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

NEBRASKA DEPARTMENT OF ROADS LETTING DATE : May 22, 2003

CALL ORDER: F09 CONTRACT ID: 6278 CONTROL NO./SEQ. NO.: 61278 /000 PROJECT NO.: EACSTPD-L25B(104) TENTATIVE START DATE: 06/30/03 CONTRACT TIME: 70 WORKING DAYS LOCATION: ON L25B SOUTH OF BIG SPRINGS. IN COUNTY: DEUEL BIDDER

GROUP 1 GRADING GROUP 3 CONCRETE PAVEMENT GROUP 6 BRIDGE GROUP 7 GUARDRAIL GROUP 8B ELECTRICAL GROUP 10 GENERAL ITEMS

SEE SPECIAL PROVISIONS FOR GROUP TIES

NOTES

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

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

### NOTICE TO ALL BIDDERS

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

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

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

### **LETTING QUESTIONS**

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

#### 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

 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 piecework, station work, or by subcontract.

2. Except as otherwise provided for 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

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

 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."

 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 Execu-Form FHWA-1273 (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:

 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.

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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

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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:

 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 journeymanlevel 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

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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. Payrolis 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 that 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

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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.

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 sub-contract 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.

 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 that \$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 <u>et seq</u>., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 <u>et seq</u>., 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)

 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 disgualify 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 knowingly 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:

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 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.

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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 \$10,000 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.

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#### 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	PARTICIPA	
GUALS FUR		FARIULEA	ACH INADE

	Goal		Goal
Economic Area	%	Economic Area	%
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

	Goals
Timetables	(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.

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#### 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.

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- 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 offthe-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 dispositon 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 **NE020002** 03/01/02 NE2 General Decision Number **NE020002** 

Superseded General Decision No. NE010002

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	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	

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	03/01/2002

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

SUNEZOUZE 00/10/1999		
	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 sl	ip	
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 stabil	Li-
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

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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)(v)).

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

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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-L25B(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 May 22, 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.

GROUPS 1, 3, 6, 7, 8B AND 10 ARE TIED TOGETHER AND BIDDING PROPOSAL FORMS FOR THIS WORK WILL BE ISSUED AND A CONTRACT AWARDED TO A CONTRACTOR WHO IS QUALIFIED FOR CONCRETE PAVEMENT.

### 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 February 5, 2003.

Utility facilities, aerial and/or underground may exist within this project. The contractor should request a utility status update at the project preconstruction conference, and/or prior to starting work.

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.

The following utilities have facilities within the project area, and have been provided project plans.

Village of Big Springs – municipal water and sewer.

WorldCom – fiber optic communications cable on railroad right of way.

Sprint Communications – fiber optic communications cable on railroad right of way.

**Qwest Communications** – underground communication facility along the project.

Kinder Morgan – natural gas system in town.

Nebraska Public Power District - aerial power in town and along the project.

**Nebraska Department of Roads -** there is existing interchange lighting at the I-80/L25B interchange; any adjustments will be accomplished by the NDOR or NDOR contractor.

All utility rehabilitation will be accomplished prior to or 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.

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

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

Bidders must identify all firms who bid or quote subcontracts on all projects. If no bids or subcontractor quotations are received, the "Subcontractor Bidders List" must be submitted with

the bidding documents and the bidder must indicate on the face of the "Subcontractor Bidders List" that no bids or subcontractor quotations were received.

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

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

105.08 - Authority and Duty of the Inspector

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

105.13 – Tentative Acceptance of Portions of the Project

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

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

107.14 – Opening of Sections of the Project to Traffic

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

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

### AWARD AND EXECUTION OF CONTRACT

The first sentence of Subsection 103.03 in the Standard Specifications is void and superseded by the following:

The bidder to whom the contract is awarded shall furnish within 5 days after the award, a contract bond, in a sum equal to the full amount of the contract.

The first sentence of Subsection 103.04 is void and superseded by the following:

The contract shall be signed by the successful bidder and returned, together with a satisfactory bond, within 5 days from the date of award.

Paragraph 1.a. of Subsection 103.05 is void and superseded by the following:

a. Fails to file an acceptable performance bond within 5 days from the date of award.

### SPECIAL PROSECUTION AND PROGRESS

The plans depict phasing sequences that are to be used in construction of this project. Any deviation from these sequences shall require the written approval of the Engineer.

Unless otherwise approved by the Engineer, the Contractor will not be allowed to perform the concrete pavement repair, dowel bar retrofit and diamond grinding operations between Sta. 90+16 and Sta. 102+70 concurrently with the phased construction north of Sta. 102+70.

### SPECIAL PROSECUTION AND PROGRESS (Dowel Bar Retrofit & Diamond Grinding)

Providing that the minimum material strengths have been met, the Contractor will be required to begin the diamond grinding within 7 calendar days after completion of the dowel bar retrofit on any traffic lane segment of five miles in length. The removal of the concrete in the kerf cuts and placement/grouting of the dowel bars will be completed for an entire lane segment in one direction prior to beginning concrete removal of the kerf cuts and dowel bar placement/grouting operation in another segment. Failure to begin the diamond grinding in any traffic lane segment within the calendar days allowed shall result in the assessment of liquidated damages of \$1,000.00 per day for each traffic lane segment in violation.

The Contractor shall schedule his work so as to minimize the number of lane closures; for example, constructing different items of work at the same time whenever possible.

It is suggested that the Contractor saw the slots for the dowel bar retrofit operation during the concrete repair operation.

Lanes may be reopened to traffic after sawing the slots for the dowel bars.

The maximum continuous length of lane closure for dowel bar placement and diamond grinding operations shall be 1,250 feet  $\pm$ . Based on the work operation, the Engineer may specify a lane closure shorter than the maximum permissible length.

The Contractor shall schedule their retrofit operations so that both lanes are open to traffic at night or at times when the Contractor is not working. When placing the dowel bars and grout, the Contractor should allow sufficient time for the grout to cure before reopening the closed lanes in the evening.

### UNION PACIFIC RAILROAD COMPANY

### RAILROAD SAFETY TRAINING (S1-22A-0801)

The railroad company requires that anyone working within the railroad right-of-way attend a "Rail Safety Training" class. The Contractor, or their representative, will not be allowed on railroad right-of-way until they have successfully completed the mandatory safety training. The railroad will present a certification card to everyone who completes their safety training, and construction crews will be required to have their safety training certification cards in their possession at all times when they are working on railroad right-of-way.

The contractor will be responsible for all costs associated with attending this training class.

### FLAGGING PROTECTION

When, for any reason, the Manager Industry & Public Projects, Mr. Jack Dobrinska, or other duly authorized representative of the Union Pacific Railroad Company shall deem it necessary to employ flagmen for the protection of train operations, such flagmen shall be furnished by the Railroad Company and all costs for such flagmen shall be borne by the contractor.

Prospective bidders shall familiarize themselves fully with the Railroad Company's requirements for flagging protection before bidding on the work.

#### REIMBURSEMENT TO RAILROAD COMPANY FOR FLAGGING COSTS (S1-24-0801)

At all times while performing such work, flagmen shall be deemed to be employees of the Railroad Company.

The contractor shall reimburse the Railroad Company directly for this flagging protection and shall make a showing that the Railroad Company has been reimbursed for all necessary flagging required by his operations before final payment for the work contemplated in the contract is made by the State.

Direct payment for flagging protection as required in these special provisions will not be made but it shall be considered that this work is subsidiary to any or all of the items for which the contract provides that direct payment shall be made.

### FLAGGING CONDITIONS (S1-25-0801)

Flagging and other protective services and devices will be provided by the Company to protect its facilities, property and movements of its trains or engine.

In general, the Company will furnish such flagging or other protective services and devices:

- (a) For any excavation below elevation of track subgrade, if, in the opinion of the Company's representative, track or other railroad facilities may be subject to settlement or movement.
- (b) During any clearing, grubbing, grading or blasting in proximity to the railroad, which, in the opinion of the Company's representative, may endanger or interfere with the railroad's facilities or operations.
- (c) When any of the Contractor's operations are carried on or within the Railroad Company's right of way and in the opinion of the Company's representative could endanger Company's facilities or create a hazard to the Company's operations.

### PROTECTION OF UTILITIES (S1-26-0801)

Before the contractor begins his operations on the railroad right-of-way he shall confer with the official representatives of the State and the Railroad Company with regard to any underground or overhead utilities which may be on or in close proximity to the site of the work. The contractor shall take such measures as the State or Railroad Company may direct in protecting those utilities properly throughout the period his construction operations are in progress. The party or parties owning or operating overhead or underground utilities shall perform the actual work of moving, repairing, reconditioning or revising those utilities, except as otherwise provided in the contract. Whenever and wherever such operations are undertaken by owners of utilities, the contractor shall cooperate to the extent that ample protection of their work will be provided so that the entire work that is contemplated in the contract may be expedited to the best interests of all concerned, as judged by the engineer for the State.

The contractor shall be responsible for any and all damages to utilities that are permitted to remain in place, or to reconstructed utilities in the vicinity, which may be due either directly or indirectly to his operations, and shall repair promptly any such damaged property to the satisfaction of the engineer and the owner of the property, or shall make payment to such owners for repairs as may become necessary on account of damages that are due to his operations.

Direct payment for this work will not be made but it shall be considered that the protection of the utilities is subsidiary to any or all of the items for which the contract provides that direct payment shall be made.

### **RAILROAD SPECIAL PROVISIONS**

Before the contractor begins his operations on railroad right of way, he will contact the railroad at least 10 days in advance by telephone at 1-800-336-9193 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the railroad property to be used by the contractor.

The railroad will advise the contractor if fiber optic cable exists at the location(s) being occupied and will dispatch a representative to locate, mark and protect each cable in the vicinity of the work to be performed by the contractor.

The railroad will need the Railroad Mile Post involved which is 353.95 on this project.

The contractor, for his own protection, should obtain and record the "Trouble Log Number" from the railroad for verification of the call made.

### WRITTEN NOTICE TO RAILROAD COMPANY

The contractor shall give written notice to the Manager Industry & Public Projects, Mr. Jack Dobrinska, or to his authorized representative, at least ten days in advance of the date on which he expects to begin any work under or adjacent to any of the tracks of the Railroad Company or he expects to begin any construction work on the right of way of the Railroad Company. The contractor shall also give written notice to the Manager Industry & Public Projects, Mr. Jack Dobrinska no later than ten days after completion of all work on the railroad company's right of way.

### PROTECTION OF PROPERTY (S1-29-0801)

The contractor shall use the utmost care to guard against accidents or cause the least possible interference with the operation of trains of the Railroad Company and the telephone, telegraph or signal lines of the Railroad Company or of any tenant of the Railroad Company's right-of-way. The contractor shall use the utmost care in guarding against injury to underground and overhead public utilities and services at or near the site of the work.

All work to be done under this contract shall be handled by the contractor so as to interfere as little as is reasonably possible with the use of tracks, wires, signals and property of the Railroad Company or its tenants, and the underground or overhead services of public and private utilities, and the contractor shall be responsible for any damages which may be sustained by the Railroad Company, its tenants, employees, passengers or freight in its care, or by the owners of any public or private overhead or underground services caused by such interferences which could have been avoided by the proper handling of said work. The contractor shall discontinue immediately, upon request of the engineer, any practices or actions which, in the opinion of the engineer, are unsafe or cause damage to underground or overhead services of public or private utilities, or which might result in delays to trains, engines or cars, or damage to tracks, roadbed, telephone, telegraph or signal wires.

The contractor shall take all precautions for the purposes of protecting the embankment of all railroad tracks as may be determined necessary by the authorized representative of the Railroad Company. The contractor agrees to affix the seal of a registered professional engineer licensed to practice in the State of Nebraska on all plans and calculations pertaining to details for sheeting or otherwise protecting excavations next to or adjacent to railroad tracks if necessary and noted on the State's plans. The contractor also shall take all precautions for the protection of underground and overhead services either public or private, as may be determined by the engineer.

