shall be posted at the asphalt production site and kept current with both individual test results and moving average values for review by the Engineer.
- (2) Control charts shall include a target value and specification limits.
- (3) As a minimum, the following values shall be plotted or reported on NDR provided software:
- (i) Laboratory Gyratory density
- (ii) Ignition oven or cold feed aggregate gradations for all Superpave sieves will be reported.
- (iii) PG Binder content shall be plotted to the nearest 0.1 percent by ignition oven results in accordance with AASHTO T 308.

- (iv) The theoretical maximum specific gravity (Rice) to the nearest 0.001 percent will be reported.
 - (v) Laboratory Gyratory air voids at Ndes shall be plotted to nearest 0.1 percent. Laboratory Gyratory air voids, at Nini, Ndes and Nmax shall be reported to nearest 0.1 percent.
 - (vi) FAA and CAA of the asphaltic concrete for both cold feed and ignition oven samples will be reported to the nearest 0.1 percent.
 - (vii) VMA content shall be plotted to nearest 0.1 percent and VFA shall be reported to the nearest 0.1 percent.
 - (viii) Dust to Binder ratio to the nearest 0.01 will be reported.
- h. Independent Assurance (IA) Review of Testing:
- (1) The Contractor will allow NDR personnel access to their laboratory to conduct IA review of technician testing procedures and apparatus. Any deficiencies discovered in testing procedures will be noted and corrected.
 - (2) During IA review, NDR personnel and the Contractor will split a sample for the purpose of IA testing. The sample(s) selected will be tested in the NDR Branch Laboratory. Any IA test results found to be outside of defined testing tolerances will be noted. The Contractor must then verify the testing apparatus and make corrections if the apparatus is out of tolerance.
 - (3) Testing Tolerances
 - (i) Asphaltic Concrete and Asphaltic Concrete Aggregates.

Table 1028.17

Test	Tolerance
Asphalt Content by Ignition Oven	0.5%
Gyratory Density	0.020
Maximum Specific Gravity	0.015
Bulk Dry Specific Gravity (Gsb)	0.020
FAA	0.5%
CAA	10.0%
Field Core Density	0.020

(4) Aggregate Gradation (Blended Aggregate)

Table 1028.18

Size Fraction Between Consecutive Sieves, %	Tolerance
0.0 to 3.0	2%
3.1 to 10.0	3%
10.1 to 20.0	5%
20.1 to 30.0	6%
30.1 to 40.0	7%
40.1 to 50.0	9%

5. a. In response to tests results, the Contractor shall notify the Engineer whenever the process approaches the Specification limits.
- b. When any single test result(s), on the same mix property, from two consecutive QC samples fall outside the allowable production tolerances in Table 1028.19, the material represented by these tests will be accepted with a 20% penalty or rejected, as determined by the Engineer.

Table 1028.19
Production Tolerances*

Test	Allowable Single Test Deviation from Specification
Voids in the Mineral Aggregate	- 0.75% to + 1.25% from Min.
Dust to Asphalt Ratio	None
Coarse Aggregate Angularity	- 5% below Min.
Fine Aggregate Angularity	- 0.50% below Min.

* These tolerances are applied to the mix design specification values, not the submitted mix design targets.

- c. The Contractor shall assume the responsibility to cease operations when specifications other than those stated in Table 1028.19 are not being met and production shall not be started again without approval of the Engineer.
6. Verification Sampling and Testing:
 - a. The NDR will select and test at random one of the subplot samples (750 tons, 680 Mg) within a Lot (3750 tons, 3400 Mg) for verification and report results in a timely manner.
 - b. The results of Contractor QC testing will be verified by NDR verification tests. On any given Lot, if the results of Air Void verification testing and its companion QC testing are within 1.4 percent air voids, the Air Void verification for the entire Lot is complete and the Contractor test results will be used to determine the pay factors. If the Air Void verification test results

and the companion QC test results are outside the above tolerance, the results from the verification test will be used to determine the pay factor for that subplot. Any or all of the remaining four NDR subplot samples may be tested and the NDR subplot test results may be applied to the respective sublots and the resulting pay factors will apply.