### **PROTECTION OF PROPERTY**

The contractor shall not place or permit to be placed, or remain, piles of material or other temporary obstructions closer than 12 feet (3.7 meters) to the nearest rail of any track or closer than 23 feet (7 meters) above the top of any rail except that the construction forms and scaffolding may be placed no closer than 12 feet (3.7 meters) from the centerline of any such track.

Any changes necessary in the clearance set forth above shall be made only by special arrangements with the Manager Industry & Public Projects, Mr. Jack Dobrinska, of the Company or his authorized representative.

The contractor agrees to affix the seal of a registered professional engineer licensed to practice in the State of Nebraska on all plans and calculations pertaining to details for sheeting or otherwise protecting excavations next to or adjacent to railroad tracks if necessary and noted on the State's plans.

### RAILROAD CROSSINGS (S1-31-1201)

The Contractor shall use only public roadways or special crossings that are specifically shown on the plans to cross railroad tracks. If the Contractor should desire a temporary crossing for construction purposes at a location other than an existing public crossing, provisions for such crossing shall be negotiated with the railroad by the Contractor, and all costs for such crossing shall be borne by the Contractor.

Prospective bidders should familiarize themselves with railroad temporary crossing and insurance requirements before bidding on the work.

### INSPECTION (S1-32-0801)

Subsection 105.09 in the Standard Specifications is amended to provide also that the work shall be subject to the inspection of the properly authorized representatives of the railroad and that such inspection shall in no sense make the railroad a party to this contract and will in no way interfere with the rights of either party hereunder.

#### INSURANCE (S1-33-1201)

The State shall require its Contractor or any of his subcontractors to carry regular Contractor's Public Liability and Property Damage Insurance as specified in Federal-Aid Policy Guide 23 CFR 646A providing for a limit of not less than Two Million Dollars (\$2,000,000) for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of not less than Four Million Dollars (\$4,000,000) for all damages arising out of bodily injuries to or death of two or more persons in any one accident and providing for a limit of not less than Two Million Dollars (\$2,000,000) for all damages to or destruction of property in any one accident and subject to that limit a total (or aggregate) limit of not less than Four Million Dollars (\$4,000,000) for all damages to or destruction of property during the policy period. A certified copy of the policy providing said Contractor's Public Liability and Property Damage Insurance executed by a corporation qualified to write the same in the State in which the work is to be performed, in form and substance satisfactory to the Railroad, shall be delivered to and approved by the Railroad prior to the entry upon or use of the Railroad's property by the Contractor.

In addition to any other forms of insurance or bonds required under the terms of the contract and the specifications, the Contractor shall furnish to the Railroad a Railroad Protective

Policy in the form provided by Federal-Aid Policy Guide 23 CFR 646A. The combined single limit of said policy shall not be less than Two Million Dollars (\$2,000,000) for all damages arising out of bodily injuries to or death of any person or persons and for all damages arising out of loss or destruction of or injury or damage to property in any one occurrence during the policy period; and subject to that limit, a total (or aggregate) limit of not less than Six Million Dollars (\$6,000,000) for all damages arising out of bodily injuries to or death of any person or persons and for all damages arising out of or loss or destruction of or injury or damage to property during the policy period. Said insurance policy executed by a corporation qualified to write the same in the State in which the work is to be performed shall be in form and substance satisfactory to the Railroad and shall be delivered to and approved by the Railroad prior to the entry upon or use of its property by the Contractor.

The above mentioned insurance shall be written in accordance with the Federal-Aid Policy Guide 23 CFR 646A issued by the Federal Highway Administration, which is hereby, through reference, made a part of these provisions.

The State shall require its Contractor or any of its subcontractors to carry a Business Automobile Insurance Policy or equivalent policy with minimum limits of one million dollars (\$1,000,000) for bodily injury and property damage per occurrence on all vehicles which the Contractor or subcontractors, their agents or employees may use at any time in connection with the performance of the work on this project. A certified copy of the policy providing said Business Automobile Insurance executed by a corporation qualified to write the same in the state in which the work is to be performed, in form and substance satisfactory to the companies, shall be delivered to and approved by the companies prior to the entry upon or use of the companies property by the Contractor.

The insurance as hereinbefore specified shall be carried by the Contractor and the Railroad covering all work performed on this project within the limits of the rights-of-way of the Railroad. Said insurance shall be carried until all work required under the terms of the contract is satisfactorily completed, as evidenced by formal acceptance by the State.

The State's Contractor shall cause triplicate originals of the policy or policies covering the Railroad Protective Liability Insurance specified above to be delivered to the State for delivery to the Railroad. The Contractor shall not enter upon or perform any work upon the property or the rights-of-way of the Railroad until the specified originals of the policy or policies have been delivered to and approved by the Railroad. The Contractor shall deliver one original policy of the above described Contractor's Property Damage Liability Insurance and one copy of the Business Automobile Insurance Policy to the State prior to the beginning of any work on the Railroad's right-of-way.

In addition to the above, the Contractor shall indemnify and hold the railroad(s) harmless against and from all cost, liability, and expense whatsoever (including the railroad attorney's fees and court costs and expenses) actually incurred arising out of or in any way contributed to by any negligent act or omission of the Contractor and its employees, for any damage to or destruction of any telecommunications system by the Contractor and its employees on the railroad's property.

### RIGHT OF WAY (S1-34-0801)

The right of way and property which the public has, or will have, by ownership or easement, for the permanent construction and the prosecution of the construction operations, is indicated in the plans or will be defined upon request. Any additional ground, or working or storage space that the contractor may require for his operations, shall be provided by the contractor at his own expense.

### RESTORATION OF RAILROAD COMPANY'S PROPERTY (\$1-35-0801)

In the event the contractor shall in any manner move or disturb other property of the Railroad Company, in connection with the use of the said property, then, and in that event, the contractor shall, as soon as possible and at its sole expense, restore such property to the same condition as it was in before such property was moved or disturbed, and the contractor shall indemnify and save harmless the Railroad Company against and from any and all liability, loss, damages, claims, demands, costs and expenses of whatsoever nature, including court costs and attorneys' fees, which may result from injury to or death of persons whomsoever, or damage to or loss or destruction of property whatsoever, when such injury, death, damage, loss or destruction grows out of or arises from the taking down of any fence, or the moving or disturbance of any other property, of the Railroad Company.

### FINAL CLEANING UP (S1-36-0801)

Subsection 104.08 in the Standard Specifications is amended to provide also that upon the completion of the work contemplated in this contract, the contractor shall remove all machinery, equipment, surplus materials, falsework, rubbish, ditches, and temporary building, furnished or erected by him from within the limits of the right of way of the Railroad Company and shall leave the said right of way in a neat condition satisfactory to the Chief Engineer of the Railroad Company, or his authorized representative.

### PERCENTAGE OF COST OF WORK WITHIN RAILROAD RIGHT-OF-WAY

The following information is furnished to aid in the determination of a proper premium for the Railroad Protective Liability Insurance required elsewhere in these special provisions.

### RAILROAD PROTECTIVE POLICY DATA SHEET

- Railroad: Union Pacific Railroad Company
- Railroad Contact: Jack Dobrinska

Title: Manager Industry & Public Projects

Address: 1416 Dodge Street, Room 940, Omaha, NE 68179

Telephone Number: (402) 271-2029

Project Number: <u>EACSTPD-L25B(104)</u>

Project Location: Big Springs South

Type of Project: <u>Surfacing/grading-up to south side of UPRR tracks</u>

No. of trains/day: Total: 71

Freight or Coal: <u>71</u> Speed: <u>70</u> mph Passenger <u>0</u> Speed \_\_\_ mph

No. of Tracks: Mainline 2 Pass/Lead 2

Project Over RR: No X Yes Project Under Railroad: No X Yes

Railroad Shoo-fly Required: No X Yes

Project Parallel to RR: No X Yes If Yes, Number of Miles

Crossings on State Highway or City Street System: No \_\_ Yes X

If Yes, Number of Crossings <u>1 at DOT No. 815-491-E</u>

Pavement or Overlay up to Crossing on County or City Road:

No X Yes If Yes, Number of Crossings

Work to be done by Railroad <u>None</u>

It shall be the contractor's responsibility to contact the railroad for additional information needed to purchase the Railroad Protective Policy.

The percentage of work within railroad right of way that is within 50 feet (15.25 meters) of any railroad track shall be covered by railroad protective insurance. The railroad's ownership of right of way that extends beyond 50 feet (15.25 meters) from the closest track shall be covered under regular Contractor's Public liability and Property Damage Insurance in the amounts specified in this contract.

Approximate	Approximate	
Percent of Work	Percent of Work on	
Within 50 feet	RR/ROW <u>Not Within</u>	
(15.25 meters)	50 feet (15.25 meters)	
of Nearest Track	of Nearest Track	Description of Work
<u>0.01</u> %	<u>0.0</u> %	
	Approximate Percent of Work <u>Within</u> 50 feet (15.25 meters) of Nearest Track %	ApproximateApproximatePercent of WorkPercent of Work onWithin 50 feetRR/ROW Not Within(15.25 meters)50 feet (15.25 meters)of Nearest Trackof Nearest Track0.01_%0.0_%

### **CONSTRUCTION DETAILS**

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

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

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

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

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

#### FCA=QFD where

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

D = Allowable price differential.

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

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

D = P - 1.10P(b), but not less than zero.

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

D = P - .90P(b), but not greater than zero.

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

In either case, P, shall be the current diesel price, in dollars per gallon (liter), defined as the average of the minimum and maximum prices for No. 2 Diesel Fuel (Oklahoma) published in the first issue of "*Platt's Oilgram Price Report*" for the month in which the progress estimate is generated.
### GENERAL CLEARING AND GRUBBING (S2-2-0801)

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

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

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

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

## CONSTRUCTION AND OBLITERATION OF TEMPORARY RAMP

The 42 inch corrugated metal pipe for the temporary ramp will be furnished and installed by the grading contractor. The length of each section of pipe shall not exceed 26 feet. Excavation and connection bands required to install the pipes will be subsidiary to the pipes.

The embankment required to construct the temporary ramp is included in the pay quantity of Earthwork Measured in Embankment shown in Group 1.

When the temporary ramp is no longer required, it shall be obliterated by the grading contractor. The temporary surfacing shall be removed, the embankment removed and the area graded to the original cross sections.

The corrugated metal pipe used for the temporary ramp shall be removed and delivered to the State of Nebraska Maintenance Yard located in Big Springs, Nebraska.

The removal of the temporary surfacing shall be paid for as stated elsewhere in the Special Provisions.

The work of obliterating the embankment shall be paid for as "Excavation (Established Quantity)" and is included in the quantity shown in group I

The removal of the culvert pipe, will not be measured and paid for directly, but will be considered subsidiary to "Excavation (Established Quantity)."

## 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.

# **BITUMINOUS FOUNDATION COURSE**

Paragraph 2. of Subsection 307.02 in the Standard Specifications is void and superseded by the following:

Material used in constructing Bituminous Foundation Course 4", shall be obtained from the cold milling operation on the project.

All salvaged bituminous material that is to be used in the bituminous foundation course, whether from an existing stockpile or from the contractors' stockpile on the project, shall be reprocessed just prior to the placement on the subgrade so that all material shall pass a  $1 \frac{1}{2}$  inch (37.5 mm) sieve.

# **ROADWAY LIGHTING**

Paragraph 2. of Subsection 415.02 in the Standard Specifications is void and superseded by the following:

2. Lamps provided shall be as shown in the plans.

Paragraph 7 of Subsection 1073.02 in the Standard Specifications and Supplemental Specifications is amended to include the following:

1. Conventional Roadway Luminaires

#### A. Housing

Luminaire housing shall be "cobra-head" style, of pressure die-cast aluminum, Large Housing Series. The casting shall be sound, complete, with smooth edges and free of flash. The lower portion of the housing shall be hinged for easy access.

The optical compartment shall be effectively sealed and filtered using a dacron polyester filter. The seal/filter combination shall be provided between the reflector and lens and between the socket assembly and reflector. The seal/filter combination shall be under compression when the assembly is in operating position. Seal/filter combination shall be of heat resisting material selected to last the functional life of the unit, but shall be easily replaceable should they become damaged. The optical compartment door shall be secured in position with a positive latch mechanism. The hinge arrangement shall be designed to prevent accidental disengagement when it is in the open position.

Finish shall be a gray Polyester Powder Coat or an electrodeposited epoxidized acrylic paint coat capable of successfully withstanding 1,000 hours of salt spray test per ASTM B 117.

Attachment hardware used to secure components to the aluminum housing shall be organically coated. Stainless steel or galvanized hardware is not allowed.

Housing must be legibly and durably marked with the lamp size, using ANSI NEMA lamp identification label.

### B. Slipfitter

The slipfitter shall accept 1 1/4 inch to 2 inch (32 mm to 50 mm) pipe.

#### C. Reflector

The reflector shall be hydroformed aluminum with an approved aluminum oxide or silica coating bonded to the inside and outside surfaces.

#### D. Socket

The socket shall be a mogul base porcelain.

#### E. Lens

The lens shall be made of clear tempered flat glass, heat resistant and free from imperfections.

#### F. Terminal Block

A terminal block will be required.

#### G. Ballast

The ballast shall be of the magnetic regulator type for the high pressure sodium lamp size as indicated in the plans.

Ballast shall be dual volt 120/240 or multi tap, ballast to be factory wired to 240 volt.

The ballast and starting aid shall not incur significant life reduction should the lamp continue in open or shorted circuit condition for a six-month period.

Regulation and Operation:

At nominal line voltage and nominal lamp voltage, the ballast design center will not vary more than 5% from rated lamp wattage. Lamp wattage variation shall not exceed 10% for a  $\pm 10\%$  line voltage variation.

The ballast/lamp combination must provide reliable starting to -40 degrees F (-40 degrees C).

Ballast starting current must not exceed normal operating current.

Power factor must be rated above 90% through all operational modes.

H. Photometric and Performance Requirement

The luminaire shall have "cutoff" control characteristics as follows: Candela per 1000 lumens shall not exceed 100 (10%) at a vertical angle of 80 degrees above nadir, and 25 (2.5%) at an angle of 90 degrees above nadir horizontal.

The luminaries, with lamp size and lumens as specified in the plans and installed in accordance with the following parameters, shall provide an average maintained horizontal

illumination level of 1.0 FC with an average to minimum uniformity ratio not exceeding 3.5:1. The maximum to minimum uniformity ratio shall not exceed 7.0:1. Any adjustments to the luminaire's optical system needed to provide a light distribution meeting the preceding requirements shall be made at the factory prior to shipment.

Parameters used; roadway width 48', pole spacing 162', mounting height 40', pole setback 15', mastarm length 12', maintenance factor .81, pole layout staggered.

#### I. Substitutions and Variations

No substitutions or variations of the above will be allowed.

#### J. Approval Requirements

In addition to the requirements for approval of the roadway lighting luminaires outlined in Subsection 1073.02, the contractor may be asked to supply IES formatted photometrics on a 1.44 MB computer disk for each type of luminaire he/she proposes to furnish for the project. The disk must be IBM compatible.

The contractor shall be prepared, upon request, to furnish a working sample of any luminaire proposed for this project (sample will be returned to the contractor or counted as part of the contract quantity).

The right is reserved to reject any and all proposals. The State of Nebraska will decide all questions which may arise as to the quality or acceptability of the luminaire submitted for approval under this specification.

Manufacturers allowed to submit luminaires for approval are as follows:

Crouse Hinds General Electric Hubbell American Electric

## PREFORMED PAVEMENT MARKING TAPE, TYPE 4 IN GROOVED PAVEMENT (S4-6-0801)

Paragraph 6. a. of Subsection 424.03 in the Supplemental Specifications is void and superseded by the following:

a. The permanent preformed pavement marking, Type 4 dashed lines on this project, shall be applied to the pavement in Contractor installed grooves.

## 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.

# CONTRACTOR FURNISHED SIGNS (S4-11-0303)

"Contractor Furnished Sign Day" shall consist of approved retroreflective fluorescent orange or white signs mounted on NCHRP-350 approved traffic control devices, i.e. Type III Barricades or Plastic Drums. The Contractor furnished sign, mounted on a traffic control device, shall together be NCHRP-350 Test Level 3 approved. The signs shall be of the size and shape required by the plans. The color and design of the signs shall be as required by the MUTCD and the NDR Traffic Engineering Division. Sign legends and symbols shall be of professional quality workmanship and in uniformity with the Standard Highway Signs design guide. Contractor furnished Signs shall meet the requirements of the American Traffic Safety Services Association (ATSSA), "Quality Standard for Work Zone Traffic Control Devices", hand printing or poor workmanship shall not be allowed.

Rigid sign substrates that have been approved to NCHRP 350 (TL-3) mounted on a traffic control device may be used.

Retroreflective orange fluorescent sheeting used for Contractor Furnished Signs shall be 3M diamond grade, Avery Dennison 6500 sheeting or other approved equal material.

Subsection 422.03 is amended by adding Paragraph 1.h.

Contractor Furnished Signs shall be installed as shown in the plans, or as directed by the Engineer. Contactor Furnished Signs shall be installed as prescribed in the MUTCD.

Paragraph 1.a. of Subsection 422.04 is void and superseded by the following:

1.a. Sign days of permanent, temporary and Contractor furnished signs installed in accordance with the plans, or as directed by the Engineer, will be measured and paid for by the each.

Paragraph 1. of Subsection 422.05 is amended to include the following:

Pay ItemPay UnitContractor Furnished Sign DayEach (ea)

## TRAFFIC CONTROL MANAGEMENT

#### **Description and General Requirements**

Paragraph 1. of Subsection 422.01 of the Specifications is void and superseded by the following:

- 1. This work consists of furnishing, installing at the locations shown on the plans, operating, maintaining, and when work is complete, removing the temporary traffic control devices described in this Section. This work shall also consist of providing Traffic Control Management by furnishing one or more qualified individuals who shall be specifically responsible for performing or supervising the installation, inspection, maintenance, and removal of those devices.
- 2. When project conditions warrant, the Engineer may suspend the need for Traffic Control Management and will notify the Contractor accordingly. The Contractor shall be given at least three days' notice of the suspension, but the work may be suspended in a lesser time if mutually acceptable to the Department and the Contractor. During periods when no payment is being made for Traffic Control Management under this Special Provision, this provision will not apply.

Paragraphs 2.i., 2.j.(2)(ii), and 2.k. of Subsection 422.01 of the Specifications are void; and Paragraph 2. of Subsection 422.01 of the Specifications and Supplemental Specifications is amended to include the following:

- p.(1) The Contractor shall designate an individual, other than the project superintendent, to be the Traffic Control Manager for the project. This person shall be certified as a Traffic Control Supervisor or Traffic Control Technician by the American Traffic Safety Services Association (ATSSA). Other certifications may be accepted if approved by the Engineer. The Traffic Control Manager shall also possess a current Flagger Certification Card. Copies of the Traffic Control Manager's certifications shall be provided to the Engineer prior to the installation of any traffic control devices on the project.
  - (2) The Contractor may also designate one or more Assistant Traffic Control Managers for the project. These individuals shall be qualified by certification as a Traffic Control Technician by the American Traffic Safety Services Association (ATSSA) or other training or qualification satisfactory to the Engineer.
- q. The Traffic Control Manager or Assistant Traffic Control Manager shall be available and reasonably accessible (within 30 minutes) to the project during normal working hours on every day that work is being performed on the project and always on call at other times. During other than normal working hours, these individuals shall respond and be on the project within 60 minutes of notice being given that traffic control items on the project are in need of attention. The Contractor may elect to have an employee or employees perform this function simultaneously on more than one project, but shall not be relieved from the sanctions or disincentives that may be imposed for failure to meet the deadlines specified herein.

- r. The Traffic Control Manager's or Assistant Traffic Control Manager's activities on the project shall be dedicated to the purpose of monitoring and maintaining the traffic control devices. The performance of other crafts or trades will be permitted, but shall be secondary to the performance of duties associated with traffic control.
- s. The Contractor shall provide prior to the installation of any traffic control devices on the project two to four telephone numbers where the Traffic Control Manager or an Assistant Traffic Control Manager may be reached 24 hours a day, seven days a week.
- t. The Traffic Control Manager or Assistant Traffic Control Manager shall have available at all times an approved, current version of the Traffic Control Plan.
- u. If corrective action is not taken by the Contractor within the times specified in Paragraph 2.q., the Engineer may suspend all work on the project until the problem is corrected. The Engineer shall make reasonable allowance for existing weather conditions in the case of materials whose installation is governed by temperature or other atmospheric conditions.

### **Construction Methods**

Subsection 422.03 of the Standard Specifications is amended to include the following:

- 19. The Traffic Control Manager's or Assistant Traffic Control Manager's duties shall include:
  - a. Insuring that all traffic control devices are functioning properly, are clean, and are correctly located as shown on the Traffic Control Plan or as directed by the Engineer. This provision in no way restricts the cleaning, repair, and maintenance of traffic control devices to the Traffic Control Manager or his or her assistants.
  - b. Inspecting all traffic control devices on every calendar day that traffic control devices are in place, whether in use or covered. Inspections shall take place a minimum of twice daily, and at least two inspections shall be eight hours apart. However, during or following periods of inclement weather or when the situation warrants for other reasons, inspections shall be done more frequently. At least 1 inspection each week shall occur during hours of darkness. The Traffic Control Manager or Assistant Traffic Control Manager shall perform the inspections.
  - c. Monitoring the cleaning and maintenance of all traffic control devices and the placement of temporary pavement markings.
  - d. Completing a Traffic Control Inspection form provided by the Engineer at the completion of each inspection. These forms shall be submitted daily to the Engineer, either in person or via facsimile transmission.
  - e. Monitoring flagging operations on the project. The Traffic Control Manager or Assistant Traffic Control Manager shall not act as a flagger, except in an emergency or when providing relief for short periods of time.
  - f. Coordinating all traffic control operations, including those of subcontractors and suppliers.
  - g. Coordinating traffic-related activities with the appropriate law enforcement, fire, and emergency medical agencies.

h. Attending all project scheduling meetings.

### Method of Measurement

Subsection 422.04 of the Standard Specifications and Supplemental Specifications is amended to include the following:

- 21. (1) Traffic Control Management is measured by the day for the actual number of days management and inspection are required and provided. Payment will only be made for one day of Traffic Control Management during each midnight-to-midnight period regardless of the number of Traffic Control Managers or assistants required to adequately perform the work.
  - (2) No measurement will be made when the Engineer has suspended the need for Traffic Control Management and notified the Contractor accordingly.

#### **Basis of Payment**

Paragraph 1. of Subsection 422.05 of the Standard Specifications and Supplemental Specifications is amended to include the following:

Traffic Control Management Day (d)

Paragraph 15. of Subsection 422.05 of the Supplemental Specifications is renumbered to be Paragraph 16. Subsection 422.05 of the Standard Specifications and Supplemental Specifications is amended to include the following:

- 15. With regard to inspection, maintenance, and repair of temporary traffic control devices, an assessment in the amount of \$500 per occurrence per day shall be charged to the Contractor when any of the following occur (these assessments shall be in addition to any other liquidated damages which may be assessed):
  - a. The Contractor fails to respond within the timeframe specified in Paragraph 2.q. of the amended Subsection 422.01 of the Standard Specifications. Response time shall begin when:
    - 1) The Engineer notifies the Contractor of deficiencies in person;
    - 2) The Engineer makes notification of deficiencies via the 24-hour phone number(s) provided by the Contractor; or
    - The Engineer leaves a message or receives no answer at the number(s) provided;
  - b. The Contractor fails to begin corrective actions to repair, replace, remove, relocate, or clean any traffic control devices or pavement markings within two hours of the completion of an inspection that uncovers deficiencies or within two hours of notification of deficiencies by the Engineer.
  - c. The Contractor fails to begin corrective actions to repair, replace, remove, relocate, or clean any traffic control devices or pavement markings within two hours of documented notification by an official law enforcement agency.
  - d. The Contractor fails to make or report the inspections prescribed in this specification.

e. The Engineer observes and documents any occurrence of the Contractor or his or her subcontractors flagrantly disregarding the necessary maintenance of traffic control devices that are in obvious need of attention.