- c. When verification test results show a consistent pattern of deviation from the QC results, the Engineer may cease production and request additional verification testing or initiate a complete IA review.
- d. If the project personnel and the Contractor cannot reach agreement on the accuracy of the test results, the Materials and Research Laboratory will be asked to resolve the dispute, which will be final.

7. Acceptance and Pay Factors

- a. Acceptance and pay factors for Asphaltic Concrete Type SPS will be based on compacted in place average density.
- b. Acceptance and pay factors for Asphaltic Concrete Type SP1, SP2, SP3, SP4, SP4 Special and SP5 will be based on single test air voids, running average air voids, compacted in place average density, and production tolerances pay factor as stated in Paragraph 5.b. subsection 1028.03
 - (1) When there is a production tolerance pay factor penalty as stated in Paragraph 5.b. subsection 1028.03 this penalty percentage will be subtracted from the percent pay for single test air voids for each subplot affected. These three individual pay factors will then be multiplied by each other to determine a total pay factor for each subplot [(750 tons) (680 Mg)].

8. Asphaltic Concrete Air Voids

- a. Normally, 1 sample for testing will be taken from each subplot [(750 tons) (680 Mg)] at locations determined by the Engineer.
- b. The pay factors for the single test air voids and moving average of four air voids pay factors will be determined in accordance with table 1028.20.
- c. If the average air voids pay factor is (50% or reject) the NDR will have the first option of accepting or rejecting the asphaltic concrete represented in this subplot. If the NDR accepts this subplot the Contractor will have the second option of replacing this asphaltic concrete for no pay on the removal and for whatever pay factor that applies to the replacement.
- d. In the case of removal, the foremost limits of the removal will be defined as the tonnage (mass) at which the production and placement was halted and a design change was made. The rear limits will be at the tonnage (mass) where linear interpolation with the previous test return to an accepted range and out of rejection limits or at the limit(s) of the defective material as determined by additional core samples taken and tested by the Contractor which show result(s) in an acceptable range and out of rejection limits to the satisfaction of the Engineer.

Table 1028.20

Acceptance Schedule Air Voids - N_{des}		
Air voids test results	Moving average of four	Single test
Less than 1.5%	Reject	Reject
1.5% to less than 2.0%	Reject	50%
2.0% to less than 2.5%	50% or Reject	95%
2.5% to less than 3.0%	90%	95%
3.0% to less than 3.5%	100%	100%
3.5% to 4.5%	102%	104%
Over 4.5% to 5.0%	100%	100%
Over 5.0% to 5.5%	95%	95%
Over 5.5% to 6.0%	90%	95%
Over 6.0% to 6.5%	50% or Reject	90%
Over 6.5% to 7.0%	Reject	50%
Over 7.0%	Reject	Reject

9. Asphalt Concrete Density Samples:
 - a. Density tests will be performed by the Contractor under direct observation of NDR personnel. The Contractor will establish the method of testing in the preconstruction conference and shall be tested in accordance with the AASHTO T 166 or NDR T 587. The Contractor will insure that the proper adjustment bias and/or correction factors are used and accessible to NDR personnel along with all other inputs when NDR T 587 is selected. All correlation factors and test results shall be generated and reported on the NDOR Density spreadsheet. All disputed values determined using NDR T 587 shall be resolved using AASHTO T 166.

- b. Density of samples shall be determined by comparing the specific gravity of the core sample to the Maximum Specific Gravity (Rice) as follows:

$$\% \text{ Density} = \frac{\text{Specific Gravity of Core}}{\text{Maximum Mix Specific Gravity (Rice)}} \times 100$$

where:

$$\text{Sp. Gr. of Core} = \frac{\text{Wt. of Core in Air}}{\text{Wt. of SSD Core} - \text{Wt. of Core in Water}}$$

$$\begin{array}{l} \text{Maximum Mix} \\ \text{Specific Gravity} = \\ \text{(Rice)} \end{array} = \frac{\text{Wt. of Mix in Air}}{\text{Wt. of Mix in Air} - \text{Wt. of Mix in Water}}$$

Note: The individual QC test value of the Maximum Mix Specific Gravity (Rice) will be used to calculate the density of each corresponding core.