# **RELOCATE EXISTING LIGHTING UNIT**

The existing lighting unit carries a 250 watt luminaire on a 12 foot mastarm, mounted 40 feet above the roadway. The pole is mounted on a concrete foundation using a breakaway transformer base.

The contractor shall relocate the two existing lighting units as indicated on the plans. The lighting units to be relocated shall be carefully dismantled, stored and protected from damage until installed at the new location. The engineer may designate specific areas for temporary storage of the salvaged material. It will be the contractor's responsibility to protect all material from damage during removal and storage.

The contractor shall remove the concrete foundation, including the steel and anchor bolts to a minimum of two feet below finished grade, backfill the excavation with clean soil and compact the soil to the density requirements of the project. Any debris resulting from the removal operation shall be removed from the project. Abandon existing unused conduit and cable in place.

The salvaged components shall be installed at the new location indicated on the plans and connected electrically as shown. The salvaged luminaire shall be cleaned and provided with a new 250 watt HPS lamp.

#### Method of Measurement and Basis of Payment

Lighting units, relocated as indicated in the plans, shall be measured for payment as an individual unit. The relocated lighting unit, in place, and accepted by the engineer, shall be paid for at the contract unit price, per each, for the item "Relocate Street Lighting Unit". This price shall be full compensation for the removal, salvage, storage, transportation, preparation, installation of salvaged material, disposal of surplus materials; for the termination and abandonment of existing underground feeders and for all materials, labor, equipment, tools and incidentals necessary to complete the work.

# **POWER LOCATIONS**

In most instances, the location at which the Contractor is to obtain electric power for a lighting system will be prearranged with the local utility and this location will be shown on the plans. These locations, however, are approximate and subject to change.

The Contractor will be required to contact the utility prior to installing the conduit, cable, and lighting control center to determine if the location for the electrical service remains as shown on the plans. If the location for the service has changed, the Contractor shall advise the Project Manager of this change and shall refrain from installing the lighting control center, conduit and cable until he/she has received the Project Manager's approval.

The Contractor shall be fully responsible for installing the lighting control center at its correct location. If installed at an incorrect location, the Contractor will be required to move the control center to its correct location. The move will be made at no cost to the State.

## TEMPORARY LIGHTING SYSTEM

Lighting Units TP-1 thru TP-4 under this project shall be taken to constitute two Type "R" Temporary Lighting Systems. The Contractor shall install these units as detailed in the plans and these Special Provisions. The temporary lighting system shall be tested and in proper operating condition before traffic is routed over the temporary surfacing.

The State will furnish the following items for the two Temporary Lighting Systems on this project:

4	40' Mastarm Poles	Stock No. 52-17121
4	TBI-17 Transformer Bases	Stock No. 52-17124
4	12' Truss Type Mastarms	Stock No. 52-13125
4	Pole Caps	Stock No. 52-33600
4	Sets (4/set) Connection Bolts	Stock No. 52-33050
4	Sets (4/set) Carriage Bolts	Stock No. 52-33075
4	7' Power Foundations, Slotted	Stock No. 52-33340

The Contractor shall provide all other materials (including luminaries with lamp) required by the plans for a complete and working system and shall install all materials in accordance with the project plans and specifications.

The Contractor shall arrange with the project manager to obtain the state furnished materials at the Nebraska Department of Roads' Supply Yard at 5001 South 14<sup>th</sup> Street, Lincoln, Nebraska. Contact Mr. Dave Feddern at (402) 479-4322 two days prior to pick up. The contractor will be responsible for transporting material from the yard to the job site. The project manager will supply the contractor with a properly completed Department of Roads' Form 146 "Stock Requisition." <u>The contractor will not be allowed to withdraw material from stock without a properly executed copy of this form. Use Activity No. 6242, AFE Z301.</u>

Power to the temporary lighting units will be obtained by making electrical connections to existing lighting circuits as shown in the plans.

When construction is complete and traffic has been redirected back onto the normal driving lanes, the contractor will remove all poles, luminaires, breakaway bases and power foundations from along the temporary surfacing, separate as individual components, clean, properly prepare and deliver all items to the Department of Roads' Supply Yard at 5001 South 14<sup>th</sup> Street, Lincoln, Nebraska. Abandon the direct buried cable in place.

All items must be accounted for and returned in good working condition. Missing or damaged components must be replaced by the contractor before final payment can be made. Items to be returned must be prepared as follows:

- (a) Poles shall be free of internal wiring and have their handhole cover in place.
- (b) Breakaway transformer bases shall have four connecting bolts with nuts and proper large washers attached.

(c) Power foundations shall be thoroughly cleaned and have four carriage bolts with nuts and proper large washers attached.

Luminaires will not be salvaged but will become the property of the Contractor and must be removed from the project.

All items being delivered to the State yard for insertion into state stock must be accompanied by a properly completed Department of Roads' Form 147 "Stock Return for Credit". This form will be signed by the project manager and must be presented to the yard foreman at the time the materials are delivered. <u>The Contractor will not be allowed to "offload"</u> any material if all of the above requirements are not complied with.

All voids resulting from power foundation removal shall be filled with clean soil and compacted to a density equal to that of the surrounding earth.

#### Method of Measurement and Basis of Payment

A temporary lighting system as described in the Plans and these Special Provisions, complete, in place, and accepted by the Engineer, shall be measured for payment as a single unit and paid for at the contract unit price, per each, for the item "Temporary Lighting System, Type R". This price and payment shall be full compensation for installing the lighting system including poles, luminaires, lamps, foundations; all necessary wiring, all materials, labor, equipment, tools; for all transportation, storage and all incidentals necessary to complete the work. Payment shall be made in accordance with the following schedule: Two-thirds (2/3) of the contract unit price to be paid when the system is installed, in place, and approved by the Engineer; one-third (1/3) of the contract unit price to be paid when the system is removed and delivered to the Department of Roads as specified.

## **TEMPORARY TRAFFIC SIGNAL**

Section 422 in the 1997 Edition of Standard Specifications for Highway Construction is amended to include the following

## TEMPORARY TRAFFIC SIGNAL

The contractor shall furnish, construct, maintain and remove the temporary traffic signal as directed by the project manager. All equipment and material shall be furnished by the contractor, except video detection which shall be supplied by the State. All equipment will remain the contractor's property except for the video detection which will remain the State's property.

The contractor shall contact NPPD, (877)ASK-NPPD, to request electric power service for the temporary signal. This should be done as soon as the contract is awarded.

The contractor shall supply a solid state NEMA style traffic signal controller capable of 4 phase operation and shelf to house a 15" x 7" x 10" video detection unit. The contractor shall program and maintain the controller. Contact Bob Simard, Department of Roads Traffic

Engineering Division, (402)479-4594, for the phasing and timing data to program into the controller.

The contractor shall mount the camera on the pole as shown on the plan. The contractor shall supply and install one Beldon #8281 coax cable and one 3/C #14AWG Traffic Signal Cable from the controller to the camera.

The contractor shall maintain the entire temporary signal for the duration of its use at no additional cost to the state.

Payment for the temporary traffic signal shall be full compensation for furnishing, installing, operating, maintaining and removing the temporary traffic signal and for all labor, equipment, tools, materials and incidentals required to complete the work.

## 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.

## SURFACING UNDER GUARDRAIL (S5-4-0801)

Amend Section 503 in the Standard Specifications and Supplemental Specifications to include Surfacing Under Guardrail.

At the contractor's option, the surfacing may be constructed using Class "47B-3000" Concrete, Class "AX-3000" Concrete, Class "PR-3000" Concrete (Class 47B-20 Concrete, Class AX-20 Concrete, Class PR-20 Concrete), or any commercially produced hot mix asphaltic concrete, which has been approved by the Engineer. These materials may be used interchangeably during the course of the work except that surfacing at any individual location must be completed with the same material with which the work was begun.

If concrete is used in the surfacing, it shall reach a minimum strength of 3000 psi (20 Mpa) before opening to traffic.

Amend Subsection 302.04 in the Standard Specifications to provide that the work of subgrade preparation for surfacing under guardrail will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

Subsection 503.05 in the Standard Specifications is amended to provide that P.G. binder used in the asphaltic concrete will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

Subsection 504.04 in the Standard Specifications is amended to provide that the application of a tack coat, including furnishing emulsified asphalt, will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

The work and materials required for any drainage curb placed on surfacing under guardrail will not be measured and paid for, but will be considered subsidiary to the item "Surfacing Under Guardrail".

The work and materials required for surfacing under guardrail will be paid for at the contract unit price per square yard (square meter) for the item "Surfacing Under Guardrail". Payment will be full compensation for the work prescribed in these Special Provisions and the Standard Specifications.

## 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
  - I. 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.

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				

### Table 502.01

- 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.

Pay Factor Formula						
PF = <u>A</u>	(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) +				
		<u>J(0.90)</u>				
		A + B + C + D + E + F + G + H + I + J				
Where:						
А	=	Length of pavement with a Profile Index of 0 to 2 inches per mile.				
В	=	Length of pavement with a Profile Index greater than 2 to 4 inches per mile.				
С	=	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.				
Е	=	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.				
Н	=	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.				

Table 502.02

- 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.

# COLD MILLING, CLASS 3

Under no circumstance shall the Contractor mill a greater depth from the roadway than is shown in the plans.

Amend paragraph 1.c. of Subsection 510.01 to provide that cold milling for the inlays will be measured and paid for as Cold Milling Class 3.

Existing surfacing material is Type B Asphaltic Concrete.

Salvaged Material shall be used in constructing Bituminous Foundation Course on the project.

## **TEMPORARY SURFACING 8**"

The work shall consist of the construction and removal of the temporary surfacing on this project in accordance with plans and these Special Provisions.

The Temporary Surfacing depth shall be as shown in the plans. This provision is applicable to all Temporary Surfacing depths shown in the plans.

Prepare the underlying subgrade, prior to placing the temporary surfacing, in accordance with the requirements of Section 302 in the 1997 English Edition of the Standard Specifications.

At the Contractor's option, the surfacing may be constructed using Class "47B-3500" Concrete or Asphaltic Concrete Type SP4. These materials may be used interchangeably during the course of the work except that surfacing at any individual location must be completed with the same material with which the work was begun.

Asphaltic Concrete used for surfacing shall meet all specifications and sampled and tested as shown in the Supplemental Specifications. The incentive, disincentive pay tables do not apply, however, any asphaltic concrete not meeting the specifications will be subject to removal.

Subsection 302.04 is amended to provide that work of subgrade preparation, as well as all water applied as directed by the Engineer, will not be measured for payment but shall be considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_\_".

Subsection 304.04 is amended to provide that work of shoulder construction, as well as all water applied as directed by the Engineer, will not be measured for payment, but shall be considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_".

Subsection 503.05 is amended to provide that Asphaltic Concrete and P.G. Binder used in the asphaltic concrete will not be measured for payment, but shall be considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_\_". Performance Graded Binder 64-22 shall be used if asphaltic concrete is chosen as the temporary surfacing.

Subsection 504.04 is amended to provide that the application of a tack coat, including furnishing emulsified asphalt, will not be measured for payment, but shall be considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_\_".

Paragraph 10. of Subsection 603.03 is amended to provide that concrete used in the surfacing, reach a minimum strength of 3500 psi before opening to traffic.

Subsection 603.04 is amended to provide that concrete pavement will not be measured for payment, but shall be considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_\_".

When the need for the temporary surfacing is no longer required, the Contractor shall remove the temporary surfacing and it shall become the property of the Contractor and removed from the project. All the work necessary to accomplish this requirement is considered subsidiary to the item "Temporary Surfacing \_\_\_\_\_".

Measure temporary surfacing by the square yard of completed and accepted work.

The work and materials required for temporary surfacing will be paid for at the contract unit price per square yard for the item "Temporary Surfacing \_\_\_\_\_." Payment will be full compensation for the work prescribed in these Special Provisions and the Standard Specifications.

# 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.

Repairing the concrete pavement shall be done prior to the retrofitting and diamond grinding operations.

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 amended to include 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.

The pavement elevation of repair areas shall be corrected in a manner that eliminates swales or bumps. Swales and bumps are defined as having a 1/8" or greater deviation using an approved 10 foot straightedge. Correction shall be diamond grinding or replacement. The condition of the adjacent pavement shall be considered when evaluating the 1/8" deviation requirement.

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 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 shall be placed on the transverse joint on the longer side of the panel to minimize the panel length. 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.

# SEALING TRANSVERSE AND LONGITUDINAL CRACKS

Subsection 611.01 in the 2001 Supplemental Specifications is amended to include the following:

Sealing the transverse and longitudinal cracks shall be done after the dowel bar retrofitting and diamond grinding operations.

The first sentence of Paragraph 1. a. of Subsection 611.03 is void and superseded by the following:

Transverse and longitudinal cracks from 1/4 inch to 1/2 inch in width shall be prepared with a crack reservoir of a nominal 1/2 inch in width at the surface of the pavement and to a depth of at least 5/8 inch

The last sentence of Paragraph 1. b. of Subsection 611.03 is void and superseded by the following:

The backer rod shall be of such diameter to be seated properly that will allow for a depth of approximately 1/2 inch to 1 inch of crack sealing filler.

Paragraphs 2. d. and 2. e. of Subsection 611.03 are void and superseded by the following:

- d. When proper pouring consistency is attained, the cracks shall be filled to 1/8 inch (3 mm) below the pavement surface through the use of a pressure type applicator approved by the Engineer, and equipped with a nozzle which will fit into the joints.
- e. Material spilled on surfaces of the pavement adjacent to the crack shall be cleaned away by the Contractor at no additional cost to the Department.

Subsection 611.04 is void and superseded by the following:

Sealing transverse and longitudinal cracks will be measured for payment by the linear foot of transverse and longitudinal cracks sealed, measured to the nearest foot of sealed cracks, complete, in place and accepted by the Engineer.

## TINING (S6-19-0203)

Paragraph 5.d. of Subsection 603.03 of the Standard Specifications is void and superseded by the following:

#### Description

When required by the plans or Special Provisions, the Contractor shall tine texture the concrete pavement surface using the following methods:

### **Construction Methods**

- 1. The surface of the concrete pavement shall be dragged with wet burlap, carpet, or canvas belt before tining.
- 2. Mainline Tining-Longitudinal
  - a. Mainline paving shall be tined with a metal device 23 feet (7 meters) in length with a single row of tines.
  - b. The tines shall be of such dimensions as to produce grooves parallel to the centerline of the road approximately 1/8 inch (3 mm) wide and 1/8 inch (3 mm) deep spaced at 3/4 inch (19 mm) on center. A 2 inch (50 mm) to 3 inch (75 mm) wide strip of pavement surface shall be protected from surface grooving for the length of and centered along the longitudinal joint.
  - c. The tining device shall be mechanically operated and shall cover the full pavement width in a single pass at a uniform speed and depth centered on the longitudinal joint. Longitudinal tining shall be accomplished by equipment with horizontal and vertical string line controls to ensure straight grooves.
  - d. Hand tining will be allowed on irregular areas or areas inaccessible to the tining machine as shown in the 6 inch (155 mm) to 16 inch (405 mm) Concrete Pavement Plan. A tine rake shall be used for hand tining. The use of a corrugated bull float or other device that creates a smooth finish between the grooves will not be permitted.
- 3. When authorized, pavement texture damaged by rain and pavements not textured to the specified requirements shall be textured only after the concrete has attained its designed strength. The texturing shall be done with diamond grinding equipment specifically designed to grind and texture concrete pavements. The cutting head shall be at least 36 inches (915 mm) wide and capable of producing the depth and spacing indicated in 2.b.

# TIE BARS FOR CONCRETE PAVEMENT (S6-19-0203)

Paragraph 4.k. of Subsection 603.03 in the Standard Specifications is amended to include the following:

TIE BAR SPACING FOR LONGITUDINAL JOINTS * #5 X 30" (760 mm) Grade 40 Bars								
Slah Thickness	2-Lane F	Roadway	Roadways w/3 or More Lanes 30' (9.1 mete Top System					
	Shoulder Joint Bar Spacing	Centerline Joint Bar Spacing	Shoulder Joint Bar Spacing	Lane Joint Bar Spacing	Centerline Joint Bar Spacing			
10" (250 mm) or Less	33" (840 mm)	33" (840 mm)	33" (840 mm)	24 ¾" (630 mm)	33" (840 mm)			
Greater than 10" (250 mm)	33" (840 mm)	24 ¾" (630 mm)	33" (840 mm)	16 ½" ** (420 mm) **	24 ¾" (630 mm)			

\* Tie bar spacing may vary ±1" (±25 mm) from the nominal spacing shown. The number of tie bars per 16'-6" (5 meter) panel shall remain constant.

\*\* Depth of tie bar placement for doweled pavement shall be (T/2) less 1 ½" (38 mm).

TIE BAR SPACING FOR LONGITUDINAL JOINTS * #5 X 30" (760 mm) Grade 60 Bars								
Slah Thickness	2-Lane F	2-Lane Roadway Roadways w/3 or More Lanes 3			30' (9.1 meter) Top System			
	Shoulder Joint	Centerline Joint	Shoulder Joint	Lane Joint	Centerline Joint			
	Bar Spacing	Bar Spacing	Bar Spacing	Bar Spacing	Bar Spacing			
10" (250 mm)	49 ½"	49 ½"	49 ½"	33"	49 ½"			
or Less	(1260 mm)	(1260 mm)	(1260 mm)	(840 mm)	(1260 mm)			
Greater than 10"	49 ½"	33"	49 ½"	24 ¾"	33"			
(250 mm)	(1260 mm)	(840 mm)	(1260 mm)	(630 mm)	(840 mm)			

\* Tie bar spacing may vary  $\pm$  1" ( $\pm$  25 mm) from the nominal spacing shown. The number of tie bars per 16'-6" (5 meter) panel shall remain constant.

No tie bar shall be installed closer than  $\frac{1}{2}$  the tie bar spacing to a transverse joint.

Paragraph 4.k.(3)(ii) of Subsection 603.03 in the Standard Specifications and Supplemental Specifications is void and superseded by the following:

(ii) To minimize tie bar breakage, before placing the adjacent lane the tie bars shall be bent to a position that is at least 45 degrees to the longitudinal joint. The free end of the bar shall not be within six inches (150 mm) horizontally of the location of the transverse joint to avoid corner cracking when the joint is sawed. The free end of the bar shall also be positioned so that it does not interfere with the movement of any dowel bar in the transverse joint. Bars that are broken by bending or that are loose in their socket must be replaced or secured.

## DOWELED CONCRETE PAVEMENT (S6-20-0203)

Section 603 in the Supplemental Specifications and the Standard Specifications is amended to include Doweled Concrete Pavement.

Transverse Joints for doweled concrete pavement shall be constructed perpendicular to the roadway on 16'-6" (5 meter) centers.

The dowel bars shall meet the requirements of Section 1022.

The dowel bars shall be placed within a tolerance of 1/4 inch (6 mm) in both the horizontal and vertical planes. The Contractor shall check with a suitable template approved by the Engineer, the placement of each assembly and the position of the bars within the assembly. If the assembly is found to be placed outside any one of the tolerances, the placement shall be corrected.

Dowels for transverse joints furnished in approved assemblies shall be suitable for the joint layout shown in the plans. The assemblies shall be dipped in MC-70, RC-70, RC-250, CRS-1, CRS-2, CSS-1H, HFMS-2h, or HFMS-2s prior to delivery to the work site.

For areas with pavement widening, the Department requires that dowel baskets be placed in all contraction joints which are 6 feet (1.8 m) or wider.

When basket assemblies are used, the baskets shall be placed at all transverse joints where doweled concrete is required, and shall be securely pinned to the grade to prevent any movement during the paving operation. Pins shall be placed at a maximum distance of three feet (1 meter) apart and shall be a minimum of 12 inches (300 mm) in length. All lateral support braces, which would restrict movement of the dowel bars, shall be cut after the baskets are secured and prior to placing the concrete.

Assemblies that are damaged prior to placement shall not be used. Assemblies damaged after placement shall be replaced prior to paving.

If normal vibration is found inadequate to thoroughly consolidate the plastic concrete within and around the dowel basket assemblies, additional hand vibration or other procedures may be required by the Engineer.

Precautions shall be taken to assure that the sawed contraction joint is located directly over the center of the dowel bars.

# CRACKS IN CONCRETE PAVEMENT (S6-20-0901)

Transverse cracks which form in the concrete pavement panels between load transfer joints shall be secured with a minimum of 1 1/2 inch x 18 inch (38 mm x 450 mm) epoxy coated deformed reinforcing bars as shown in the plans. The reinforcing bars shall conform to the requirements of Sections 1020 and 1021. The dowel bars shall be secured using a resin adhesive listed on NDOR approved products list. No payment will be made for this work.

## PORTLAND CEMENT CONCRETE PAVEMENT SMOOTHNESS (S6-22E-0203)

Section 602 in the Standard Specifications and Supplemental Specifications is void and superseded by the following:

### 602.01 - General

- 1. This specification establishes a standard for Portland cement concrete pavement smoothness, and defines defective pavement smoothness. The intent of the specification is to produce a finished Portland cement concrete pavement driving surface with a Profile Index no greater than 20 inches per mile.
- 2. Pavement smoothness will be evaluated as prescribed in this section when the pay item "Portland Cement Concrete Smoothness Testing" is included in the contract.

### 602.02 – Equipment

- 1. The Contractor shall furnish a 25-foot California profilograph approved by the Nebraska Department of Roads.
- 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
  - I. Profile Index for each test section
  - m. Bump locations for each test section
- 602.03 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 pre-measured block height.
    - d. The profilograph shall be checked for overall performance by moving it over the prescribed path of a premeasured pavement test section at walking speed.
    - e. Distance measurement indicated by the profilograph shall be within 0.2 percent 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 percent 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 Independence 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.
- 602.04 Profilograph Test Procedures
  - 1. The Contractor shall perform all pavement smoothness specification tests except the 10-foot straight edge testing as shown in Paragraph 15, 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 72 hours after initial 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 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. The wheel path to be tested shall be designated by the Engineer prior to the beginning of construction.
- 6. The Contractor shall remove all objects and foreign material from the pavement surface before testing.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. 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.
- 12. The Engineer shall perform or schedule verification tests on at least 10 percent of the pavement surface, using a profilograph owned by the Department.
- 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.
- 14. 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 crossing and associated transitions.
  - e. Pavement with a posted speed limit of 45 miles per hour or less.
  - f. Mandated blockouts for access at intersections and driveways including 50 feet on either side.
  - g. Pavement that would require handwork by normal industry practices.
  - h. Additional exceptions shown on the summary sheet in the plans.
- 15. 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 0.30 inch. The deviation of the surface shall not exceed 1/8 inch, if a 10-foot straight edge is used.
- 602.05 Evaluation
  - 1. The Contractor shall determine a Profile Index and number of correctable bumps 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 0.30 inch in height above a base line span of 25 feet.
- 602.06 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. The Contractor may also locate and perform voluntary corrective work as described in Paragraphs 4 & 5 of this Subsection.

- a. Corrective work, including bump correction, shall be accomplished by diamond grinding or by removal and replacement, at no cost to the Department.
- b. 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.
- c. The Contractor shall re-test all corrected test sections with the profilograph.
- 2. All bumps, as defined in Subsection 602.05, Paragraph 2, shall be corrected until they are at or below the 0.30 inch maximum height.
- 3. When the initial Profile Index of a test section is 20 in/mi, or less, mandatory bump correction is the only corrective work allowed for that section.
- 4. When the Profile Index of a test section exceeds 20 in/mi, the Contractor may perform voluntary corrective work in that section, in addition to mandatory bump correction work.
- 5. When the Profile Index of a test section exceeds 30 in/mi, mandatory corrective work shall be performed to reduce the Profile Index of that section to a value of 30 in/mi or less. The Contractor may perform voluntary corrective work in that section, in addition to mandatory work.
- 6. When pavement removal and replacement is used for correction, the Contractor shall furnish the replacement material and construction at no cost to the Department.
  - a. All replacement material shall meet the original specifications for the material removed.
  - b. Removal and replacement shall be for the full lane width for a distance determined by the Engineer.
  - c. Replacement material must meet the same smoothness requirements as the removed pavement.