- c. Either 4 inch (100 mm) or 6 inch (150 mm) diameter core samples shall be cut by the Contractor the first day of work following placement of the mixture.
- d. Normally, 1 sample for determination of density will be taken from each subplot (750 tons) (680 Mg) at locations determined by the Engineer.
- e. The theoretical maximum density for each lot (3,750 tons) (3,400 Mg) shall be calculated using AASHTO T 209.
- f. The average density of the lot shall be used to compute the pay factor for density. Exceptions to the sampling and testing of core samples for the determination of density are as follows:
- (1) When the nominal layer thickness is 1 inch (25 mm) or less, the sampling and testing of density for this layer will be waived.
 - (2) When the average thickness of the 5 cores for a lot is 1 inch (25 mm) or less, the testing of density samples for this lot will be waived.
 - (3) When the nominal layer thickness and the average of the original 5 cores for a lot are both more than 1 inch (25 mm), but some of the cores are less than 1 inch (25 mm) thick, additional cores shall be cut at randomly selected locations to provide 5 samples of more than 1 inch (25 mm) thickness for the determination of the pay factor for density.
- g. For the first lot (3,750 tons) (3,400 Mg) of asphaltic concrete produced on a project and for asphaltic concrete used for temporary surfacing, the pay factor for density shall be computed in accordance with Table 1028.21. After the completion of the first lot, the pay factor for density shall be computed in accordance with Table 1028.22.

- h. (1) If, at the completion of the project, the final lot consists of less than 3,750 tons (3400 Mg) of asphaltic concrete, a minimum of 3 samples, or 1 sample for each 750 tons (680 Mg) or fraction thereof, whichever is greater, shall be taken and tested for density.
- (2) The test results shall be averaged and the density pay factor based on the values shown in Table 1028.22.
- (3) Should the average of less than 5 density tests indicate a pay factor less than 1.00, additional density samples to complete the set of five shall be taken at randomly selected locations and the density pay factor based on the average of the 5 tests.

Table 1028.21

Acceptance Schedule Density of Compacted Asphaltic Concrete (First Lot)	
Average Density (5 Samples, Percent of Voidless Density)	Pay Factor
Greater than 90.0	1.00
Greater than 89.5 to 90.0	0.95
Greater than 89.0 to 89.5	0.70
89.0 or Less	0.40 or Reject

Table 1028.22

Acceptance Schedule Density of Compacted Asphaltic Concrete (Subsequent Lots)	
Average Density (5 Samples, Percent of Voidless Density)	Pay Factor
Greater than 92.4	1.00
Greater than 91.9 to 92.4	0.95
Greater than 91.4 to 91.9	0.90
Greater than 90.9 to 91.4	0.85
Greater than 90.4 to 90.9	0.80
Greater than 89.9 to 90.4	0.70
89.9 or Less	0.40 or Reject

- i. If requested by the Contractor, check tests for all density tests in the original set, taken no later than the working day following placement will be allowed in lots with a density pay factor of less than 1.00. No re-rolling will be allowed in these lots. Locations for checks tests will be determined by a new random sampling schedule provided by the Engineer. The average density obtained by the check tests shall be used to establish the density pay factor for the lot.

10. PG Binder Sampling

- a. At least one sample (2-1 quart cans) (2-1 liter cans) of PG Binder will be sampled by the Contractor's QC Technician for every Lot (3750 tons) (3400 Mg) of asphalt concrete mixture produced.
- b. Samples will be taken in accordance with NDR Standard Method T40.
- c. The QC Technician will include on the Sample Identification form all information required by the contract.

**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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