### 602.07 – Traffic Control

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

### 602.08 – Method of Measurement

1. The unit price of the accepted quantity of Portland concrete pavement in each profilograph test section shall be adjusted according to the schedule in Table 602.01, subject to the limitations in Paragraphs 2, 3 and 4 of this Subsection. Pavement sections excluded from this smoothness specification shall not qualify for incentive pay.

Tab	le	602.01

Payment Adjustment Schedule					
Profile Index	Percent of				
Inches per Lane Mile	Contract				
	Prices				
0 to 4	106				
Greater than 4 to 8	104				
Greater than 8 to 12	102				
Greater than 12 to 20	100				
Greater than 20 to 22	98				
Greater than 22 to 24	96				
Greater than 24 to 26	94				
Greater than 26 to 28	92				
Greater than 28 to 30	90				
Greater than 30	Corrective				
	work				
	required				

- 2. When the initial Profile Index of a test section is 20 in/mi or less, that value shall determine the percent of incentive pay for the section. Mandatory bump correction work performed in that section may increase the percent of pay.
- 3. When the initial Profile Index of a test section is greater than 20 in/mi, mandatory bump correction and/or voluntary corrective work performed in that section may increase the percent of pay up to the100 percent level.
- 4. When the initial Profile Index of a test section is greater than 30 in/mi, mandatory or voluntary corrective work performed in that section may increase the percent of pay up to the 100 percent level indicated in Table 602.01.

#### 602.09 – Basis of Payment

1. The overall pay factor for the accepted quantity of Portland cement concrete pavement in all profilograph test sections shall be determined according to the formula in Table 602.02.

Table 602.02

Pay Factor Formula
PF=A(1.06) + B(1.04) + C(1.02) + D(1.00) + E(0.98) + F(0.96) + G(0.94) + H(0.92) + I(0.90)
A + B + C + D + E + F + G + H + I
Where:
A=Length of pavement with a Profile Index of 0 to 4 inches per mile.
B= Length of pavement with a Profile Index greater than 4 to 8 inches per mile.
C=Length of pavement with a Profile Index greater than 8 to 12 inches per mile.
D. Length of neuropent with a Drafile Index greater than 40 to 20 inches neuroile
D=Length of pavement with a Profile index greater than 12 to 20 inches per mile.
E-Length of pavement with a Profile Index greater than 20 to 22 inches per mile
L-Lenger of pavement with a rione index greater than 20 to 22 inches per time.
F=Length of payement with a Profile Index greater than 22 to 24 inches per mile.
G=Length of pavement with a Profile Index greater than 24 to 26 inches per mile.
H=Length of pavement with a Profile Index greater than 26 to 28 inches per mile.
I-I anoth of navomant with a Profile Index greater than 28 to 20 inches per mile
I=Length of pavement with a Frome index greater than 20 to 30 inches per time.

2. The work of smoothness testing shall be paid for at the lump sum contract unit price. This price shall be full compensation for all smoothness testing as set forth in this specification.

## SEALING TRANSVERSE AND LONGITUDINAL JOINTS

Section 612 in the Supplemental Specifications is amended to include the following:

Subsection 612.01 is void and superseded by the following:

This work shall consist of the preparation and sealing of all joints in the concrete roadway after the dowel bar retrofitting and diamond grinding operations.

# DIAMOND GRINDING AND TEXTURING CONCRETE PAVEMENT

#### DESCRIPTION

This work shall consist of diamond grinding and texturing the mainline concrete pavement surface for profile improvement. The grinding quantities are based on 26' width, due to day-lighting the concrete shoulders, as required to prevent any vertical projection in excess of ¼ inch. Grinding shall not extend across bridges unless specifically designated by the Engineer. The work shall be done according to the plans and these Special Provisions.

#### **PROJECT INFORMATION**

The 9" plain portland cement concrete pavement to be ground was constructed in 1995. The surface is 24' wide with skewed joint spacing of 16'-6" and has 8' concrete shoulders. The joints are not doweled. Pertinent data for the original construction project is shown below:

Northbound and Southbound					
Highway	L-25B				
Reference Post	0.00 to 0.44				
Station	90+16 to 102+7	0			
<b>Class of Concret</b>	e:	47B (30% Coarse Aggregate)			
Type of Coarse /	Aggregate:	Limestone			
Source of Coarse Aggregate:		Guernsey Stone			
		Guernsey, Wyoming			
Los Angeles Abr	asion (% Wear):	Average 26 to 30			

Bridge Exceptions: Sta. 96+54 to 99+99 (Bridge No. 0.16)

The minimum, maximum and average joint faulting in this section is shown in the following table:

#### JOINT FAULT MEASUREMENTS, INCHES

	Northbound		nd	Southbound		
Location	Min.	Max.	Avg.	Min.	Max.	Avg.
L-25B(0.00 to 0.44) Sta. 90+16 to 102+70	0.02	0.60	0.25	0.06	0.48	0.25

Below are the proportions for 47B concrete pavement:

	Sacks o	f	Ratio					
	Cement		Lbs. Tot	al Agg.	Coarse Agg.			
Class	per	Туре	per S	Sack	to	Type of		
of	Cu.Yd.	of	of Cement		Total Agg.	Coarse		
Concrete	(Fixed)	Concrete	Min.	Max.	(Percent)	Aggregate		
47B	6.0	Air-Entrained	480	520	30±3	Limestone		
## EQUIPMENT

Grinding and texturing shall be done utilizing diamond blades mounted on self-propelled machines designed for grinding and texturing pavements. The cutting head shall be at least 36 inches wide and consist of many diamond blades with spacers. The equipment shall be such that it will not cause strain or damage to the underlying surface of the pavement. Equipment that causes excessive raveling, aggregate fractures, spalls, or disturbance of transverse or longitudinal joints will not be permitted.

#### DIAMOND GRINDINGS

Grinding shall be done in the longitudinal direction so that grinding begins and ends at lines normal to the pavement centerline within one ground area, but not necessarily at the end of each shift or of a working day.

Grinding for profile improvement shall be continuous, within the area designated on the plans. All grinding shall be to full pavement width and shall include at least 90% of the pavement surface within any 100-foot length of pavement.

Grinding shall leave no vertical projection in excess of 1/4 inch on any longitudinal line and at either edge of the portland cement concrete pavement.

This work shall be done only with one lane closed, as shown in the plans. The contractor will also be allowed to maintain a single lane closure overnight during the Diamond Grinding operation if he elects to continue grinding on a 24 hour basis. The lane closure shall be removed upon completion of grinding operation in that lane or when there is no grinding activity scheduled for the next day or the weekend. The contractor will be assessed \$500 for each day the lane closure remains in place without grinding taking place.

Removal of all slurry or residue from the grinding operation shall be continuous. Pavement must be left in a clean condition. Residue from grinding operations shall not be permitted to flow into gutters or other drainage facilities. The residue shall be disposed of on the shoulder foreslopes.

Concrete pavement repair and dowel bar retrofitting shall be completed in an area before the grinding operation.

## **SMOOTHNESS**

The ground and textured pavement will be considered acceptable provided the maximum roughness does not exceed 1.0 inch in any individual 0.10 mile of each vehicle lane, when tested with the California Type Profilograph.

## METHOD OF MEASUREMENT

The quantity of grinding and texturing concrete pavement to be paid for shall be measured in square yards to the nearest 1.0 square yard, completed and accepted by the Engineer.

#### BASIS OF PAYMENT

The quantity of completed and accepted work, measured as provided herein, shall be paid for at the contract unit price per square yard for the item "Diamond Grinding and Texturing Concrete Pavement". This price shall be full compensation for furnishing all materials, equipment, labor, supplies, tools and incidentals necessary to complete the work.

## DOWEL BAR RETROFIT

#### DESCRIPTION

Install epoxy coated dowel bars on the transverse joints and transverse cracks in the existing portland cement concrete pavement as shown in the plans. The dowels shall be placed after the concrete repair and prior to the diamond grinding operation. Below are the locations for dowel bar retrofit:

L-25B(0.0-0.44) Sta. 90+16 to 102+70 NB & SB (54 lane joints & 13 transverse cracks) Exception: Bridge No. 0.16 (Sta. 96+54 to Sta. 99+99)

#### MATERIALS

Furnish materials meeting the following requirements:

Epoxy coated dowel bars, 1-1/2 x 18 inches, shall conform to the requirements of Section 1022 in the Standard Specifications and Supplemental Specifications. The surface of the dowel bars shall be epoxy coated. Epoxy coating of the ends of the dowel bars is optional. The dowel bars shall be uniformly coated with an approved bond breaker in conformance with Paragraph 4 of Subsection 603.03.

The dowel bars shall have tight fitting end caps made of nonmetallic material that allow for at least 1/4 inch bar movement at each end of the bar. The contractor shall submit an end cap sample to the Engineer for approval before installation. Chair devices for supporting the dowel bars shall be either epoxy coated or made of nonmetallic material. The chair devices shall provide a minimum clearance of 1/2 inch between the bottom of the bar and the surface upon which the bar is placed and between the bar and the walls of the slot. The chairs shall be designed to prevent movement of the bar during placement of the grout. The chair devices shall be approved by the Engineer before installation.

The caulking filler shall be a non-sag sealant approved by the Engineer before use.

The foam core board filler material shall be a closed cell foam faced with poster board material on each side. The foam core board filler shall be  $3/8 \pm 1/8$  inch thick. The foam core board filler shall be approved by the Engineer before installation.

#### NON-SHRINK GROUT

The non-shrink grout placed around the dowel bars shall be one of the materials listed in the Approved Products List.

The grout may be extended as the manufacturer recommends. The aggregate for extending the grout must be a sand / gravel material approved by Materials and Research Division and meeting the following gradation.

	Percent Passing	
Sieve Size	Target Value	Tolerance
3/8	100	0
4	90	±5
10	5	±10
200	0	+1

The grout must meet the following strength requirements.

4-hour minimum compressive strength, 3000 psi 24-hour minimum compressive strength, 5000 psi

A minimum of one set of 3 cylinders will be made from each day's pour from the first grout produced and additional sets can be made at anytime during grout production. When the lane will be opened to traffic at the end of a day's pour, cylinders shall also be taken from the last grout produced and placed. These cylinders shall be tested at the age of 4 hours to verify that the minimum 4-hour compressive strength has been obtained before opening to traffic. If minimum grout strengths are not being met, grouting operations shall be suspended until the contractor can demonstrate batch mixing and proportioning proficiency that meets the minimum strengths required. Acceptance will be based on meeting the 24-hour minimum strength requirements. Acceptance of dowel bars placed with strengths not meeting the 24-hour minimum compressive strength shall be based on a 72-hour compressive strength of 6000 psi. If this strength is not met, the dowel bars shall be removed and replaced at no additional cost. Any additional traffic control required due to not meeting the minimum strength requirements shall be performed at no additional cost.

## CONSTRUCTION REQUIREMENTS

Slots shall be cut in the pavement with a gang saw capable of cutting at least three slots in each wheel path at a time. The slots shall be cut to the depth required to place the centers of the dowels at mid-depth in the concrete slab. Multiple saw cuts parallel to the centerline may be required to remove the material from the slot.

Jackhammers used to remove the concrete from the slots shall not be larger than the 30pound class. Care shall be taken to prevent any damage to the pavement or to vehicles traveling in the adjoining lane.

All exposed surfaces and cracks in the slots shall be sandblasted and cleaned before bar installation. The transverse contraction joint on the bottom and sides of the slots shall be filled with non-sag caulking filler.

Chair devices shall be used to support the dowel bars at the depth shown on the plans but shall provide not less than 1/2 inch clearance around the sides and bottom of the bar. Place the dowel bars parallel to the centerline of the pavement and parallel to the pavement surface. The dowel bars shall be placed within  $\pm$  1/4 inch of the desired alignment. The dowel bars shall be centered over the transverse joint or crack so that a minimum of 7 inches of the dowel extends into the adjacent panel.

Cut a piece of foam core board material to fit tightly around the dowel bar. The foam core board shall be placed at the center of the dowel bar and 1 to 1-1/2 inches below the surface of the concrete pavement. The foam board shall also cover the existing transverse joint or crack and be capable of remaining in a vertical position, tight to all edges during grout placement operations. The joint or crack above the foam board insert shall be re-established within 8 hours of grout placement by means of sawing when the grout has attained sufficient strength.

The non-shrink grout shall be produced with a portable mixer approved by the Engineer. The mixer must be capable proportioning the grout material and automatically recording and printing the material weights. All grout shall be placed immediately after mixing and before the grout has attained an initial set. The grout shall not be re-tempered with water.

The grout shall be placed according to the manufacturer's recommendations. The grout shall be thoroughly consolidated with a hand held vibrator so the grout completely surrounds the dowel bars and support chairs. The grout shall be placed so that the material is at least 1/8 inch higher than the pavement.

The contractor shall construct a test section consisting of slot sawing, concrete removal, dowel bar placement, and grout mixing and placement at a location selected by the Engineer. The test section shall be at least one full lane width and consist of at least 10 joints. Full depth cores will be taken from the test section to determine the quality of the placement operation. This requirement may be waived by the Engineer provided the contractor has previously demonstrated competency in dowel bar retrofit operations.

## METHOD OF MEASUREMENT

Dowel Bar Retrofit will be measured by the each for each bar placed.

## BASIS OF PAYMENT

Payment for Dowel Bar Retrofit will be paid at the contract unit price per each for the item "Dowel Bar Retrofit." Payment will be full compensation for all work prescribed in this specification.

# 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 Appli- cation 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
Sheeps Fescue	85		8
Thickspike Wheatgrass - Critana	85		6
Western Wheatgrass – Flintlock	85		6
Sand Lovegrass – Native	90		2
Blue Grama – NE, KS, CO	35		2
Buffalograss – Sharps II, Cody	80		5
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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# **EROSION CONTROL**

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

	Minimum Purity (%)	Application rate in lb. of Pure Live Seed/1000 yd. <sup>2</sup>
For all Erosion Control – Use the sam seeding.	e seed mix and rate	e as shown for Type B

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

Rate of application of inorganic fertilizer shall be:

	Rate of Application Per 1000 yd.² (Min.)
Available Nitrogen ( $N_2$ )	8 or 9 lb.
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	23 or 24 lb.

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

	Rate of Application Per 1000 yd. <sup>2</sup> (Min.)
Nitrogen (Total Available)	18 lb.

# GUARDRAIL END TREATMENT, TYPE II (S9-3-0202)

Section 902 in the Standard Specifications is amended to include "Guardrail End Treatment, Type II".

This work consists of furnishing and installing a guardrail end treatment system according to the details and at the locations shown in the plans.

The Contractor has the option of installing one of the following systems:

- 1.) SRT-350; Manufactured by Trinity Industries, Inc. 2525 N. Stemmons Freeway Dallas, TX 75207 (800) 644-7976
- 2.) FLEET; Manufactured by Road Systems, Inc. 3616 Old Howard County Airport Big Springs, TX 79720 (915) 263-2435

The Contractor will be required to furnish two sets of shop plans to the Department of the system to be installed. The guardrail end treatment shall be installed in accordance with the recommendations of the manufacturer.

Payment shall be full compensation for all work required to provide and install the system.

# **REMOVE GUARD RAIL**

Section 903 in the 1997 English Edition of the Standard Specifications is amended to include that all guard rail removed shall be salvaged and delivered to the State of Nebraska Maintenance Yard in Big Springs, Nebraska.

## 47B CONCRETE PAVEMENTS AND 47BD CONCRETE FOR BRIDGES (S10-4-0403)

#### General

Section 1002 in the 1997 Standard Specifications and Supplemental Specifications is amended to include the following:

For the purpose of this Special Provision, Type IPN shall mean Type IP cement made with 15 to 25 percent natural pozzolan and Type IPF shall mean Type IP cement made with 15 to 25 percent Class F fly ash. All cements must conform to the requirements of Section 1004 in the 1997 Standard Specifications and Supplemental Specifications.

#### 47BD Concrete for Bridges and Barriers

The 47BD concrete used in bridge decks, approach slabs, bridge rails, and barriers shall be proportioned using one of the alternates shown in Table I.

Alt.	Cement Type	Pounds of Cement per Cu.Yd.	Pounds of Class F Fly Ash	A Cor Per Min.	nir ntent cent Max.	Pour Total per C Min.	nds of Agg. Cu.Yd. Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	l or ll	590	130 Min.	5.0	7.5	2530	2950	30±3	Limestone
2	IPN	658	0*	5.0	7.5	2530	2950	30±3	Limestone
3	IPF	658	0**	5.0	7.5	2530	2950	30±3	Limestone
4	l or ll	658***	0***	5.0	7.5	2530	2950	30±3	Limestone

## TABLE I (ENGLISH) CLASS 47BD CONCRETE PROPORTIONS

# TABLE I (METRIC) CLASS 47BD CONCRETE PROPORTIONS

Alt.	Cement Type	Kg of Cement per Cu. Meter	Kg of Class F Fly Ash	A Cor Per Min.	nir ntent cent Max.	Kg of Agg Cu.l Min.	<sup>:</sup> Total . per Veter Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	l or ll	350	77 Min.	5.0	7.5	1500	1750	30±3	Limestone
2	IPN	390	0*	5.0	7.5	1500	1750	30±3	Limestone
3	IPF	390	0**	5.0	7.5	1500	1750	30±3	Limestone
4	l or ll	390***	0***	5.0	7.5	1500	1750	30±3	Limestone

\* Class C or F fly ash may be substituted in the mix design provided the total pozzolan content does not exceed 25 percent. The mix may be modified by substituting an amount of fly ash equal to the weight of cement removed.

\*\* No additional fly ash substitution is allowed.

\*\*\* Total alkali content shall not exceed 3 lbs./yd.<sup>3</sup> (1.8 Kg/m<sup>3</sup>)

\*\*\*\* Alternate Aggregate from an approved source may be substituted for limestone.

Water reducing and set retarding admixtures shall be used in accordance with the manufacturer's recommendations of dosage rates.

# 47B Concrete Pavements

The 47B concrete used in concrete pavements shall be proportioned using one of the alternates shown in Table II.

Alt.	Cement Type	Pounds of Cement per Cu.Yd.	Pounds of Class F Fly Ash	A Cor Per Min.	ir itent cent Max.	Pour Total per C Min.	nds of Agg. Cu.Yd. Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	l or ll	510	110 Min.	5.0	7.5	2876	3130	30±3	Limestone
2	IPN	564*	0*	5.0	7.5	2876	3130	30±3	Limestone
3	IPF	564**	0**	5.0	7.5	2876	3130	30±3	Limestone
4	l or ll	564***	0***	5.0	7.5	2876	3130	30±3	Limestone

# TABLE II (ENGLISH) CLASS 47B CONCRETE PAVEMENT PROPORTIONS

TABLE II (METRIC) CLASS 47B CONCRETE PAVEMENT PROPORTIONS

Alt.	Cement Type	Kg of Cement per Cu. Meter	Kg of Class F Fly Ash	A Cor Per Min.	nir ntent cent Max.	Kg of Agg Cu.I Min.	<sup>:</sup> Total . per Veter Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	l or ll	303	65 Min.	5.0	7.5	1706	1857	30±3	Limestone
2	IPN	335*	0*	5.0	7.5	1706	1857	30±3	Limestone
3	IPF	335**	0**	5.0	7.5	1706	1857	30±3	Limestone
4	l or ll	335***	0***	5.0	7.5	1706	1857	30±3	Limestone

\* Class C or F fly ash may be substituted in the mix design provided the total pozzolan content does not exceed 25 percent. The mix may be modified by substituting an amount of fly ash equal to the weight of cement removed.

\*\* No additional fly ash substitution is allowed.

\*\*\* Total alkali content shall not exceed 3 lbs./yd.<sup>3</sup> (1.8 Kg/m<sup>3</sup>)

\*\*\*\* Alternate Aggregate from an approved source may be substituted for limestone.

Water reducing admixtures shall be used in accordance with the manufacturer's recommendations of dosage rates.

# 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 ¼		

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

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

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

# DOWEL BARS (S10-5-0801)

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

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

# CORRUGATED METAL PIPE (S10-5-0801)

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

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

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

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

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

3.a. Round reinforced concrete pipe shall conform to the requirements of AASHTO M 170-95 with the exception of the minimum circumferential reinforcing (in2/ft. (mm 2/m) of pipe wall) for 15, 21, and 24 inch (380, 460, 600 mm) Class III pipe, as shown below:

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

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

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

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

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

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

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

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

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

Subsection 1058.02 in the Supplemental Specifications is void.

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

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

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

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

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

Paragraph 3. of Subsection 1068.02 is void.

# STEEL BARS FOR CONCRETE REINFORCEMENT (\$10-5-1201)

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 (\$10-5-0403)

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

Table 1021.01			
Bend Test Requirements			
En	glish	M	etric
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 samples results, along with meeting other requirements of the group or groups. Failure to do so will result in loss of certification by the Department.

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

## Supplier Certification

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

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

## II. Binder Sampling and Testing:

- 1. Lots. Each 3750 tons (3400 Mg) of HMA produced will be a binder lot.
- 2. A binder lot will include only one PG Binder grade or a blend as allowed in paragraph 6.e.
- 3. A Binder lot will only include one supplier of the PG Binder or a blend as allowed in paragraph 6.e.
- 4. Blending of different binder grades and binders from different suppliers will be allowed with restrictions as noted in paragraph 6.e. The Engineer must be notified of the intent to blend prior to actual blending.

- 5. All binders shall be sampled at the rate of one sample per lot with a minimum of three samples per project.
  - a. The sample shall consist of two one-quart (liter) cans and shall be taken by the Contractor's Certified Sampling Technician, with assistance from or under supervision of NDR personnel. The sample shall be taken at the plant from the line between the storage tank and the mixer or from the tank supplying material to the line, at a location at which material sampled is representative of the material in the line to the mixer. One can will be tested for compliance with MP1 specifications and the other can portion will be saved for dispute resolution, if needed. The sampling process shall follow procedures of the NDR Materials Sampling Guide and NDR T 40.
  - Testing. When the tested PG Binder is in compliance, the binder lot will be accepted and both cans of the sample can be discarded. If the tested PG Binder does not comply, then the price of the PG Binder lot represented by the sample shall be adjusted according to Table 1. Overall project average testing requirements and price adjustments will also apply, as stated in Table 2.
- 6. Material Requirements:
  - a. Performance graded binder, as specified in the contract items shall be in accordance with AASHTO Designation MP1 and meet all minimum and maximum requirements.
  - b. Substitution of a PG Binder, which exceeds the upper and lower grade designations from the specified, requires advance notification of the Engineer, and be documented by a no cost change order. The bill of lading or delivery ticket shall state the binder grade and specific gravity.
  - c. Material Certification A Material Certification shall be submitted prior to construction stating, the type of modifier being used, and the recommended mixing and compaction temperatures for the Hot Mix Asphalt.
  - d. The Contractor shall receive from the supplier, instructions on the proper storage and handling of each grade and shipment of PG Binder.
  - e. Blending of PG Binders at the hot mix plant site will be allowed only when transitioning to an asphalt mixture requiring a different grade of binder and with the following restrictions:
    - (1) The resultant blend will meet MP-1 specifications when tested as ±3° of the specified PG binder. The sample of the blended material will 1) be considered as a lot sample, 2) will be taken during initial production following the blending of the binders, and 3) deductions when not meeting MP-1, will apply. On the blended sample's identification form will be a note explaining the blending conditions and a statement that the sample is a blend of materials. The next lot sample, following the sample representing the blend,

will be tested as the specified binder grade for the asphalt mixture being produced and shall meet MP-1 specifications.

(2) Modified Binders - When a type of modification is used and stated in the Material Certification as required in paragraph 6.c., it will not be allowed to be blended with a binder containing a different type of modification. Blending of the same type of modifiers will be allowed.

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

#### TABLE 1

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

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

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

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

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

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

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

be tested for complete MP-1 compliance. Testing will continue in this manner until tested samples meet all of MP-1 specifications.

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

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

<b>OVERALL PROJECT AVERAGE - PRICE REDUCTION TABLE</b>			
	Range of Average	Pay Factor Applied	
<u>Tests on Original Binder</u> Dynamic Shear, G*/Sin δ, kPa Min. 1.00 kPa	< 1.00 - 0.98 < 0.98 - 0.96 < 0.96 - 0.94 < 0.94	0.98 0.95 0.92 0.85	
<u>Tests on Rolling Thin Film</u> <u>Oven Residue</u> Dynamic Shear, G*/Sin δ, kPa Min. 2.20 kPa	< 2.20 - 2.156 < 2.156 - 2.09 < 209 - 2.024 < 2.024	0.98 0.95 0.92 0.85	
<u>Tests Pressure Aging Vessel</u> <u>Residue</u> Dynamic Shear, G*Sin δ, kPa Max. 5000 kPa	< 5000 - 5100 < 5100 - 5250 < 5250 - 5400 < 5400	0.98 0.95 0.92 0.85	
m-Value Min. 0.300	< 0.300 - 0.298 < 0.298 - 0.293 < 0.293 - 0.290 < 0.290	0.98 0.95 0.92 0.85	
<u>Creep Stiffness</u> S, MPa Max. 300 MPa	< 300 - 306 < 306 - 315 < 315 - 324 < 324	0.98 0.95 0.92 0.85	

## Table 2

Single Sample Reduction and Overall Project Average Reduction

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

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

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

- 1. The Bituminous Lab may conduct retesting of the remaining portion of the original can sample as determined necessary to confirm or disaffirm the original test result(s).
- 2. The Flexible Pavement Engineer will notify the Contractor who will arrange to investigate all aspects of the testing, loading, handling and delivery of the material in question. The Contractor shall report findings to the Central Laboratory, Flexible Pavement Engineer.
- 3. The Department will collect and compile all information and prepare a report. A copy of the report will be distributed to the District and the Contractor.
- 4. The Bituminous Laboratory will issue the standard report of tests for all samples tested, to include any resulting pay factor deductions. A copy of the report of tests will be distributed to the District, Construction Division, and Contractor.

#### **Dispute Resolution**

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

#### Basis of Measurement

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

#### Basis of Payment:

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

# SUPERPAVE ASPHALTIC CONCRETE

Asphaltic Concrete Type SP4 shall use the 0.5 gradation band.

Paragraph 2.b. of Subsection 503.06 of the Supplemental Specifications is amended to include Asphaltic Concrete Type SP6.

Section 1028 is amended to include Asphaltic Concrete Type SP6.

Paragraph 2. a. of Subsection 1028.01 is void and superseded by the following:

Before production of asphaltic concrete, the Contractor shall submit, in writing, a tentative job mix formula on the NDOR Mix Design Submittal Form for approval to the NDR Flexible Pavement Engineer at the Lincoln, Nebraska Central Laboratory.

Paragraph 2. b. of Subsection 1028.01 is void and superseded by the following:

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.

Paragraph 2. c. (1) of Subsection 1028.01 is void and superseded by the following:

The Contractor shall submit six – 95 mm and two – 75 mm gyratory pucks compacted to  $7\% \pm 1\%$  air voids for testing and 3 proportioned 22 lb. (10,000-gram) samples of the blended mineral aggregates 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 validate the Contractor's Superpave mix design test results and mix properties.

Paragraph 2. c. (3) of Subsection 1028.01 is amended to include the following:

(ix) Dust to Binder Ratio

Paragraph 2. c. (3) (i) of Subsection 1028.01 is void and superseded by the following:

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.

Table 1028.01 is amended to include the following:

Asphaltic Concrete Type	Percent, Maximum RAP	
SP6	15	

Table 1028.01

Paragraph 4, f, (2), (i) of Subsection 1028.01 is void and superseded by the following:

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.

Paragraph 4. h. (3) of Subsection 1028.01 is void and superseded by the following:

All QC test results shall be documented on NDR Forms 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.

Paragraph 4. i. (3) (ii) of Subsection 1028.01 is amended to include the following:

(VII) Dust to Binder Ratio

Paragraph 4. i. (3) (iii) of Subsection 1028.01 is amended to include the following:

- (IV) Tearing
- (V) Irregular surface due to mix tenderness

Paragraph 2.e. of Subsection 1028.02 is void and superseded by the following:

e. Crushed rock (Limestone) and Dolomite shall conform to the requirements of Subsection 1033.02 of the Standard Specifications, Paragraph 4.a. (4), (5) and (6). 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.)

Paragraph 2.h. of Subsection 1028.02 of the Supplemental Specifications is void and superseded by the following:

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

Asphaltic Concrete Type	Course Aggregate Angularity
SPS	35
SP0	55
SP1	55
SP2	65
SP3	75
SP4	85/80*
SP5	95/90*
SP6	95/90*

Table 1028.02 is void and superseded by the following:

\* Denotes two faced crushed requirements

Paragraph 2.h.(1) of Subsection 1028.02 is void.

Paragraph 2.i. of Subsection 1028.02 is void and superseded by the following:

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 based on material passing the No. 8 (2.36 mm) sieve and retained on the No. 100 (150  $\mu$ m) sieve.

Table 1028.03 is void and superseded by the following:

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

Asphaltic Concrete Type	Fine Aggregate Angularity
SPS	
SP0	
SP1	40.0
SP2	43.0
SP3	43.0
SP4	45.0
SP5	45.0
SP6	45.0

Paragraph 2.i.(1) of Subsection 1028.02 is void.

Table 1028.04 is amended to include the following:

## Table 1028.04 Flat And Elongated Particles (ASTM D 4791)

Asphaltic Concrete Type	Percent Maximum
	10
520	10

Table 1028.05 is amended to include the following:

#### Table 1028.05 Clay Content (AASHTO T 176)

Asphaltic	Sand Equivalent,
Concrete Type	Minimum
SP6	50

Paragraph 2.I (1). of Subsection 1028.02 is void and superseded by the following:

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- $\mu$ m) sieves. Superpave mix designs with FAA values of 45.0 or greater will not be restricted from passing through the restricted zone.

The note following table 1028.08 is void and superseded by the following:

 $^{\ast}$  Dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 (75  $\mu m$ ) 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 1.20. This shall be verified during mix design approval.

Table 1028.09 is amended to include the following:

\* see note following Table 1028.08

Paragraph 3. b. (3). of Subsection 1028.02 is void and superseded by the following:

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.

Paragraph 3. b. (11). of Subsection 1028.02 is void and superseded by the following:

Personal Computer capable of running NDR software and Color Printer.

Paragraph 1. a. of Subsection 1028.03 is void and superseded by the following:

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.

Paragraph 1. c. of Subsection 1028.03 is void and superseded by the following:

The Contractor shall inform the Engineer when changes in the types or sources of aggregates or PG Binders are made. These changes may require a new job mix formula, mix design and moisture susceptibility 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.

Paragraph 1. d. of Subsection 1028.03 is void and superseded by the following:

Each Superpave mixture shall be tested for moisture susceptibility in accordance with AASHTO T 283. The loose mixture shall be short-term aged for two hours in accordance with AASHTO PP 2. 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 susceptibility testing is not required for Asphaltic Concrete Type SPS.

Paragraph 1. d. (1) of Subsection 1028.03 is void and superseded by the following:

When tests indicate the need for an anti-striping additive the Contractor shall be compensated for the cost of the anti-strip additive needed at the invoice price of the additive. If the Contractor elects to use a liquid anti-strip additive it shall be added to the PG Binder by the PG Binder Supplier.

Table 1028.11 is amended to include the following:

	g	-p -: -: -:	
Asphaltic Concrete Type	Nini	Ndes	Nmax
SP6	9	126	204

#### Table 1028.11 Gyratory Compaction Effort (Average Design High Air Temperature = < 39 degrees C)

Table 1028.12 is void and superseded by the following:

#### Table 1028.12

Mix Criteria	SPS,SP0,SP1	SP2	SP3,SP4,SP5,SP6
Voids In Mineral Aggregate	See Table 13		
Voids Filled with Asphalt	See Table 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 1028.14 is amended to include the following:

Table 1028.14 Voids Filled With Asphalt Criteria at Ndes		
Asphaltic Concrete Type	Design VFA, Percent	
SP6	65 – 75	

Paragraph 3. c. of Subsection 1028.03 is void and superseded by the following:

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 may require the Contractor to submit a new mix design, as determined by the Engineer

Paragraph 4.c.(4) of Subsection 1028.03 is void and superseded by the following:

At the project start-up and when a substantial aggregate proportion or other major mix change has been made, at least 1 sample shall be taken between the first 110 tons (100 Mg) and 300 tons (270 Mg) of production. This sample, when other than at start-up, will be in lieu of the next scheduled random sample location.

Paragraph 4.c. (5) of Subsection 1028.03 is amended to include the following:

When both ignition oven and cold feed cold feed samples are being tested the taking of the samples shall be timed such that each sample represents, as close as possible, the same aggregate being fed into the plant.

Paragraph 4. c. (6) of Subsection 1028.03 is void and superseded by the following:

For projects using RAP material the FAA and CAA shall be established as follows:

A RAP sample will be processed though 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.

Paragraph 4. f. (1) (i) of Subsection 1028.03 is void and superseded by the following:

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.

Paragraph 4.f. (1) (iv) of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

At the Contractor's request, upon evidence that the 3 Bulk Specific Gravity specimens are exhibiting consistency in their results, The Materials and Research Central Laboratory or Branch Manager may reduce the number of specimens to 2.

Paragraph 4. f. (3) (i) of Subsection 1028.03 is void and superseded by the following:

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.

Paragraph 4. f. (5) of Subsection 1028.03 is void and superseded by the following:

- 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.
- 5. (ii) The gradations shall be determined for each QC test using AASHTO T 30.

Paragraph 4.g.(1) of Subsection 1028.03 is void and superseded by the following:

All test results and calculations shall be recorded and documented on data sheets using the latest 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.

Paragraph 4. h. (3) of Subsection 1028.03 is amended to include the following:

(x) Dust to Binder ratio to the nearest 0.01

The table of paragraph 4. i. (3) (i) of Subsection 1028.03 is void and superseded by the following:

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

Paragraph 5.b. of Subsection 1028.03 is void and superseded by the following:

Two consecutive test results (single test) outside the Specification limits or a (50% or reject) shall be cause to cease operations.

Paragraph 5.e. of Subsection 1028.03 is void and superseded by the following:

Failure to cease operations after two consecutive test results fall outside the Specification limits shall subject all subsequent material to be rejected.

Paragraph 7.b. of Subsection 1028.03 is amended to include SP6.

Paragraph 9. a. of Subsection 1028.03 is void and superseded by the following:

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.

The "**Note**" in paragraph 9.b. of Subsection 1028.03 is void and superseded by the following:

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

Paragraph 9. h. 3 (i) of Subsection 1028.03 is void and superseded by the following:

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. 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.

Subsection 1028.03 is amended to include Paragraph 10 as follows:

- 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 T 40.
  - c. The QC Technician will include on the Sample Identification form all information required by the contract.

# TEMPORARY PAVEMENT MARKING

Section 1069 in the Standard Specifications is amended to include the following:

Prior to the initial placement of the markings, temporary paint, Type II tape or raised pavement markers, the pavement upon which the markings are to be placed shall be dry, cleaned and properly prepared by shot blasting, as a minimum, and to the extent recommended by the manufacturer so that all contaminants, loose debris, and other foreign material are completely removed. Surface preparation for any subsequent application shall consist of air blasting and brushing the roadway surface to remove all loose dirt, mud or other debris and to dry the surface. Each additional application of paint shall be applied over the previously painted stripes.

Initial surface preparation requiring shot blasting shall be paid at the contract unit price per linear foot for the item "Temporary Pavement Marking, Surface Preparation". Surface

preparation for repainting, consisting of air blasting and brushing, shall be subsidiary to other items for which payment is made.

# 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 <u>not</u> to be opened and read.

\* \* \* \* \*

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